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DISCUSSION PAPER 05/25 | 30 DECEMBER 2025

Greater Kuala Lumpur's Public Transportation and its Viability: A Qualitative Study

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Khazanah Research Institute

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Summary

- **Despite significant government investment in public transport infrastructure, ridership growth in Malaysia remains uneven**. This suggests that expanding public transport infrastructure alone does not guarantee that services can meet the commuters' standards and needs.

- **This paper adopts a qualitative, phenomenological approach to centre the lived experiences of choice riders**. By surfacing these lived experiences, personal standards and decision-making process, we seek to uncover the behavioural factors and subjective preferences that influence commuters' travel mode choice.

- **We conducted 34 semi-structured interviews with choice riders** across urban and sub-urban areas. This allows us to better understand how choice riders interpret service quality and negotiate trade-offs in choosing public transport over private vehicles.

- **Our findings show that public transport in Greater Kuala Lumpur is perceived as working well enough to use, yet fragile enough to be set aside.** Commuters' perceptions are shaped by three set of experiences: commuting journey experience, reliability of the operating services, and social and environmental conditions.

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1. Introduction

In cities, mobility shapes how people access jobs, education and daily services. Public transport is an essential part of mobility that connects our homes, workplaces, community spaces and other spaces central for urban life[1]. For Malaysia and especially within Greater Kuala Lumpur (GKL)[2], the government has made substantial investments in expanding the rail and bus systems. Of particular note is the mass rapid transit (MRT) network, where a total of RM54.57 billion[3] was invested to construct both the MRT Kajang and MRT Putrajaya lines, between March 2011 and December 2023.

Yet despite these expansions, ridership growth remains uneven. While some public transport systems show rising usage, the *Keretapi Tanah Melayu* (KTM) has experienced a decline in ridership while bus lines have stagnant ridership between 2024 and 2025[4]. While certain bus lines (MRT feeders and BRT Sunway) show moderate growth, others (RapidKL buses) exhibit a decline[5]. These patterns reflect deeper structural issues in network design and spatial accessibility.

Public transport is intended to connect first (home), second (work) and third (amenities and recreation) places[6]. However, the spatial distribution of services can result in uneven access across the region. Residents in well-served areas benefit from frequent and walkable access to public transport services, while those in less connected areas face longer travel distances and less reliable connections.

These spatial disparities weaken overall system performance. Services in poorly served areas tend to exhibit lower ridership and weaker farebox performance. This increases reliance on subsidies and limits opportunity for service improvement. Such patterns disproportionately affect lower-income and captive riders[7] as they face restricted access to jobs, education and essential services[8].

Yet, structural conditions do not fully explain how people choose to travel. Framing mobility challenges purely in infrastructural or operational terms overlooks the human dimension of everyday travel. Commuters' evaluations of public transport are shaped through what they have experienced during their entire journey[9], including perceptions of safety, comfort, predictability and time autonomy. These subjective evaluations are central to how service quality is interpreted, and in turn, whether public transport is chosen or avoided.

The gap is particularly visible among choice riders i.e. those who have access to both public transport and private vehicles, and they choose to use public transport as their primary mode of travel. Because they face viable alternatives, their decisions offer a revealing lens on when the

[1] Nur Fareza Mustapha (2024)
[2] Based on the Fourth National Physical Plan, GKL refers to the whole territory of Kuala Lumpur, Selangor, Putrajaya and some parts of Perak (Tanjung Malim) and Negeri Sembilan (Seremban). Source: PLANMalaysia (2021)
[3] National Audit Department (2024)
[4] Government of Malaysia (2025)
[5] MyRapid (n.d.a.)
[6] Oldenburg (1989); West (2017)
[7] Captive riders refer to commuters that do not have driving licenses or unable to drive due to personal reasons, and must use public transport to make their journey.
[8] KRI (2023); Haliza Mohd Zahari et al. (2023)
[9] Rohana Sham et al. (2024)

public transport system is experienced as acceptable, and when it falls short. In this sense, choice riders help identify the existence of certain thresholds at which public transport becomes competitive with driving.

Therefore, this study uses a qualitative, phenomenological approach to examine how choice riders in GKL make sense of their everyday commuting experiences. By focusing on the commuters' lived experiences, personal standards and conditions that shape their travel decisions, we seek to uncover behavioural factors[10] and subjective preferences[11] that influence mode choice.

A phenomenological lens allows us to capture how choice riders interpret service quality, weigh competing demands and decide between travel modes. These dimensions cannot be answered solely through quantitative indicators alone. By adopting a qualitative approach, this study aims to draw out insights that are both analytically rigorous and directly relevant for transport operators and policymakers seeking to improve service quality and increase ridership.

This paper is structured as follows: Literature Review will discuss the landscape of public transport in Malaysia, in addition to uncover what dimensions that influence mode choice behaviour. Research Methodology will cover the methodology of this qualitative research and how it is done. Findings will present the findings from the study in a qualitative manner. Discussion will discuss the findings and how it can be tied back to the central thesis of this research. Finally, Conclusion will provide a conclusion on what can be done to improve ridership and service quality.

[10] Behavioural factors refer to the cognitive processes of an individual who takes public transport, where it entails one's intention, beliefs and attitudes towards public transport.
[11] Subjective preferences represent the commuter's personal evaluations, feelings and perceptions about the public transport ecosystem.

2. Literature Review

Understanding travel behaviour in Greater KL requires situating it within both historical policy trajectories and contemporary issues of transport use. Three strands of literature are particularly relevant: (1) the political economy of Malaysia's transport landscape; (2) frameworks for assessing service quality; and (3) behavioural understanding and factors in using public transport. A conceptual framework is structured at the end of this section to understand behavioural intentions of commuters within GKL's mobility landscape.

2.1. Historical and Policy Context / The Public Transport Landscape in Greater Kuala Lumpur

Urban mobility in Malaysia is profoundly shaped by policy decisions made since independence. In the decades following the 1960s, transport and land-use planning emphasized road expansion and car ownership, with moderate development in public transport[12]. The introduction of the National Car Project in the 1980s reinforced this trajectory by offering tax incentives and low-interest loans for car ownership[13]. The number of minibuses also began to decline in the late 1990s[14]. This decline was exacerbated by the increase in the habitual use of private cars and the reduced bus frequencies[15].

Earlier planning documents for Kuala Lumpur included discussions and plans for expansion of public transport services[16]. More recent frameworks, including the Kuala Lumpur Structure Plan 2040 and the National Transport Policy (2019-2030), articulate a clear ambition to rebalance the city's modal split in favour of a higher public transport modal share.

Despite the delivery of urban infrastructure mega-projects such as the MRT1 and MRT2, public transport modal share is reported to be approximately 20% to 25%[17], well short of the official 70% target by 2040[18]. Even these figures warrant scrutiny, as performance varies substantially across modes and locations. For example, the MRT Kajang line now records ridership levels comparable to the LRT Kelana Jaya, with daily averages ranging from 240,000 to 300,000[19]. In contrast, KTM commuter services continue to report more modest ridership levels[20]. This pattern suggests that headline modal share figures may mask uneven performance across transport modes and across geography.

The spatial distribution of services further compounds this issue. Urban cores are relatively well-served by rail and bus networks, while sub-urban areas often face a relatively weaker coverage and longer first-and-last mile gaps, of a different nature. In this context, functional access implies that commuters can reach their public transport hubs within reasonable time and cost threshold, regardless of where they live[21].

[12] Hidayati, Yamu, and Tan (2021)
[13] Ibid.
[14] Barter (2004)
[15] Ibid.
[16] Refer to Kuala Lumpur Structure Plan 2020 and Government Transformation Programme (GTP) document for more details.
[17] Sinar Harian (2025)
[18] DBKL (2025)
[19] MyRapid (n.d.b.)
[20] Government of Malaysia (2025)
[21] Aman and Smith-Colin (2020)

In practice, stations such as MRT Bukit Bintang record very high ridership and are embedded within dense networks of connecting modes, while at the time of this writing, outer stations like MRT 16 Sierra serve far fewer commuters and have limited feeder bus integration. This disparities in access can structurally compel residents who live further away from the city centre to own and rely more heavily on private vehicles despite its higher travel costs[22].

2.2. Service Quality

Service quality has long been identified as a determinant of public transport ridership. Internationally, the Transit Capacity and Quality of Service Manual (TCQSM) identify attributes such as frequency, span of service, accessibility, passenger load, and reliability[23] for assessing service quality. These attributes can be organised into two broad domains: (1) availability, referring to how often, how far, and how reliable services operate; and (2) comfort & convenience, capturing the experiential conditions of travel. While these categories offer a technical baseline, their interpretation is not universal and varies across cultural and policy contexts.

Table 1: Measures of service quality in North America

Availability	Comfort and Convenience
Frequency	Passenger load
Service span	Reliability
Accessibility	Travel time

Source: National Academies of Sciences, Engineering, and Medicine (2013)

Evidence from international studies further suggest that perceptions of service quality vary systematically across commuters and contexts. De Oña et al. (2013), for example, have examined the service quality of the studied public transport system in northern Italy by dividing respondents along four analytical dimensions: trip purpose, type of day, frequency of service usage, and time of day. Their findings suggest that perceived service quality depends on when, why and how public transport is used, despite having service regularity and punctuality as the common denominator.

A substantial body of literature has also examined how service quality influences individual mode choice decisions. Table 2 summarizes empirical findings from studies in Malaysia and elsewhere, highlighting the range of service attributes found to shape commuters' travel behaviour:

Table 2: Review of studies on public transport service quality in Malaysia and other countries

Author(s)	Year	Country	Methodology	Relationship between service quality and individual mode of choice
Rohana Sham et al.	2024	Malaysia	Quantitative survey and multiple linear regression analysis	Reliability, assurance, tangible, and responsiveness are among the primary factors affecting satisfaction in public transport usage.

[22] Scheurer, Curtis, and McLoed (2017)
[23] National Academies of Sciences, Engineering, and Medicine (2013)

Jen Sim Ho et al.	2008	Malaysia	Quantitative survey, and ANOVA and t-tests	Comfort and cleanliness, personal status and privacy, unreliability, safety, sending kids to school and irregular working hours can influence mode of choice.
Ahmad Nazrul Hakimi et al.	2021	Malaysia	Quantitative survey and ordered logit model	Male commuters prioritized travel speed, punctuality, service hours, and frequency, while female commuters prioritized comfort and cleanliness. Both genders viewed information provision and facilities as important factors.
Eboli and Mazzulla	2012	Italy	Systematic literature review	Transit services can be distinguished into objective characteristics (e.g. service availability, reliability, fare, information) and subjective characteristics (e.g. comfort, cleanliness, safety and security, customer care, environmental impacts).
Tyrinopoulos and Antoniou	2008	Greece	Market segmentation analysis through factor analysis and ordered logit models	The most important ones are service frequency, vehicle cleanliness, waiting conditions, transfer distance, and network coverage.
Mouwen	2015	Netherlands	Multiple regressions and ordinary least squares	Core attributes (punctuality, frequency, cost), peripheral interactional attributes (personnel and driver behaviour) and peripheral physical attributes (information, safety, seating capacity) correlate positively with commuters' preferences.

Taken together, the literature indicates that service quality cannot be reduced to a checklist of operational metrics. It is primarily relational, in that it is shaped by how commuters interpret, compare and prioritize different aspects of their journey. Policies must therefore go beyond technical upgrades to address perceptions of safety, comfort and fairness. This requires recognizing diversity across commuter groups, integrating objective performance indicators with subjective user feedback, and designing reforms that resonate with commuters' lived realities and experiences.

2.3. Behavioural Understanding and Factors in Using Public Transport

2.3.1. Behavioural understanding of public transport use

Understanding travel behaviour requires attention to both psychological models of decision making and sociological critiques of those models. This subsection reviews prominent behavioural frameworks used in transport research.

The Theory of Planned Behaviour (TPB) has been widely applied to transport studies. It posits that attitudes, subjective norms, and perceived behavioural control are theorized to shape an individual's intention to act[24]. Attitude refers to an individual's overall evaluation of a behaviour[25],

[24] Ajzen (1991)
[25] Baumeister and Bushman (2017)

whether it is implicitly held or explicitly expressed. Subjective norms capture perceived social expectations[26], while perceived behavioural control (PBC) reflects one's individual beliefs about one's ability to perform the behaviour in question[27]. Some studies also suggest extending the TPB, to incorporate perceived moral obligation[28], which reflects the degree to which an individual feels ethically compelled to act or refrain from acting in different situations.

