

Understanding the Persistence of Illegal Taxi Services at Kuala Lumpur International Airport: A Conceptual Framework Perspective

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Abstract: This study investigates the persistence of illegal taxi services, locally known as *Prebet Sapu*, at Kuala Lumpur International Airport (KLIA) using a conceptual framework that examines accessibility, affordability, economic factors, and enforcement as determinants of continuance intention to use illegal taxi services. This study employed a quantitative approach to develop and assess a conceptual framework derived from relevant literature. Data were collected through a structured questionnaire survey and analysed using reliability testing and descriptive statistical techniques to validate the proposed framework and highlight the complex interaction between regulatory mechanisms and user-driven considerations in sustaining informal transport services. The study offers insights for policymakers and enforcement agencies, emphasising the need for integrated enforcement strategies and policy interventions that address both regulatory effectiveness and economic and accessibility concerns at KLIA.

Keywords: *Illegal taxi services, KLIA, services factors, economic factors, enforcement factors*

1. Introduction

Illegal taxi services or *Prebet Sapu* remain a persistent issue in Malaysia's transport ecosystem, particularly at KLIA. Despite regulatory frameworks and enforcement measures, informal operators continue to attract passengers due to perceived affordability and accessibility. This study examines the phenomenon by analyzing user perceptions and the interplay of enforcement, economic, accessibility, and usage factors.

The public transport industry at KLIA, particularly licensed taxi services, is facing serious challenges due to the rise of *prebet sapu* (Utusan Malaysia, 2024). KLIA, as Malaysia's main international gateway, is not only an aviation hub but also a critical ground transport center. However, the presence of unlicensed *prebet sapu* operators has disrupted the sustainability of licensed taxis and raised concerns about passenger safety and the integrity of the transport system (NST, 2024).

This phenomenon requires new strategies and stricter enforcement by authorities. Through consistent application of transport laws, improvement in service quality, and public awareness of the risks of using *prebet sapu*, licensed taxis at KLIA can remain relevant and competitive (Astro Awani, 2024).

Local reports indicate that complaints about *prebet sapu* at KLIA are increasing, with passengers often lured by cheaper fares compared to licensed taxis (The Vibes, 2024). While seemingly beneficial to users, this situation creates market injustice and safety risks, as *prebet sapu* drivers are not subject to licensing requirements, vehicle inspections, or insurance coverage (Carz Automedia, 2024).

2. Literature review

Prebet Sapu or illegal taxi services that operate without a license or official permission from the authorities. The term is often used in Malaysia to describe private vehicles that offer passenger transportation services illegally. Illegal taxi drivers typically charge lower fares than licensed taxis or legal public transportation, attracting passengers looking for cheaper travel

costs. The presence of a illegal taxi brings a number of issues, including safety issues as these vehicles may not meet the set safety standards, increasing the risk to passengers. In addition, it also raises economic issues as unfair competition against licensed taxis, reducing the income of legitimate taxi operators. In addition, the existence of illegal taxi challenges the authorities in enforcing transport and road safety laws.

Illegal taxi services at KLIA pose significant challenges to regulated public transportation by undermining safety, revenue, and passenger confidence. Prior studies on informal transport in Malaysia and similar contexts emphasize drivers like affordability and accessibility, while highlighting enforcement gaps under laws such as the Land Public Transport Act 2010. This literature review examines these dynamics, drawing from recent operations and academic insights (travelandtourworld, 2025). The modus operandi of the illegal taxi also varies. One of the ways of operation is ad-hoc pick-up, where the driver spontaneously searches for passengers in crowded spots. In addition, some also use the method of booking via phone or app to arrange transportation. Some illegal taxi drivers may have a standing agreement with residents or employees in a particular area to provide transportation services on an ongoing basis.

2.1 Services Factors (Accessibility, Affordability & Flexibility)

In transport behaviour research, passengers' choice of mobility services is influenced by a combination of service-related attributes rather than isolated factors. Accessibility, affordability, and flexibility collectively represent core dimensions of service convenience that shape users' perceptions of transport utility and value. As such, these dimensions can be conceptualised as a single composite independent variable reflecting the overall attractiveness of a transport service.

Prior studies on informal transport highlight accessibility as key drivers of demand (e.g., local references on Malaysian transport law). Cheaper fares position *Prebet Sapu* as attractive, with operators charging RM100–300 for KLIA routes versus higher official rates, aligning with studies on cost as a primary motivator for informal transport choice. This undercut licensed taxis and e-hailing, eroding public transport revenue as passengers prioritize savings (Bernama, 2024).

Therefore, accessibility in the transport context refers to the ease with which passengers can obtain and use transportation services to reach their desired destinations within acceptable time, cost, and effort constraints. It reflects not only the physical availability of transport modes but also the efficiency and convenience of accessing these services when travel demand arises. In transport research, accessibility is commonly associated with factors such as proximity to transport services, waiting time, service availability, operating hours, and connectivity to key activity centres.

Easy availability through touting at arrivals makes these services prominent for arriving passengers and tourists, who face long waits for regulated options. This convenience factor persists despite safety issues, drawing users unwilling to use buses or trains (Planning Malaysia Journal, 2025). Literature notes such visibility boosts uptake in