The COM-B Model[29] extends this perspective. COM-B stands for Capability, Opportunity and Motivation-Behaviour. Capability refers to one's physical and psychological resources necessary to engage in an activity concerned[30]. Opportunity refers to the external conditions of the ecosystem that enables the behaviour possible or prompted by the individual[31]. Motivation is defined as the cognitive processes that direct behaviour as a whole[32]. The model proposes that behaviour emerges from the interaction of these three components.

In the transport domain, COM-B highlights the need to align infrastructure provision (opportunity) with individual resources (capability) and incentives (motivation) to encourage modal shift. Both TPB and COM-B are frequently applied instrumentally to design interventions that influence behaviour change, but their application can risk framing commuters primarily as rational decision-makers that are detached from issues of equity, identity and power.

Previous mobility studies have conceptualised travel behaviour as both being instrumental[33] and socially embedded[34] for individuals. Additionally, car ownership is seen as carrying symbolic meaning as a marker of class mobility and autonomy[35]. From Weberian lens[36], car use can be understood as a form of social action shaped by both instrumental[37] and value-oriented[38] rationalities. Owning a car offers predictability and flexibility for the people to travel[39]. At the same time, car ownership may reflect value-rational orientations where personal accomplishments or control over one's time is experienced as intrinsically meaningful[40] rather than just being efficient.

Importantly, these meanings are not universal but are embedded within specific urban and social contexts. As GKL is a car-oriented city, private vehicles have become intertwined with broader aspirations related to mobility and status[41]. Viewing car use through this lens allows individual preferences to be understood not simply as personal choices, but as actions shaped by structural conditions and embedded dimensions of autonomy and mobility.

Taken together, behavioural frameworks are valuable but insufficient on their own. They illuminate how attitudes and motivations affect mode choice. Yet, they must be complemented by attention to the broader socio-technical systems in which these choices are embedded in. This perspective helps clarify why infrastructure investments alone have struggled to shift entrenched

[26] Baumeister and Bushman (2017)
[27] Ibid.
[28] Raats, Shepherd, and Sparks (1995); Conner and Armitage (1998)
[29] Abdul Kafi et al. (2024); Liu (2017); Michie, van Stralen, and West (2011)
[30] Michie, van Stralen, and West (2011)
[31] Ibid.
[32] Ibid.
[33] Wiersma (2020)
[34] Harms (2003)
[35] Fitt (2021)
[36] Kalberg (1980)
[37] Instrumental rationalities focus on achieving specific goals through efficient means.
[38] Value-oriented rationalities prioritise adherence to intrinsic values or ethical principles.
[39] Jensen (1999)
[40] Soza-Parra and Cats (2023)
[41] Hidayati, Yamu, and Tan (2021)

mobility practices. The following subsection therefore examines the specific behavioural factors that influence mode choice in 'everyday' contexts.

2.3.2. Behavioural factors affecting public transport use

This subsection illustrates how behavioural frameworks help explain everyday mode choice by linking service conditions, perceptions and constraints, while also highlighting their limitations in accounting for entrenched travel practices.

The TPB is widely used to examine how attitudes, subjective norms, PBC and perceived moral obligation shape travel behaviour[42]. In public transportation research, TPB has been applied to explain motivations related to travel behaviour [43]. In this study, we apply TPB to investigate attitudes, subjective norms, PBC, and perceived moral obligation in relation to choice riders' daily use of public transport.

To put this into perspective, imagine a regular commuter who is a 25-year-old woman who lives in Klang and works in Tun Razak Exchange (TRX). For her, daily mode choice is shaped by her belief that KTM services are unreliable, and that delays were common. Within the TPB framework, this negative perception reduces her intention to use the rail network. Social norms reinforce this, as most of her friends and colleagues also mostly drive. This reinforces the sense that cars also contribute to her sense of social identity. PBC also plays a role. If she doubts her ability to arrive punctually via KTM, she will default to driving. If KTM betrays her often enough, she gives up on the system entirely. However, once a new LRT line opens and KTM reduces delays, her perceived control over her use of time improves. This shift alters her perceptions towards a different mode of public transport, one that she is willing test. This illustrates how structural improvements (or expansion) can translate into behavioural change when mapped through the lens of TPB.

The COM-B model offers a complementary lens. Consider a middle-aged office worker living in Puchong who owns a car but works in walking distance from one of the stations of the MRT Putrajaya Line. Her capability to use public transport is shaped by her physical health, commuting knowledge and ability to navigate ticketing systems. Her capability is also shaped by knowing the uncertainties in predicting bus time arrival, causing her planned buffer time to be reduced thus resulting her to make another back up plan. Opportunity depends on whether feeder buses arrive reliably and whether there are safe and comfortable walking routes that connect her home. Motivation reflects her personal priorities: saving money, avoiding stress from driving, and the desire to reduce her carbon footprint on the environment. But if feeder services are irregular and walking paths are unsafe, her opportunity is curtailed, and she defaults to using her car, as that is the mode that makes her most comfortable. But once consistent feeder buses and shaded walkways with lights are introduced, her opportunity expands, her motivation aligns with cost-saving and comfort, and she is far more likely to shift to public transport.

Integrating both the literature on service qualities and behavioural factors can elicit a more comprehensive view on how people choose to take public transport. A qualitative study by Beirão and Cabral (2007) has investigated the relationship between an individual's attitudes towards public transport and their perception of its service quality. They interviewed 24 people ranging from commuters in Portugal, car users and those that used both. The interview responses

[42] Ajzen (1991)
[43] Tun Ahmad Adlan Asma'an et al. (2024) studied that attitude plays a main role in shifting private vehicle users to using public transport; Ambak et al. (2016) used the TPB dimensions to identify what are the factors that influence people to take the public bus.

suggested that the level of service quality reflects a user's attitudes towards public transport, which in turn influences their mode choice of transport. Their findings have been supported by many public transport studies that investigated a similar research question[44], which further indicates the significant interplay between service quality and travel attitudes of the people.

Considering this, it is also important to investigate the travel attitudes of private vehicle users and their reasons for not using public transportation or when they have shifted to driving as their main mode of transport. In contexts shaped by decades of car-oriented policies, automobile use becomes normalized and embedded in everyday routines and social expectations[45]. This makes the transition to public transport usage even harder.

Sociological studies on automobility discuss how car use is structured within everyday mobility practices. Cars can be perceived as an extension of the human identity, which can shape drivers' emotions and interactions with others while driving[46]. Car use structures everyday action by offering speed, flexibility and personal control, fostering habitual reliance on cars[47]. Driving cars can be seen as a social phenomenon that has become a part of our daily habits, which further requires the need to consider those who can access private vehicles as their mode of transport when analysing travel behaviour.

While these models offer a framework to understand a commuter's mode choice, they are also subject to critique. Their focus on individual-level determinants risk underplaying the role of structural constraints and cultural contexts. For instance, habitual car use may persist even in the presence of improved public transport options. Similarly, perceived behavioural control may be less relevant when institutional and structural gaps (first-and-last mile deficiencies) preclude the feasibility of public transport use. Scholars in the mobilities paradigm argue that private car use is deeply embedded in everyday life and cultural practices, indicating that understanding travel behaviour requires attention to structural and cultural mobility patterns [48].

2.4. Towards an Integrated Conceptual Framework

Drawing from the preceding strands of the literature, this study develops an integrated conceptual framework that situates behavioural intention within the broader structural and cultural context of Greater KL's transportation systems. The framework is intended to be both descriptive and normative, that is to explain how travel behaviour is shaped in practice, while also motivating the need for more integrated approaches to mobility reform.

By combining service quality dimensions with TPB and COM-B, the framework captures how conditions outside the commuter's direct control (infrastructure reliability, safety, coverage, information provision) intersect with internal drivers intrinsic to the commuter (attitudes, norms, motivations, capabilities).

Incorporating sociological perspectives on automobility further reinforces this integration. Behavioural models help clarify how choices are formed, but on their own cannot account for uneven spatial access to public transport services, or the historical policy legacies discussed in **Section 2.1**. Car ownership is often associated with autonomy, convenience and social status, and

[44] De Vos, Singleton, and Gärling (2022); Alyavina, Nikitas, and Njoya (2020)
[45] Hidayati, Yamu, and Tan (2021)
[46] Fraine et al. (2007); Brown and Altman (1981)
[47] Jensen (1999)
[48] Ibid.

once established, it is more likely to become habitual. Over time, frequent reliance on cars can reduce engagement with public transport, particularly when car use is reinforced by convenience and familiarity[49]. This study therefore treats commuters not simply as a rational decision-makers, but as actors navigating infrastructures, institutions and cultural embedded meanings simultaneously.

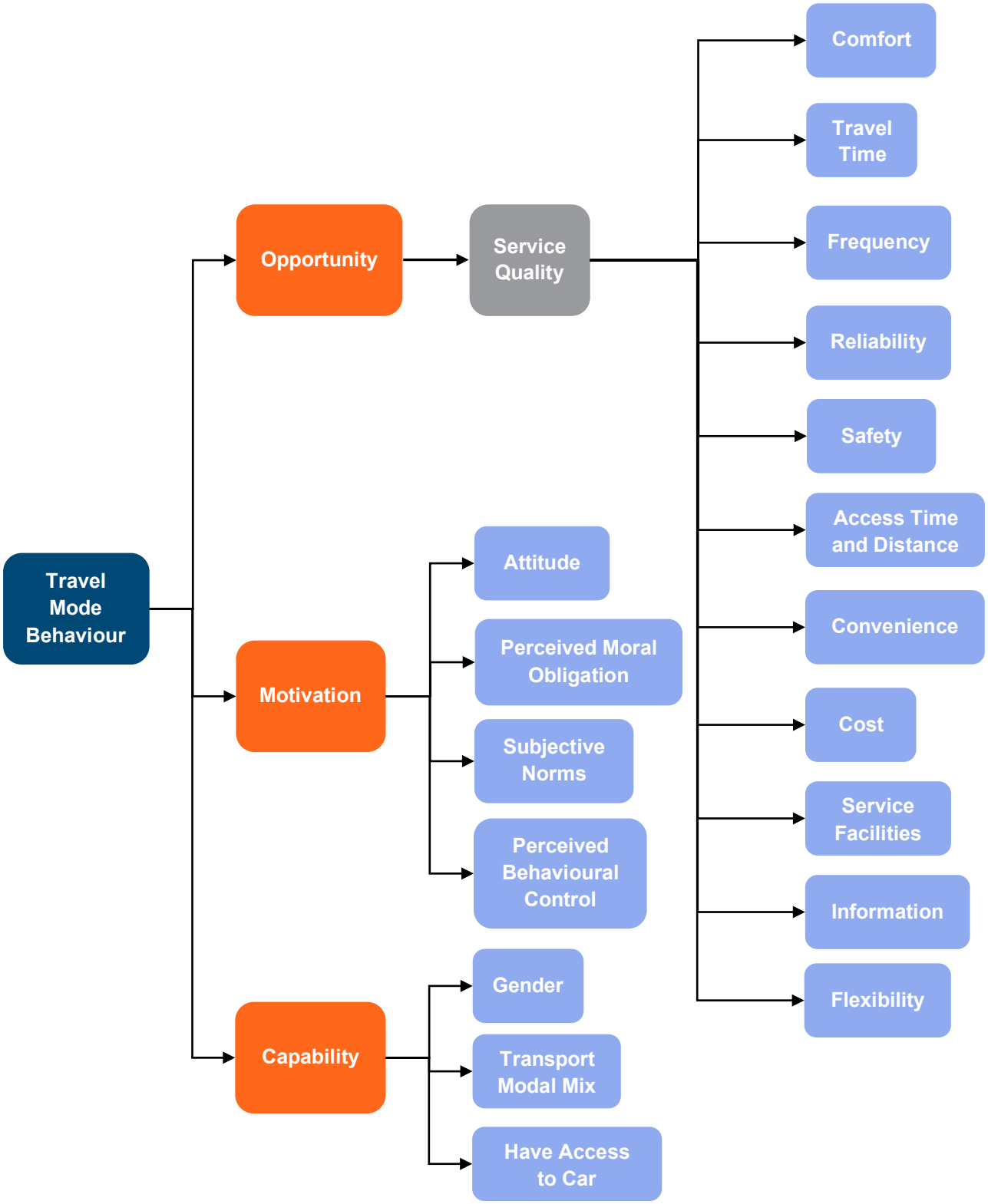
Emphasizing this integrated approach is important for three reasons. First, it guards against overly technocratic solutions that assume supply expansion alone will generate sustained demand. Second, it enables closer attention to equity, by revealing how improvements may be experienced differently across groups and locations, and by highlighting who benefits from reforms and who remains constrained. Third, it bridges academic and policy debates by translating lived experiences of actual commuters into key insights and centring these key insights in ways that are relevant for policymakers to consider before, and when driving policy changes.

This integrated framework also has methodological implications for qualitative inquiry. In qualitative research, saturation refers to the point at which additional data no longer generate substantively new insights[50]. This is a pursuit reflecting depth and completeness in capturing the diversity of experiences rather than statistical representation. Viewed through this framework, qualitative accounts are treated as holistic representations of how commuters experience constraints, trade-offs, and frustrations with everyday travel. Policies that result, would therefore be grounded in how transport systems are encountered and navigated in real life.

Figure 1 below maps these relationships using the TPB dimensions and the COM-B model. Adapting from the COM-B model as the main framework, capability includes the physical and psychological resources necessary to engage in public transport use such as demographic factors, geographical location, physical health, and others. Opportunity refers to the external conditions of the public transport ecosystem that enables public transport use or vice versa. Service qualities of public transport comprise this dimension. Motivation utilises the TPB dimensions as they predict intentions to understand human behaviour in mode choice[51].

[49] Tao, He, and Thøgersen (2019)
[50] Glaser and Strauss (1967)
[51] Abdul Kafi et al. (2024)

Figure 1: **Conceptual framework of the qualitative study**



Source: Author's illustration based on Ajzen (1991) and Michie et al. (2011)

3. Research Methodology

This chapter is guided by two central research questions:

1. **What behavioural factors and subjective preferences influence travel mode choice in Greater Kuala Lumpur?**
2. **Under what conditions do individuals choose public transportation over private vehicles?**

We outline the methodological approach adopted to investigate behavioural factors and subjective preferences influencing the choice of travel mode in GKL. Given the study's focus on lived experience and subjective meanings, a qualitative design was employed, drawing on phenomenological principles to capture the perspectives of choice riders.

3.1. Research Design and Rationale

The phenomenological approach is particularly appropriate because it centres participants' subjective interpretations of mobility. Commuting is not a neutral activity, but a lived phenomenon that is shaped by time pressures, bodily comfort, cultural expectations, and urban form. By surfacing the lived experiences, personal standards and conditions, a phenomenological approach[52] allows us to identify these conditions under which public transport is perceived by commuters as viable[53], and even when it is rejected in favour of an alternate mode of transport. This approach helps in understanding the experiences of commuters so that we can get new insights or perceptions from them about the public transport usage phenomenon.

The design is also theoretically motivated. Literature Review highlights the interplay of service quality attributes, behavioural models such as TPB and COM-B, and the cultural-symbolic system of automobility. A qualitative, phenomenological lens enables us to operationalise this integrated framework by tracing how structural factors (e.g. frequency of buses, coverage, security personnel) are filtered through individual perceptions and values. In this way, the design connects macro-level policy debates with micro-level commuter narratives. This is done by aligning commuters' standards and needs to the operational features by which these services are actually experienced. Therefore, the policies that result would directly engage with real friction points that commuters experience.

The strength of this approach also lies in the depth and contextual richness it provides. These insights emerge through the systematic exploration of how transport is lived and understood across diverse contexts. By attending to saturation[54], the study ensures that recurring patterns in public transport use are examined at sufficient depth, while capturing a wide range of experiences. This allows readers to judge the relevance of these insights to other settings. In this way, this paper hopes to contribute to both academic debates and policy conversations by showing how structural factors and cultural meanings are experienced in practice.

[52] van Manen (2017)
[53] Public transport is considered as viable when commuters perceive its service quality and the entire ecosystem as reliable, comfortable and convenient.
[54] Saturation refers to the point during data collection, where additional interviews yield little to no new information.

3.2. Question Development

The interview guide was developed directly from the integrated conceptual framework established in the Literature Review. Questions were crafted to align with the three broad dimensions influencing behaviour – Capability, Opportunity and Motivation. All interview questions were open-ended and designed to invite reflection on experience, allowing respondents to frame issues in their own terms. While the guide ensured coverage of theoretically relevant dimensions, it remained flexible so that unanticipated themes and interpretations could emerge organically during the interviews. The interview guide is referenced in **Appendix 8.4: Interview Guide.**

Each question is framed to elicit respondents' lived experiences rather than their abstract opinions. Participants were invited to recall and describe their entire commuting journey while diving into specific moments of that journey, trade-offs and comparisons. For instance, participants were asked to reflect their thoughts and experience when facing delays or walking during a transfer. From this, their thoughts and emotions surfaced naturally from what they had experienced as opposed to being subjected to detached judgments of public transport. Follow-up probes were used to draw out *thick descriptions* and clarify ambiguous or contradictory responses. For example, if a participant expresses frustrations with reliability, probes asked them to recall particular episodes, their coping strategies, and how those experiences shaped subsequent choices when facing that event. This is to focus on how they make sense of their commuting journey rather than merely what they think.

Some dimensions, particularly those under the 'capability' aspect of COM-B, were incorporated into the pre-screening survey. These included sociodemographic variables (gender, income, employment type), transport resources (access to private vehicles, access to different PT modes), and modal mix. Collecting these data beforehand ensured that the interviews could focus on subjective experiences and attitudes, while also allowing the research team to stratify the sample systematically.

3.3. Pilot Test Study

A pilot study was conducted prior to full-scale fieldwork with a small group of KRI staff and interns who are choice riders[55]. In total, five KRI staff were interviewed in this phase. The pilot served several interconnected purposes: firstly, to test and refine the semi-structured interview guide; secondly, to evaluate logistical feasibility including language preferences, interview length, audio-recording quality, and the quality of automated transcription using OpenAI's Whisper-1[56] model; and thirdly, to surface gaps in coverage of key constructs within our integrated conceptual framework.

Findings from the pilot were subsequently presented to and reviewed by other members of KRI's Urban Team[57]. This prompted both technical and conceptual revisions. On the technical side, question wording was simplified, probes were made more explicit, and bilingual prompts (English and Malay languages) were developed to ensure accessibility. On the conceptual side, the pilot revealed that some dimensions of service quality and behavioural attitudes were under-

[55] Choice riders refer to people who have the flexibility to choose between different modes of transport, while captive riders refer to people who depend solely on public transport due to factors such as not having a driver's license, unable to drive, financially disadvantaged or others. Source: National Academies of Sciences, Engineering, and Medicine (2013)
[56] Mojadeddi and Rosenberg (2024)
[57] Consisting of Dr Suraya Ismail, Dr Nur Fareza Mustapha, Theebalakshmi Kunasekaran, and Muhammad Nazhan Kamaruzuki.

explored. This led to the addition of follow-up probes on first-last mile issues, gendered safety perceptions, and differences that emerged depending on which public transport system (MRT, LRT, KTM, Bus, etc.) was used. It showed that experiences varied across geography, with sub-urban and urban residents reporting distinct challenges and opportunities.

The pilot also underscored the importance of interviewer reflexivity. It highlighted how phrasing, tone and positionality could influence participant narratives. Interviewers have to remain alert to their own influence on respondents. In this sense, the pilot served both as a rehearsal and more importantly, a key stage in enhancing the rigor, credibility, and reflexivity of the overall research design.

3.4. Sampling Strategy

The study targeted choice riders. In operational terms, a choice rider is defined as an individual with access to alternative modes of travel (e.g. private car or ride-hailing services) for whom the use of public transport was at least partially discretionary rather than necessity-driven. This criterion ensured that participants were able to make comparative evaluations of public transport quality.

Sampling was purposive and stratified to capture variation along the dimensions identified in the literature review and refined through the pilot study as salient to travel experience and mode choice. These dimensions included **main modal mix** (e.g., walk + rail, car + rail, bus + rail, bus only, among others), which reflects routine mobility practices and degrees of flexibility; **gender**, which is associated with differentiated experiences of safety, comfort and vulnerability in public transport settings [58] ; and **public transport system(s) used** (e.g., MRT, LRT, KTM, or combinations thereof), which vary in operating characteristics, service quality, and network integration[59]. Together, these dimensions were selected to ensure that we capture heterogeneity in how public transport is encountered, experienced and evaluated in everyday life.

Recruitment was conducted through KRI's social media channels (LinkedIn, Instagram, Facebook), where potential participants were invited to complete a pre-screening survey, after which participants were selected based on the inclusion and stratification criteria. Where participants regularly used more than one public transport mode, the interviews elicited mode-specific experiences (e.g. rail vs. bus), and analysis distinguished these experiences accordingly.

Secondary attributes, including age group, income range, and employment type were recorded to support descriptive profiling and post-hoc comparisons, but did not structure initial recruitment. Data collection continued until saturation was achieved, defined here as the point at which successive interviews yielded minimal new insights.

3.5. Interview Protocol

Interviews were semi-structured, lasting approximately 60 minutes, and conducted at locations chosen by the respondents. These were normally open spaces (cafes, eateries, etc.) or at KRI's office, to ensure comfort and authenticity. The interview was organized around the integrated framework (capability, opportunity, motivation) but designed to elicit open-ended narratives.

[58] Ahmad Nazrul Hakimi Ibrahim et al. (2021)
[59] Beirão and Cabral (2007)

Probes were used to clarify or deepen responses, particularly where respondents expressed ambivalence or contradiction.

Fieldwork was carried out by a small team of trained interviewers. All interviewers received a common briefing on ethical procedures, reflexivity, and the use of probes to ensure consistency while still allowing space for respondent-led narratives.

All interviews were audio-recorded with the participant's informed consent. At the beginning of each session, participants were briefed on how their data would be used and reported, including procedures for anonymisation and data retention. Participation was fully voluntary, and respondents were informed that they could decline to answer specific questions or discontinue the interview at any point. Where excerpts from the interviews were intended to be used verbatim, participants will be given the opportunity to review, clarify or to confirm quotations prior to inclusion. Audio recordings were stored securely and scheduled for deletion several months after the publication of this paper.

A copy of the agreement/disclosure is attached in **Appendix 8.3: Informed Consent Form**. The protocol thus empowers respondents to shape the flow of the conversation and foreground their lived experiences. Reflexivity was further reinforced through interviewer field notes, regular team debriefs, and discussions of positionality, ensuring that the research team continuously reflected on how their own perspectives and interactions influence the data collection process[60].

3.6. Data Management and Analysis

Audio recordings were first transcribed verbatim using OpenAI's Whisper-1 model, and then manually reviewed to correct errors and remove extraneous conversational markers. Cleaned transcripts were imported to Atlas.ti for systematic coding and organization[61].

The coding framework combined deductive and inductive approaches. This abductive strategy ensured that our analysis remains grounded in participant accounts while still connected to theory. Codes were continually refined through iterative reading and re-reading of transcripts, and new inductive categories were integrated into the framework when recurrent patterns surfaced.

Thematic maps were constructed to visualize how codes clustered into broader categories and how these categories related to the research question. Maps were validated through cross-checking with the underlying transcripts and discussions with the team to harmonize definitions. Inter-coder reliability was assessed through independent coding of a subset of transcripts by three researchers, with discrepancies resolved by consensus discussions.

3.7. Saturation and Credibility

In qualitative research, saturation refers to the point at which additional data collection no longer yields substantively new codes, meanings, or experiential patterns relevant to the research questions[62]. In this study, saturation was assessed analytically, through ongoing coding, team discussion and iterative engagement with the data.

[60] Creswell and Poth (2016)
[61] Hwang (2008)
[62] Glaser and Strauss (1967)

As analysis progressed, interviews increasingly reinforced existing codes and interpretive categories rather than extending the thematic structure. This pattern was observed across the primary stratifiers. While surface-level complaints and narratives continue to vary, later interviews consistently reflected the same underlying mechanisms shaping travel behaviour, such as perceptions of reliability, time autonomy, safety, and trust in the system.

To assess whether saturation has been reached, additional interviews were intentionally conducted after this point, particularly among under-represented strata. These interviews did not generate substantive new codes or challenge the existing analytical framework but instead refined and corroborated the previously identified themes. On this basis, our research team judged that thematic and meaning saturation had been achieved for the population of choice riders within the scope of this study.

It is important to note that this saturation claim is bounded by the study's sampling frame. The analysis does not claim theoretical saturation across all commuter groups, as captive riders and exclusive vehicle users were not included. Rather, saturation is understood as sufficient for capturing the range of lived experiences and behavioural mechanisms relevant to discretionary public transport use in Greater KL.

3.8. Reflexive Practices

Reflexivity was systematically embedded across the project. Interviewers kept field notes reflecting on how their own positionality, assumptions and interactions might shape participant narratives. Regular team debriefs provided opportunities to surface emerging biases, refine question phrasing, and calibrate probing strategies. These reflexive practices also informed iterative adjustments during fieldwork such as clarifying ambiguous questions, adding bilingual prompts when necessary, and probing more deeply into respondents' lived experiences.

Reflexivity is also extended to the analytic phase. Field notes and debriefs were revisited during coding to question taken-for-granted assumptions, challenge our early interpretations and refine emerging themes. Differences between interviewer backgrounds and participants' commuting experiences were treated as interpretive resources, rather than biases that is to be eliminated. This allows the team to interrogate how meaning is co-produced during interviews.

To further enhance credibility, respondent validation was incorporated into the analytic process. Selected quotations intended for verbatim use were shared with participants for confirmation prior to the publication of this paper. Most respondents agreed with the research team's interpretation of their views. Six participants provided minor clarifications or contextual adjustments, which were incorporated into the analysis. This feedback was documented and considered during thematic refinement. This process helped ensure that participants perspectives were represented accurately while maintaining analytic integrity.

3.9. Participant Profile

A total of 34 choice riders were interviewed across Greater KL between May to August 2025. Participants had recent experience using both public transport and private vehicles, allowing their accounts to reflect comparative evaluations of travel modes rather than necessity-driven use.

The sample was distributed across age and gender (Figure 3), geography (Figure 4) and modal mix (Figure 5). Modal combinations varied, with the most common combination being the car + rail system, indicating that most respondents access rail stations by cars such as using the park-n-ride facilities or someone giving them a ride. The diversity in profile was deliberate. It allowed us to capture the heterogeneity of lived experiences and to identify how demographic and spatial factors intersect with behavioural determinants, as seen in **Appendix 8.1**.

Figure 3: Participants breakdown by age and gender

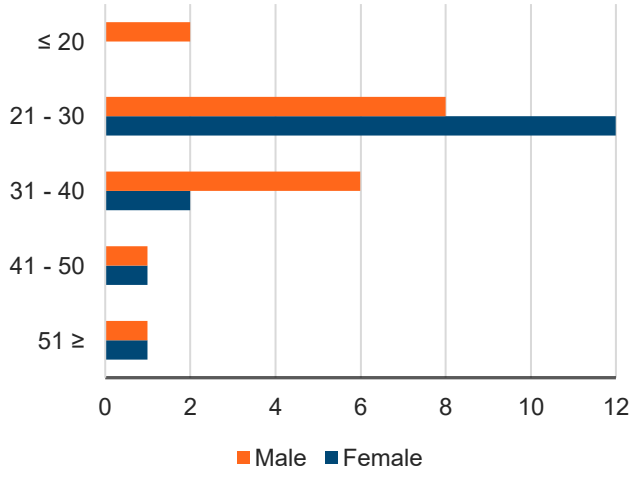


Figure 4: Participants breakdown by geographical location[63]

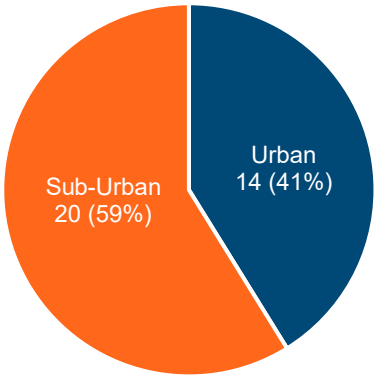
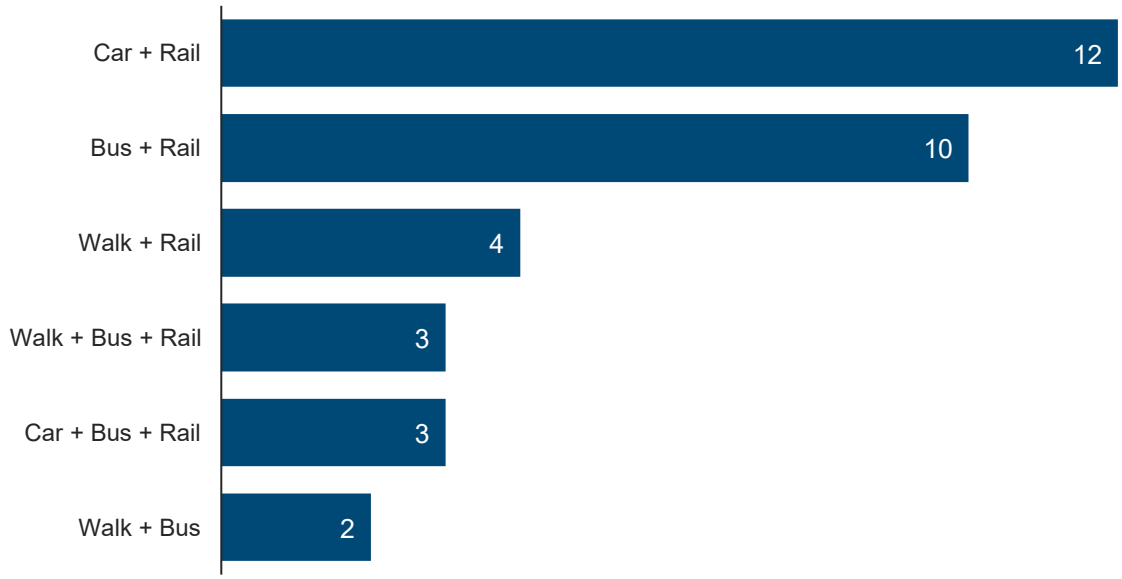


Figure 5: Modal mix of public transport modes



[63] Urban areas are defined as areas located within the boundary of the Federal Territory of Kuala Lumpur, while sub-urban areas refer to areas located outside the boundaries of the Federal Territory of Kuala Lumpur.

4. Findings

4.1. Emergent Themes from Commuter Experiences

Thematic analysis reveals eight interconnected themes. Some were strongly inductive, surfacing from commuter narratives (e.g. Comfort-Safety Interaction and Time Autonomy), while others were reinforced constructs anticipated by COM-B and TPB.

4.1.1. Comfort-Safety Interaction

Interview data reveal a strong interaction between comfort and safety in how commuters experience public transport, with clear gendered differences. Female respondents consistently described comfort and safety as inseparable. Elements such as the presence of other commuters, well-lit environments, the availability of women-only coaches and the presence of security personnel were frequently cited as conditions that enabled both physical security and psychological comfort:

"If I am alone, I will use women's coach." (R1)

"That whole stretch of pedestrian walkway, it's covered, yes. But it's got no lighting. So, the moment it rains the moment it comes towards the evening, it's very dark and it's dodgy." (R4)

"Coach wanita saya suka sebab kalau macam waktu puncak tu, dia sempit-sempit pun dengan perempuan je." (R10)

"I don't think I like to be there inside the mixed coach." (R3)

Beyond functioning as a safe space, women-only coaches were described as environments that reduced the need for being in a state of constant vigilance. Respondents noted that these settings allowed them to sit more freely, relax and remain less guarded during their journeys. In this sense, comfort was experienced not only as a physical condition, but also as an affective and psychological one. Almost all female respondents expressed a strong preference for the availability of women-only coaches, and where such provisions were not available, several articulated a desire for their implementation:

"Women's coach is the most safest and comfortable place for me… I can finally breathe and look around instead of just putting my head down." (R18)

"It does feel safer [to use women's coach] compared to when taking LRT when everyone is squished together." (R22)

Concerns over safety were also heightened in environments characterized by low lighting, sparse crowds, or the absence of security personnel, particularly during off-peak hours:

"Kalau train tu tak ramai orang pun, I tak rasa selamat. So, kalau I call for help, there's no one there." (R12)

"So, the station, I would say is quite dark for some stations. The KTM [station] also is quite empty." (R22)

"If it's like less people, that's a bit scary as a woman, especially if there's like a man or two, that one feels a bit uncomfortable." (R23)

"During non-peak hours, taking the public transport is quite scary, especially at night or very early in the morning when it's dark. I don't think anything could make me feel safe during those hours." (R33)

The presence of auxiliary police was also cited as mitigating these anxieties and contributing to a sense of safety and reassurance:

"The polis bantuan are also patrolling female coaches, so that's great." (R7)

"They actually have polis bantuan supervising the train, just in case there are men sitting at the women only coach." (R29)

Male respondents, by contrast, tended to distinguish more clearly between the dimensions of comfort and safety. Comfort was often described in terms of relief from the stress of driving and facing congestion, while safety was framed in instrumental or statistical terms, particularly with reference to accident risk:

"If you compare accident statistics, the bus is actually very low." (R2)

"I think if based on statistics, public transport is far more safer than driving actually." (R34)

Across genders, overcrowding was consistently associated with diminished comfort and heightened vulnerability. Respondents linked crowded conditions to concerns over hygiene, physical discomfort, and increased fear of theft:

"The congestion in the train makes you feel uncomfortable because of its hygiene. It's not that hygienic… We have no idea whether there's any pickpocket." (R19)

"Suddenly super packed… so that would be like the uncomfortable part, macam tak ada space." (R32)

"Sometimes when it's very packed, so everyone pushing at each other. So, we can't really realize that we are being like, steal something from somebody." (R3)

"I tak suka… worrying my bag is getting pick-pocketed." (R12)

Notably, when women were asked about comfort, their responses frequently incorporated considerations of safety, even when safety was not explicitly prompted. This suggests that for female commuters, safety is not an external or secondary condition, but an embedded dimension of how comfort itself is perceived and evaluated throughout the commuting journey.

4.1.2. Loss of Time Autonomy and Buffering for Uncertainty

A recurring theme across interviews was the loss of time autonomy associated with public transport use. Respondents described structuring their daily routines around service schedules, building in buffer time to hedge against uncertainty, and adjusting social or work plans to fit what the system allowed. This loss of autonomy was experienced both as time lost and as diminished personal control over one's schedule.

Loss of time referred not only to minutes spent waiting during delays, but also to time sacrificed pre-emptively through early departures. Some respondents described leaving home earlier than necessary to manage uncertainty, even for relatively short journeys. When services fail to arrive despite these buffers, the frustration was particularly acute:

"I prefer taking public transport, but unfortunately, it's not the fastest way to the office… If I take public transport, I have to plan it earlier, 30 to 40 minutes in the morning… so I can reach work on time." (R5)

"I would look at schedule first. I leave my home 10 minutes earlier before the bus arrives. So, when I wait, it will come on time." (R19)

Beyond the loss of time, respondents described a loss of personal control arising from the inability to predict whether and when services would arrive. This uncertainty generated anxiety and forced commuters into a state of constant adaptation, including switching modes mid-journey, rearranging meetings, or notifying colleagues of delays.

Inaccurate or fragmented real-time information further compounded the experience. Respondents frequently relied on multiple applications to monitor services, but inconsistencies and glitches undermined their ability to plan confidently:

"If it's the Pulse app, the tracking sometimes lari juga. This one time they say, 'Oh, the bus is coming,' but it doesn't track the bus lah." (R23)

"You don't know if the train has already passed or if it's late. So, it's like a gamble." (R33)

When services break down, the consequences extended beyond the journey itself. Respondents described their time as becoming dependent on the system, with little flexibility to recover lost time once delays occurred:

"I dislike how my time is dependent on something you don't have the autonomy." (R32)

"You just know something will happen and be a bit more cautious. Even if it's a 3-stop, you have to plan the whole day just for that 3-stop." (R32)

Time-cost trade-offs featured prominently in decision-making. Some respondents tolerated longer journeys because of how affordable public transport is. They framed this as "paying with time":

"Of course, I have the longest journey. But then because of cost of saving, because saving is important, so I have to endure." (R6)

"Kalau drive memang it will cost me more than RM6 daily pass. It's just naik public transport you pay with your time, which I have." (R21)

Others articulated clear thresholds beyond which public transport was no longer considered viable, even when driving was significantly more expensive:

"I'm willing to commute 45 minutes to one hour by car rather than 2 hours and 30 minutes by public transport." (R7)

"The fact that you have to travel [2 hours], you have to waste a lot of time on public transport instead of driving." (R29)

Across these accounts, buffering for uncertainty emerged as a routine, yet it is a burdensome practice. Commuters described constant vigilance, mental calculations, and contingency planning as part of everyday travel. This differentiates public transport from driving, where respondents felt they retained greater control over departure time, routing and pacing despite congestion risks.

4.1.3. Mental Relief and Productivity in using Public Transport vs. Driving

Participants frequently contrasted public transport with both the physical and mental demands of driving. Driving was portrayed as mentally draining, requiring sustained attention and vigilance, particularly in congested traffic. For some respondents, this strain accumulated over time, spilling over into stress, fatigue and broader impact to well-being. Yet, others emphasized the financial burden of driving, including fuel, parking, tolls and other costs which further compounds the experience:

"I think the toll road itself is RM7 both ways, and then the cheapest parking is like RM10, but it's quite far from my office. So, it's RM17 a day." (R1)

"At some point, dia [driving] akan makan balik on your body. You're penat and then leads to stress, then you don't function properly. Then it can affect other parts of your life." (R15)

"I hate that I have to just sit down and long-distance driving… don't want to deal with the hassle of driving." (R27)

In contrast, public transportation was consistently described as offering mental relief. Respondents valued the ability to disengage from the demands of navigating traffic and to shift into a more relaxed cognitive state. This relief also created space for activities that is simply not possible while driving, such as resting, reading or casual phone use:

"Considering I can do other things. Kalau drive, you're gonna spend like one hour on the road dan tak boleh buat apa-apa." (R21)

"I can catch up on social media, rest my eyes and don't have to focus on the road." (R20)

"Usually, you can read books or watch movies or anything." (R34)

"I get to do my own thing. It doesn't feel so long in the train compared to driving with the traffic." (R32)

"My main motivation is to avoid traffic jam." (R25)

For some respondents, this sense of relief was framed less in terms of productivity but more in terms of avoiding the cumulative emotional and financial costs associated with driving. Public transport was framed as a way to sidestep the daily stressors of congestion while also reducing routine expenditures:

"[PT] is the best way to travel, especially considering KL traffic is crazy. You are spending an amount of money on toll and fuel every day." (R32)

Taken together, these accounts suggest that public transport is valued not merely as a cheaper alternative to driving, but as a qualitatively different commuting experience entirely. By reducing cognitive load and enabling moments of rest or personal activity, public transport allowed commuters to experience travel time as less draining, and in some cases more personally meaningful.

4.1.4. Hierarchies of Reliability across Public Transport Modes

Commuters did not evaluate public transport modes in insolation. Instead, they organized them into informal hierarchies of reliability, shaped by their accumulated experience, informational clarity, and perceived predictability. Importantly, reliability was not understood merely as services being punctual, but rather as the ability to anticipate when a service would arrive and to receive timely, trustworthy information when disruptions do occur.

Within these hierarchies, the MRT and LRT consistently occupied the top tier. Respondents described these systems as predictable and low effort, requiring little active planning beyond arriving at the station. The visibility of information and high service frequency reduced uncertainty and eased cognitive burden during travel:

"So far, the MRT, we usually don't mind because we can actually see when the next train is, and it's not that long of a wait." (R29)

"LRT is always traveling at high frequency. So, from one train to another is about three minutes or less." (R4)

By contrast, respondents widely frame KTM as unreliable. Even when timetables were available, respondents stressed that information was often inaccurate, or announced too late to be useful:

"Because if we are talking about availability, there should be a train at this hour yesterday, but it never came… we can follow their timetable, but it doesn't mean they follow their own schedule." (R6)

"It's unreliable because you don't know if the train is going to come in early or late." (R29)

Respondents also consistently deem buses as being unreliable. Respondents associated bus travel with compounded uncertainty coming from exposure to traffic conditions, irregular arrivals, and limited real-time information. For many, this made busses an unsuitable option for time-sensitive trips:

"Apa yang I tak suka about public transport… buses stuck in traffic jams." (R17)

"Basically, you take public transport because you don't want to get stuck in traffic jams. But sometimes when you take a bus, you still get stuck in traffic jams." (R11)

"Normally I don't take the bus to MRT station, sebab tak reliable." (R31)

Importantly, these hierarchies functioned as sticky reputations. Sticky reputations come about from repeated experiences of unreliability that erode trust in particular modes, in ways that persisted beyond any single incident. Once a system was perceived as unreliable, respondents adjusted their behaviour to avoid it, even when services may have improved. Reliability in this sense, was cumulative and reputational.

Spatial context further shaped how these hierarchies were navigated. Urban commuters, who typically had access to multiple alternatives, described actively ranking modes and switching between them if disruptions occur. In contrast, sub-urban commuters often expressed resignation, describing constrained choice sets and the necessity of enduring unreliable services:

"First choice, I will take the bus to my workplace. Second choice, if it's late I will take Grab. And then, third choice I can walk too." (R28)

"Knowing that living [in sub-urban area], we only have KTM. So, I have to like research on different types of public transport options." (R29)

Together, these accounts show that perceptions of reliability are not mere reflections of operational performance. They are shaped by information transparency, historical experience, and spatial constraints. These influence how commuters plan, avoid, or adapt their everyday mobility practices.

4.1.5. First-and-Last Mile Frictions and Spatial Inequity

Respondents consistently described the first-and-last mile as a decisive component in the experience of using public transport. Crucially, these experiences are qualitatively different for respondents living in urban areas versus those in the sub-urban areas. Urban respondents generally described greater walkability and multiple connection options, while sub-urban respondents face limited connectivity and a stronger reliance on private vehicles to access their nearest station. In this sense, first-and-last mile conditions functioned as a gatekeeper to the wider public transport system.

For respondents who relied on walking, the physical condition of the pedestrian environment played a critical role in shaping both perceived safety and willingness to use public transport. Poor lighting, lack of crossings, and exposure to traffic acted as sources of risk and discomfort, particularly when it is dark:

"There's technically no crossing, so everyone just walks to the bus stop on the other side. But going back, if I'm coming from the station, the bus stops at the bus stop on the opposite side. So, the issue I would say with that one is there's no proper way to get across. And it's dark." (R9)

"There is no pavement so I'm literally walking on the side of the road. Because the path is quite dark at night, so I remember having to use my phone's flashlight, not just to see where I was going, but to make sure cars could see me and wouldn't hit me." (R1)

"There is not much of a walkway between my home and the station. So, sometimes it can be a bit dangerous. I would prefer if it's a proper paved walkway." (R25)

"Shaded only from LRT station walkways to a certain extent, and not to my residential area." (R12)

These accounts indicate that walking is more than a neutral connector between spaces. Under certain conditions, it can be a point of vulnerability. Inadequate pedestrian infrastructure amplified perceptions of danger and eroded confidence in using public transport, even when rail services themselves were perceived to be reliable.

Furthermore, some respondents report that they go to extreme lengths to reach their nearest train station or bus stop. These cases force the use of private vehicles even before the public transport journey began:

"It's impossible for me to walk from my residential area to the station – 45 minutes!" (R5)

"I still have to drive or ride a bike to the station." (R6)

"Plans depend on the accessibility; you just accept you're not going if you can't get there [by public transport] unless by Grab." (R27)

References to ride-hailing services such as Grab above illustrates the absence of viable first-and-last mile connections. In these cases, ride-hailing functioned as a compensatory mechanism for infrastructural gaps, shifting additional costs and stress onto commuters.

Still others emphasized sheer impracticality of relying on public transport when connectivity was weak:

"There are not enough buses to go around Klang Valley." (R25)

"The connectivity is not reliable and not so convenient." (R33)

For these commuters, public transport was not experienced as a flexible or enabling option. It is something bounded by structural conditions beyond their control. Weak first-and-last mile connections translated into longer access times, higher ancillary costs, and fewer recovery options when disruptions occurred. These spatial frictions shaped how commuters evaluate the viability of public transport in their everyday lives, often returning to continued reliance on private vehicles, despite expressing a preference for using public transport.

4.1.6. Interchange and Station Design as Friction Points[64]

Interchanges emerged as moments of heightened friction within commuters' journeys. Respondents highlighted that walking distances between interchange stations, station layouts, and quality of amenities as factors that either enhance or diminish their satisfaction. These micro-frictions were especially salient at major nodes where different systems meet:

"If I had to change at this LRT station, the walk from LRT station to the MRT was quite far… it's a lot warmer." (R1)

"And also, because as you know, the Masjid Jamek, the transfer line is very long. Like, to walk the transfer route is very long." (R22)

"Once you arrive at the KTM platform, you have to go up the escalators to get out of KTM gates and then go down again, while those in one of the platforms, you could've just easily exit at the same level but it was gated off, so you have to do that up and down escalator manoeuvre just to exit the station." (R29)

Across accounts, interchanges were described as physically tiring and mentally draining, particularly when compounded with time pressure or uncertainty about onward connections. One respondent expressed a clear threshold beyond which transfers become untenable as part of daily routine:

"But more than one switch, I think I won't – once in a while you can, but I won't do that every day." (R14)

For many respondents, interchanges functioned as breaking points in otherwise manageable journeys. When transfers demanded excessive physical effort, or cognitive attention, public transport was no longer perceived as sustainable for everyday use.

[64] Friction points here refer to design elements along the operational environment that can become an annoyance to a commuter's journey. Over time, if these experiences accumulate or if one singular severe experience occur, this can influence their decision to set public transport aside altogether.

4.1.7. Weather, Comfort and Amplified Frictions

Malaysia's tropical climate, characterized by heat, humidity and sudden downpours also weigh on respondents' experience with the use of public transport. Respondents emphasized that Malaysia's weather conditions intensified other frictions such as long walks, uncovered interchanges, and unreliable waiting times. For example, while respondents find that public transport is a viable alternative to driving, there were instances in which weather conditions exposed respondents to discomfort:

"Besides the uncomfortable seat, the bus shelter's roof is also very high. The rain and sun will come through." (R2)

"…when it rains, especially in Kwasa Sentral, dia tempias. Very teruk juga lah, even up to the platform… So slippery, very not safe" (R23)

"…if I jalan atas the road, dia bertakung juga lah" (R23)

Exposure to rain and heat during access and waiting stages was frequently cited as a source of discomfort, particularly when shelters and walkways were poorly designed or maintained. In contrast, once inside vehicles or covered stations, air-conditioning was consistently framed as a significant source of relief:

"When you go inside the bus right, there are aircons and you feel very comfortable. So, I won't sweat anymore." (R13)

"If you enter public transport, it's cold. So it's very comfortable. Although, if you stand, you won't feel hot most of the time" (R26)

Waiting environments played a decisive role in shaping overall travel experience. While some respondents described positioning themselves standing directly under the fan at the rail platform to cope with the heat, others express discomfort at the bus stop due to direct exposure to the sun or rain.

Importantly, weather was not a standalone factor. Instead, weather conditions amplified existing design limitations such as uncovered and broken walkways and exposed platforms, resulting in perceived inconvenience, discomfort and concerns for physical safety among commuters. When first-and-last mile links were equipped with shaded walkways or when stations offering adequate cover, the burden was reduced. Conversely, where exposure to the elements was high, discomfort compounded perceptions of inconvenience, risk and bad experience.

4.1.8. Social Discomforts in Public Transport[65]

Another theme that surfaced concerned how commuters experienced social discomfort in shared public transport spaces. Respondents described moments of unease arising from close physical proximity, prolonged eye contact, and differences in norms of personal space, particularly during peak hours. These experiences were most frequently articulated by female respondents and were framed in relation to feelings of vulnerability and safety rather that inconvenience.

Several respondents explicitly associated these discomforts with the presence of foreign workers in public transport settings. Respondents described experiences of being stared at, unwanted physical contact in crowded vehicles, and heightened alertness when navigating shared spaces:

"They stare a lot at you, especially when you're a female. You get a lot of stares, which makes you feel uncomfortable" (R3)

"Apart from Malaysians, there are foreigners who are in the bus as well… they tend to, like, are always touching people in the bus. So that is why, whenever I get into the bus, I'll go straight to the behind and take the corner seat, so that I won't get attacked by anyone." (R18)

These accounts indicate that public transport is not only an infrastructural system, but also a social arena where diverse norms are lived out, negotiated and sometimes contested. What respondents interpret as 'staring', may reflect different cultural expectations of eye contact.

For female respondents, these social discomforts were closely intertwined with concerns about personal safety. Being stared at, accidentally touched, or navigating crowded carriages were not perceived as mere inconveniences, but as potential threats to be avoided. In response, women described adopting defensive strategies such as choosing corner seats, positioning themselves near other women, seeking the presence of auxiliary police, or using women-only coaches. Some respondents also reported adjusting travel times, routes, or modes to avoid crowded conditions altogether.

Taken together, these findings suggest that the social experience of a commuter plays a role in shaping perceptions of safety and viability of public transport, particularly for those who already feel vulnerable within the shared commuting spaces.

[65] These perceptions are reported here as part of respondents' lived experiences, not as objective truths. They are included to illustrate how public transport functions as a social arena of cross-cultural encounter, while recognizing that such views risk reinforcing stereotypes if read uncritically. See Section 3.8.

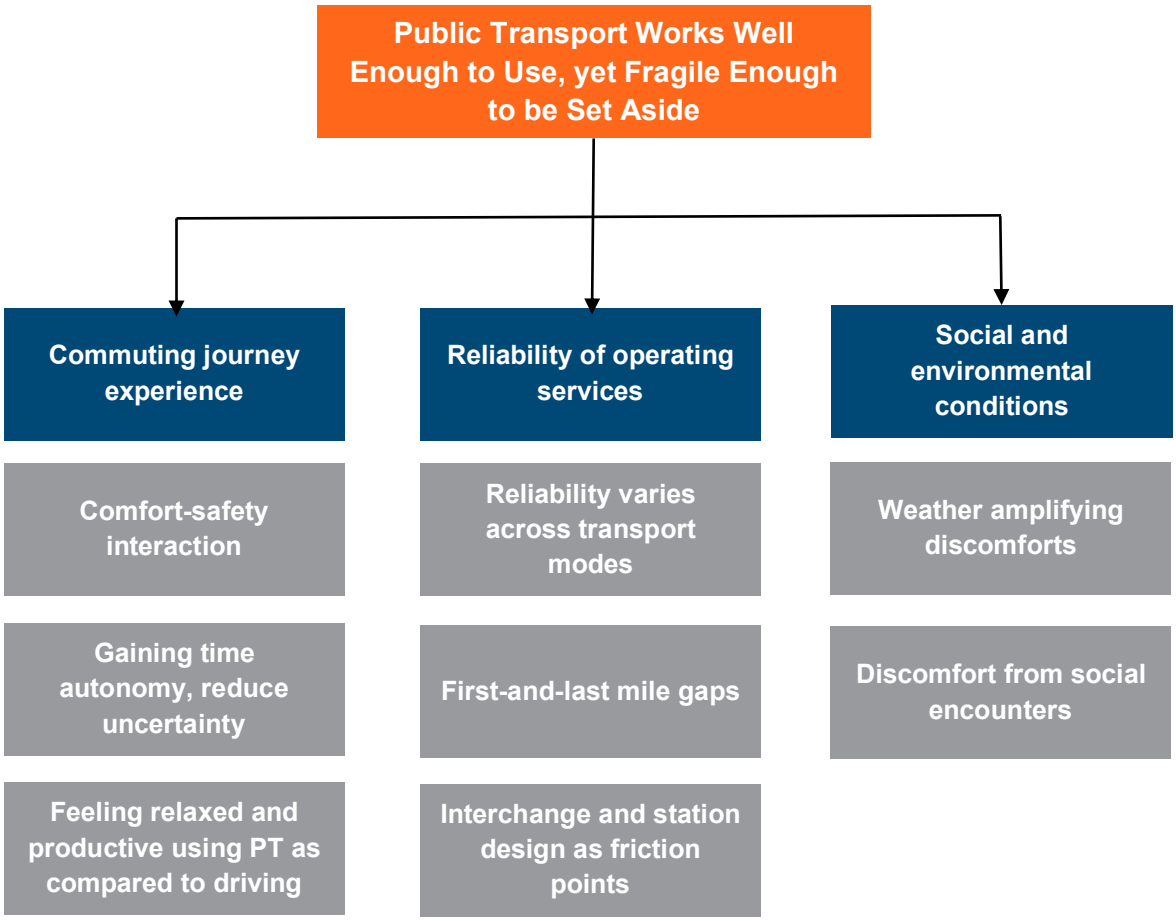
5. Discussion

In this qualitative study, a single overarching insight emerged: "**public transport works well enough to use, yet fragile enough to be set aside**." Commuters do not reject public transport outright. Rather, they engage with it conditionally, sustaining use only as far as everyday frictions remain within tolerable bounds.

This conditionality is shaped by three interrelated domains of experience. First, the **commuting journey experience** itself matters. Commuters prioritize comfort and safety across the entire trip, value ability in managing time without constant uncertainty, and often experience public transport as offering mental relief as compared to driving. Second, the **reliability of the operating services** is central. Respondents often compare between modes based on predictability, the feasibility of first- and last- mile connections, and whether station layouts and interchanges reduce or compound comfort. Third, **social and environmental conditions** influence how public transport is evaluated, as whether exposure and encounters in shared public spaces shape perceptions of comfort, safety and acceptability.

This is visualized in a final thematic map, which is crafted after conducting the thematic analysis[66], as depicted in Figure 6.

Figure 6: **Final thematic map of the qualitative study**



[66] Braun and Clarke (2006)

This thematic map explains how transport mode choice emerges from an interplay between behavioural factors and subjective preferences against the operational environment within which the commuters are embedded within. Public transport remains usable in principle, but its viability in practice is continuously negotiated through lived experience.

5.1. Public Transport is Operationally Functional

The findings converge on a central insight: Public transport in Greater KL is operationally functional, but only conditionally so. Respondents continued to use the system when frictions related to time, safety and comfort remain within tolerable limits. However, once these limits were exceeded, respondents were inclined to reassess the system as no longer workable for everyday use. This aligns with behavioural research on public transport and mode choice of a commuter[67].

Across interviews, respondents consistently framed public transport system in GKL is a viable option to move around. They acknowledged its role in enabling mobility across the city yet engaged with public transport selectively and strategically. This echoes behavioural research on how commuters rely on public transport strategically rather than habitually[68]. Respondents were in favour of public transport when it supported autonomy, predictability and personal comfort, but showed disengagement when cumulative frictions eroded trust in the system.

This helps in understanding why ridership remains uneven despite substantial investment in public transport infrastructure. When the needs and standards of commuters are challenged by the discussed friction points, public transport is functionally useable but behaviourally fragile. Continued use depends not only on infrastructure, but also on the system's ability to cater to attributes that sustain confidence, autonomy, safety and comfort across everyday journeys.

5.2. Interpreting the Lived Experience

Public transport, in this sense, is both an infrastructural system and also a social sphere where the interplay between norms, identities, and anxieties intersect and interact. Commuting often involves close physical proximity with strangers, heightening awareness of differences in social expectations and conduct. As a result, mobility is not only a technical experience of movement, but also a socially negotiated one that requires compromises in personal comfort and convenience. These social dynamics shape how commuters interpret usability of public transport in everyday trips.

Everyday mobility choices, therefore, cannot be reduced to cost or infrastructure provision alone. Instead, these experiences are also structured by gendered considerations. Women's narratives consistently centred on vulnerability, highlighting the close relationship between comfort and safety[69]. Their accounts show how the everyday act of commuting is shaped by a heightened awareness of risk, particularly in crowded or poorly monitored spaces.

Accounts describing long first-and-last mile journeys and unsafe walking conditions further point to entrenched spatial inequalities. Sub-urban residents face longer travel times, fewer modal options, and higher dependence on more costly or unsafe access solutions. When the system fails,

[67] Ambak et al. (2016); Tun Ahmad Adlan Asma'an et al. (2024)
[68] Haliza Mohd Zahari et al. (2023)
[69] Yong Adilah Shamsul Harumain et al. (2024)

the time and financial burden they bear are disproportionately heavier as compared to urban residents with more than one alternative. While urban commuters have multiple stations within reach, they still encounter barriers such as exposure to heat and rain, unsafe walkways, poor lighting conditions, and even major highways separating homes from nearby stations. For sub-urban commuters who might live further away from the main transport nodes, the first-and-last mile problem shifts away from walkability to distance, rendering walking infeasible, thus reinforcing heavy reliance on private vehicles or other modes of road transport. Several respondents value Park n Ride facilities at train stations. This indicates that for some commuters, driving forms an integral part of their first-and-last mile journey.

For some respondents, social discomfort was explicitly associated with encounters involving foreign workers in public transport spaces. These accounts often referred to differences in norms around physical proximity, eye contact, body odour, or conduct in crowded settings. In such moments, the presence of foreign workers influenced commuters' symbolic interpretation of public transport, particularly in relation to feelings of safety[70]. Crucially, these interpretations were not framed as objective assessments of risk, but as affective and situational responses that emerged within crowded and enclosed environments. While these perceptions cannot be taken at face value as objective realities, they matter because they shape how respondents experience public space and assign value to different modes[71].

More broadly, acknowledging that different groups of people have different social behaviours is a crucial step toward understanding. While public transportation facilitates the movement of people, it is invariably a shared social space as well, where diverse norms and expectations intersect. When social expectations clash with social etiquettes, commuters may be inclined to be more reluctant to use public transport. Why continue to be in a space where your expectations are consistently frustrated when you can simply avoid these by driving? These frictions highlight a broader picture in the integration of diverse social etiquettes in public spaces. While public transport must be *non-rivalrous* and *non-excludable*, because it is public good[72], it still requires negotiation over what kinds of practices are socially acceptable.

And even at a broader level, these accounts also raise the question of cultural adaptation in shared spaces. Public transport demands inclusiveness from all users, but it also exposes differences in social norms that can generate friction if left unaddressed. Norms surrounding personal space, eye contact, and demeanour differ across cultural contexts. And when these differences interact in dense and enclosed settings, discomfort may be amplified. From this perspective, adaptation is best understood as integration, rather than assimilation: a mutual process supported by orientation, communication, and system design that reduces overcrowding and ambiguity in shared spaces. In the absence of integration efforts, social frictions are more likely to be magnified and unfairly projected onto visible migrant groups, shaping perceptions of public transport in ways that extend beyond its technical performance.

Beyond the social and spatial dimensions, time autonomy emerged as a particularly salient determinant shaping commuters' experience. Respondents repeatedly emphasized that the psychological burden of planning around unreliable schedules eroded their sense of control.

[70] Ashmore et al. (2019)
[71] Shaker et al. (2022)
[72] In economics, a public good is defined if and only if they are both **non-rivalrous** (can be consumed by everyone without depleting the available resources), and **non-excludable** (should be accessible to everyone). In everyday terms, this means public transport should be available to everyone at once without taking away another person's opportunity to ride, and without being reserved only for a select group.

While driving in congestion is stressful, it nevertheless confers control over timing of departure, route, and pacing. By contrast, public transport cedes control to opaque timetables and systems that are prone to disruptions. For commuters, time autonomy is important as the ability to decide when and where to commute provides them with benefits such as reduced stress, better daily planning and greater flexibility in managing work and family responsibilities. That said, their total time spent driving can be better utilised during a public transport journey. For example, commuters can relax, scroll through social media, read, and do whatever they deem more productive. In this sense, mobility is not only about travel time per se, but from the perspective of the commuter, it includes the capacity to command one's own time[73]. Respondents' reflections show how the lack of time autonomy bleeds into other aspects of the commuters' daily lives. For example, a sudden delay in your train service, through no fault of your own, could affect your entire schedule (and mood) for the rest of the day.

Another layer shaping mode choice is the reputational hierarchy among public transport modes. Respondents consistently ranked the MRT and portions of the LRT as more reliable, while KTM and buses were broadly perceived as unreliable. These reputations are 'sticky', formed through accumulated experiences of predictability, information clarity, and repeated service disruptions rather than through isolated incidents.

For commuters, gaining trust in a transport mode not only depends on its technical performance, but also on their cognitive memories of the mode's reliability. If the system fails often, commuters begin to give up. They shift into defensive heuristics by avoiding certain modes, adding buffer time, or defaulting to private cars, even when service has improved over the years.

Viability is not a neutral function of system capacity alone, but the contingent outcome of how infrastructure is socially experienced in everyday life. How people interpret, adapt and make sense of public transport through their commuting journey, reliability of operating services, and external conditions shape whether they view the system as operationally functional.

5.3. Contributions to Theory

The findings contribute to behavioural theory by providing qualitative evidence on how COM-B and TPB operate in practice. Within the COM-B framework, opportunity constraints dominate in shaping behaviour. Unsafe walking conditions, poorly lit stations or bus stops, unreliable services, or impractical first-last mile connections directly constrained commuters' ability to use public transport. Motivation remained important, encompassing both reflective trade-offs such as cost and time, and affective states such as relief from driving, stress, discomfort in cross-cultural encounters. For example, when there are prolonged delays or when public transport spaces are unsafe, this can weaken the affective motivation of commuters to use the system. Capability played a subtler but non-trivial role, reflected in commuters' ability to navigate complex interchanges or interacting with real-time information on digital applications. Taken together, these findings underscore the need to treat the dimensions within the COM-B model as dynamically interacting, rather than analytically discrete.

Within the TPB framework, attitudes towards public transport are generally positive, mainly driven by affordability and relief from driving stress. However, subjective norms appear weaker. Few respondents reference peer or societal expectations, showing that the mobility culture in our

[73] Beirão and Cabral (2007)

public transport spaces reflects both the commuter's pragmatism and social signalling. In contrast, PBC is consistently undermined through unpredictable services, safety concerns, and discomfort, all of which reduces the commuters' sense of agency. These finding extends the TPB by highlighting the centrality of personal control as a lived and experiential condition, suggesting that PBC may be more fragile and context-dependent than typically assumed.

Beyond these frameworks, the findings align with wider literatures on time sovereignty[74], reputational heuristics[75] and gendered space[76], extending the analytical vocabulary of transport studies. Commuters' concerns on time autonomy, trust in specific modes and the gendered vulnerabilities of shared public space indicate that mobility choices are not only shaped by rational calculations but also by the various dimensions of difference and identity[77]. When mobility is also seen as a socially mediated experience, aspects of behaviour that conventional behavioural models often overlook are emphasised.

This study also contributes to the limited qualitative literature on public transport use in Malaysia. While existing Malaysian studies have largely focused on service quality and satisfaction perceptions[78] or stated preferences[79], this study foregrounds commuters' lived experiences and decision-making processes. By examining how comfort and safety, time autonomy, reliability and social encounters are negotiated in everyday mobility, the findings help explain why expanding our public transport infrastructure alone may not translate into sustained or preferred usage.

The results suggest that respondents engage in a nuanced interplay between instrumental rationalities and value-based considerations when making travel mode choices. Public transport may be viable in functional terms, but continued use depends on whether in aligns with commuters' standards of acceptability, autonomy, and everyday well-being.

5.4. Policy Implications

The findings yield implications for both short-term interventions and longer-term reforms. Quick wins target the everyday frictions repeatedly cited by commuters. These include the provision of clearer and more reliable real-time information systems to address, even eliminate commuter uncertainty, the provision of shaded and continuous walkways to reduce climate exposure, more auxiliary policing or visible staff presence to enhance perceived safety. Such measures signal responsiveness and can begin to enhance trust with relatively modest investment.

Systemic reforms demand structural changes. Extending first-and-last mile coverage is critical to address sub-urban inequities. Without this, residents remain penalized by long, costly, and risky connections to access the core network. Reputational repair is equally central. KTM and bus services in particular, require consistent demonstrable improvements, supported by communication strategies that acknowledge and communicate breakdowns, downtimes or interruptions as soon as they happen. The key is to embed the commuter experience as a central performance metric. Beyond ridership numbers, this would align operational priorities with the lived realities of those who use the system.

[74] Chou et al. (2025)
[75] Beirão and Cabral (2007)
[76] Yong Adilah Shamsul Harumain et al. (2024)
[77] Shaker et al. (2022)
[78] Rohana Sham et al. (2024); Ahmad Nazrul Hakimi Ibrahim et al. (2021)
[79] Tun Ahmad Adlan Asma'an Jamaluddin et al. (2024); Ambak et al. (2016)

The social dimension must also be recognized. Public transport is not only a mobility system but a site of diverse encounters. Inclusive design, orientation programmes, and communications campaigns that normalize diversity can help mitigate stigma, while reducing opportunities for misinterpretation across diverse norms.

Taken together, these implications suggest that ridership growth would hinge not only on the continued expansion of infrastructure and the improvement of service quality, but also equally on restoring autonomy, dignity and trust to the everyday commuter experience. Without attention to these dimensions, commuters' ambivalence will persist. And this would undermine our longer-term national mode shift aspirations.

5.5. Limitations

This study was deliberately scoped to choice riders – individuals with access to both public and private modes of transportation. Focusing on this group allowed us to shed light on behavioural trade-offs and conditional mode choice. However, their experiences do not represent captive riders, nor people with disabilities, nor individuals who rely exclusively on private vehicles, all of whom face distinct constraints. The analysis prioritized saturation of experiential patterns rather than statistical representativeness. As such, the findings are not intended to be population-representative, but to offer depth and analytical insight into how public transport is evaluated in everyday decision-making.

Researcher positionality also warrants explicit acknowledgement. Interviews were conducted by members of the research team with diverse disciplinary backgrounds (anthropology and sociology, data science, etc.), and with varied commuting practices. As relatively young Malaysian researchers, our social position shaped the rapport built with respondents and the interpretive lens through which accounts were understood. For instance, interviewers who themselves relied on rail services were more attuned to issues of punctuality and interchange design, whereas those who frequently drove as well could empathize more with comparisons to driving stress. These positionalities influenced interview dynamics, probing strategies and analytical emphasis.

To address this, reflexive practices were systematically embedded throughout the research process. Field notes captured both the descriptive observations, but also our own emotional reactions and perceived biases. Fortnightly team debriefs allowed a comparison of interviewer experiences and calibration of probing strategies. We hope that such practices enhance credibility by making transparent how findings were co-developed.

Limitations also arise from recruitment strategies. Recruitment via social media inevitably produced a sample skewed towards digitally connected populations. In addition, recruitment materials were disseminated only in the English and Malay languages. The study did not capture the voice of captive riders, disabled commuters, or commuters who solely drive cars, all of which face distinct constraints.

Furthermore, reporting respondents' discomfort with foreign workers carried ethical risks. We approached this reflexively and analytically, making clear that these were perceptions shaped by cultural differences, overcrowding, and gendered vulnerability, but not as objective truth. Surfacing these tensions is not an endorsement of any views, but an attempt to subject these to critical scrutiny. Ignoring them would risk leaving influential but unexamined perceptions intact.

By making these dynamics visible, the study aims to contribute to more informed and inclusive discussions of public transport as a shared social space.

6. Conclusion

The study shows that public transport in Greater KL should not be understood through a simple binary of reliable versus unreliable, but as conditionally viable. Commuters are in favour of using public transport when conditions of safety, predictability, and comfort are met, and are quick to set it aside when frictions accumulate. This conditionality highlights both the fragility and its latent potential. Trust erodes rapidly when everyday disruptions compound, yet the findings also suggest that a systematic reduction of these frictions can unlock a willingness to use public transport that already exists among choice riders.

For policymakers, the implications are twofold. First, while infrastructure expansion and service improvements remain necessary, they are insufficient on their own. The decisive factor that shapes human behaviour is often embedded in everyday frictions: the walk to the station, the reliability of real-time information, or the sense of dignity within a crowded coach. Second, ridership growth will depend as much on the social life of transport as on its engineering. Public transport is a site where gendered vulnerability, diverse encounters, and sticky reputational memory are lived and negotiated daily. Ignoring these dimensions risks perpetuating commuter ambivalence and undermining longer-term mode-shift objectives.

Viewed in this way, investing in public transport should be synonymous with investing in autonomy, dignity and trust, recognizing that commuter experience is simultaneously infrastructural and social at the same time. Strengthening the system requires attending to both dimensions. Doing so would not only improve ridership, but also contribute to a more inclusive, equitable and loveable GKL.

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8. Appendix

8.1. Characteristics of Participants

Table 3 summarizes the anonymised participant characteristics, according to their gender, which area they live, their total commuting time and how many transfers they have made in their commuting journey.

Table 3: Characteristics of participants

ID	Gender	Age	Employment status	Neighbourhood type	Total travel time (minutes)	Number of transfers
1	Female	31	Worker	Urban	60	3
2	Male	62	Worker	Urban	60	2
3	Female	44	Worker	Sub-urban	55	1
4	Female	34	Worker	Sub-urban	60	2
5	Male	33	Worker	Urban	96	3
6	Male	37	Worker	Sub-urban	210	2
7	Male	22	Student	Sub-urban	188	4
8	Male	40	Worker	Sub-urban	105	2
9	Male	19	Student	Sub-urban	70	2
10	Female	25	Student	Urban	70	3
11	Male	33	Worker	Urban	70	2
12	Female	27	Worker	Sub-urban	95	1
13	Female	25	Student	Urban	36	1
14	Male	43	Worker	Sub-urban	74	2
15	Male	26	Worker	Sub-urban	62	1
16	Female	70	Retiree	Urban	134	2
17	Male	35	Worker	Urban	118	3
18	Female	22	Student	Urban	90	2
19	Male	20	Student	Urban	37	2
20	Female	30	Worker	Urban	100	3
21	Female	28	Worker	Sub-urban	132	4
22	Female	28	Worker	Sub-urban	48	2
23	Female	30	Worker	Sub-urban	136	2
24	Female	23	Student	Sub-urban	105	3

25	Male	40	Worker	Urban	45	2
26	Male	29	Worker	Urban	120	3
27	Male	29	Worker	Urban	60	2
28	Female	24	Worker	Sub-urban	30	1
29	Female	29	Worker	Sub-urban	120	2
30	Male	30	Worker	Sub-urban	120	2
31	Male	29	Worker	Sub-urban	58	2
32	Male	30	Worker	Sub-urban	75	2
33	Female	26	Worker	Sub-urban	100	1
34	Male	29	Worker	Sub-urban	100	2

8.2. List of Interview Questions

To note, the list of these interview questions (**Table** acts as a guideline and not strictly to be followed, depending on the researcher's probes and participants responses. In addition to this, we have also translated the questions to Malay language (**Table** to minimize instances of on-the-spot translation.

Table 4: List of interview questions.

Q-ID	Question
D1	Could you describe a typical journey to your workplace/school/regular destination using public transport? Include the time you leave home, transfers, and arrival time?
D1a	How do you usually get from your house to the nearest station or bus stop? (e.g. walk, drive, motorcycle, e-scooter, Grab)
SQ1	What makes you feel comfortable when taking public transport?
SQ1a	What makes you feel uncomfortable when taking public transport?
SQ2	What makes you feel safe during your journey, both inside the vehicle and around the station/stop?
SQ2a	What makes you feel unsafe during your journey, both inside the vehicle and around the station/stop?
SQ3	What are your thoughts on the punctuality of the bus/train you usually take? What about its reliability?
SQ3a	Follow-up if a delay is mentioned: What happens when there is a delay? How do you respond?
SQ4	Let's say the current travel time from your origin to destination takes around x minutes. What would you consider a more acceptable travel time?
SQ5	Have you experienced long waiting times? If yes, can you recall what caused them?
SQ5a	How did it affect your decision to continue using public transport?
SA1	Do you make travel plans before making your journey? How do you plan?
SA1a	Follow-up: Do you trust the information provided by the travel apps?
SA2	What, in your view, would make your commuting journey more convenient?
SA3	What do you think about the service facilities (e.g. toilets, surau, ticketing kiosks, seats, information counter, lifts and elevators, shaded roofs etc.) at the train stations/bus stops?
SA4	How much do you spend on one trip?
B1	Do you see public transport as a viable alternative to driving? Why or why not?
B2	Do you think there are any stereotypes or social perceptions about using public transport? Have you ever experienced this yourself?
B3	Name 3 things that you like/dislike the most about public transport.
B4	What motivates you to take public transport?
C1	What are your overall thoughts about public transport in Klang Valley today?
C2	If you could improve one aspect of the public transport system, what would it be?
C3	Is there anything else you'd like to share about your experience using public transport?

Table 5: Malay translation of the interview questions.

Q-ID	Soalan
D1	Boleh anda menceritakan perjalanan biasa anda menggunakan pengangkutan awam ke tempat kerja/sekolah/destinasi biasa? (Masukkan sekali masa meninggalkan rumah, pertukaran, dan masa ketibaan?
D1a	Bagaimanakah cara anda pergi ke stesen atau hentian bas terdekat dari rumah anda? (cth. berjalan, memandu, motosikal, e-skuter, Grab)
SQ1	Apakah yang membuatkan anda rasa selesa apabila menggunakan pengangkutan awam?
SQ1a	Apakah yang membuatkan anda rasa tidak selesa apabila menggunakan pengangkutan awam?
SQ2	Apakah yang membuatkan anda rasa selamat ketika dalam perjalanan, termasuklah dalam pengangkutan awam dan di sekitar stesen/hentian?
SQ2a	Apakah yang membuatkan anda rasa tidak selamat ketika dalam perjalanan, termasuklah dalam pengangkutan awam dan di sekitar stesen/hentian?
SQ3	Apakah pendapat anda mengenai ketepatan masa bas atau tren yang anda selalu guna?

	Bagaimana pula dengan kebolehpercayaannya (reliability)?
SQ3a	Soalan susulan jika kelewatan dinyatakan: Bolehkah anda ceritakan situasi kelewatan tersebut? Bagaimanakah cara anda 'respond'?
SQ4	Katakan masa perjalanan semasa anda dari tempat asal sehingga ke destinasi mengambil masa x minit. Apakah masa perjalanan yang anda rasa boleh diterima?
SQ5	Adakah anda pernah mengalami masa menunggu yang lama? Jika ya, boleh anda ingat balik apa sebabnya?
SQ5a	Bagaimana situasi tersebut memberi kesan kepada keputusan anda untuk terus menggunakan pengangkutan awam?
SA1	Adakan anda membuat pelan perjalanan sebelum memulakan perjalanan? Bagaimana anda berbuat demikian?
SA1a	Soalan susulan: Adakan anda percaya maklumat yang dibekalkan oleh aplikasi perjalanan tersebut?
SA2	Pada pendapat anda, apakah aspek yang boleh membuatkan perjalanan anda lebih mudah?
SA3	Apakah pendapat anda mengenai kemudahan (tandas, surau, kaunter tiket and informasi, tempat duduk, lif dan eskalator, bumbung dll.) yang sedia ada di stesen tren / hentian bas?
SA4	Berapa ringgit yang telah anda belanjakan dalam satu perjalanan?
B1	Adakah anda melihat pengangkutan awam sebagai alternatif yang sesuai jika dibandingkan dengan memandu? Mengapa?
B2	Adakah anda rasa terdapat stereotaip atau tanggapan awam mengenai penggunaan pengangkutan awam? Adakah anda pernah mengalaminya?
B3	Namakan 3 benda yang anda suka/tidak suka mengenai pengangkutan awam.
B4	Apakah perkara yang memotivasikan anda untuk menggunakan pengangkutan awam?
C1	Apakah pendapat keseluruhan anda mengenai sistem pengangkutan awam di Lembah Klang pada hari ini?
C2	Jika anda boleh menambahbaik satu aspek dalam sistem pengangkutan awam, apakah aspek tersebut?
C3	Ada apa-apa lagi yang anda mahu berkongsi mengenai pengalaman anda menggunakan pengangkutan awam?

8.3. Informed Consent Form

To note, this consent form appeared in the pre-screening surveys and is given again to the selected participants during the interview sessions.

INFORMED CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY

Title of Research: Decoding Urban Mobilities in Greater Kuala Lumpur: A Data-Driven Approach to Understanding Spatial Utilization & Public Transportation

Principal Researcher:
Gregory Ho Wai Son
Khazanah Research Institute

Introduction

You are invited to participate in a research study conducted by Gregory Ho Wai Son of Khazanah Research Institute ("**KRI**"). This form provides important information to ensure that your participation in this research study is voluntary and informed. Please read the following information carefully. Any clarification required may be directed to the researchers.

Participation in this research study is entirely voluntary. By proceeding with this research study, you are indicating your informed consent to participate in this research.

Background and Purpose of this Research Study

Greater Kuala Lumpur, as the main economic and administrative hub in Malaysia, faces significant challenges related to urban sprawl, public transportation inefficiencies and issues of regional development differences.

The purpose of this research study is to examine the factors contributing to public transport inefficiencies and to examine interventions aimed at increasing ridership.

One of the main research objectives is to understand the behavioral drivers and individual preferences that influence the choice of mode of transport.

Research Study Procedure

If you decide to participate, you will first complete a pre-screening survey. The pre-screening survey is expected to take approximately 5 minutes. If deemed suitable for this research study, you will be invited to participate in an interview session.

The interview will cover your lived experience with public transport, your perceptions of its service quality, accessibility and your motivations for using it. The interview session is expected to take approximately 60 minutes.

With your consent, the interview will be audio-recorded for the purposes of transcription and analysis.

Voluntary Participation and Withdrawal

Your participation is entirely voluntary. You may choose not to take part or to withdraw from this research study at any time without any consequences. You are also free to skip any question that you do not feel comfortable answering.

Participation Criteria

To be eligible for this research study, participants must meet all the following criteria:

a) living in the Greater Kuala Lumpur/Klang Valley region;
b) be aged above 18 years and above;
c) be a Malaysian citizen; and
d) have used both private vehicles (e.g. driven a car/motorcycle) and public transport (e.g. LRT, MRT, KTM, RapidKL bus etc.) in the past thirty (30) days.

You will be excluded from this research study if you have never used public transport or if your use of public transport is solely due to the lack of alternative transportation options (e.g. you do not own a car, do not hold a driving license and do not use taxi services such as Grab).

Potential Risks

There are no foreseeable risks associated with participating in this research study. However, you may experience some psychological discomfort when answering questions related to your perceptions of public transport.

Should you experience any emotional discomfort or fatigue while participating, please be assured that you have the right to pause or withdraw from participation of this research study at any time, without any repercussions.

Potential Benefits

Your participation will help researchers gain a better understanding of the factors contributing to public transportation inefficiencies. In addition, your responses will provide valuable insights that may inform efforts to improve public transport services in Malaysia.

Confidentiality

All responses will be kept strictly confidential and used solely for the purposes of this research. Data collected will be anonymized and securely stored in compliance with the Personal Data Protection Act 2010 of Malaysia. Your identity will not be disclosed in any reports or publications related to this research study.

Compensation

As a token of appreciation for your time and effort in participating in this research study, you will receive RM50.00 in the form of Touch N' Go credits upon completion of the interview, at the conclusion of the interview. KRI shall not be responsible for any other costs howsoever arising from your participation in this research study.

Rights as a Participant

As a participant, you have the right to be informed about the data handling process, access the data collected about you, request rectification if any data held is incorrect or inaccurate and the request the deletion of your data after it has been used for data analysis.

Contact Information

If you experience any discomfort during this study or have any questions about this study or your rights as a participant, you may contact the researchers at the following details:

a) Gregory Ho Wai Son
Research Associate
Khazanah Research Institute
gregory.ho@krinstitute.org
019-3175587

b) Shukri bin Mohamed Khairi
Research Assistant
Khazanah Research Institute
cra.shukri@krinstitute.org
011-33741240

Consent Statement

If you wish to participate in this research study titled ***Decoding Urban Mobilities in Greater Kuala Lumpur: A Data-Driven Approach to Understanding Spatial Utilization & Public Transportation***, please sign below as an indication of your consent to participate:

1. I confirm that I have read and understood the information provided above and have been given the opportunity to ask questions and discuss this research study.

2. I voluntarily agree to participate in this research study.

3. I understand that I can withdraw from this research study at any time without any consequences.

4. I agree to have my interview audio-recorded.

5. I consent to my personal information being stored for the purposes of this research study with all information collected kept strictly confidential.

6. I understand that my identity will remain anonymous and that any identifying details from my interview will be disguised.

7. I understand that anonymized extracts from my interview may be quoted in future KRI publication.

8. I understand that I will be receiving a copy of this signed consent form.

Signature of research participant

I, the undersigned, confirm my consent to participate in this research study:

_____

Name:
Participant number:
Date:

Signature of researchers

We believe the participant is giving informed consent to participate in this research study.

_____

GREGORY HO WAI SON
Research Associate,
Khazanah Research Institute

Date:

_____

SHUKRI BIN MOHAMED KHAIRI
Research Assistant,
Khazanah Research Institute

Date:

ABOUT KHAZANAH RESEARCH INSTITUTE

The Khazanah Research Institute ("**KRI**"), sponsored by Yayasan Hasanah and Khazanah Nasional Berhad, is a not-for-profit organization incorporated as a company limited by guarantee. The primary objective of KRI is to undertake analysis and research on the pressing issues of the nation and, based on that research, provide actionable policy recommendations. For more information on KRI, please visit www.krinstitute.org.

Among KRI's roles are:

- carrying out rigorous, impartial research and analysis that is founded on facts and data;
- convening workshops, round tables, conferences and talks for subject matter experts, policymakers, thought leaders and interested members of the public, as appropriate; and
- advocating for its research findings and policy recommendations.

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Kuala Lumpur Sentral,
50470 Kuala Lumpur,
Wilayah Persekutuan Kuala Lumpur.

8.4. Interview Guide

1. *Introduction*

   Hello. Thank you for your willingness to join our pilot interview study. Before proceeding with our interview, may we ask for your consent in recording this conversation? This recording will be used for coding and analysis purposes.

   I would like to explain how your data is used and reported, where we will store your data securely and deleted several months after the publication of this paper. Your name will be anonymised, and your participation is voluntary. You may refuse in answering specific questions or withdraw from this study altogether. All your responses will be kept confidential. This means that your interview responses will only be used in this research, and we will ensure that any personal information will not identify you as the respondent.

   Are there any questions before we proceed?

2. *Questions*

   Thank you. So, our interview questions will cover on topics such as on your lived experience in using public transport, your perceptions on the service quality and accessibility of our public transportation system, and your motivations in using public transport.

   a. Could you describe your journey to access public transport from your origin and to your destination?
   b. Do you feel comfortable when taking public transport?
   c. Do you feel safe when taking public transport?
   d. What are your thoughts on public bus/train punctuality and reliability?
   e. Let's say the current travel time from your origin to destination takes around n minutes. Are you satisfied with the current travel time, or what do you think is a good travel time for you? Why?
   f. Have you experienced long waiting times? If yes, can you recall what caused them? How did it affect your decision to continue using public transport?
   g. Do you make travel plans before making your journey? How do you plan?
   h. In general, how can your public transport experience be more convenient for you?
   i. What do you think about the service facilities at train stations/bus stops/stands?
   j. How much do you spend on one trip?
   k. Do you think public transport is a feasible alternative to cars?
   l. Do you think there are stereotypes associated with public transport?
   m. Name 3 things you like/hate the most about public transport?
   n. What motivates you to take public transport?

3. *Closure*

   a. What do you think about public transport in general and why?

b. Is there anything more you would like to add?
c. If you could change one thing about our public transport ecosystem to make things better for you, what would it be?

That's it for our interview session for today. Thank you again for spending your time with us. Feel free to contact us if you have further questions.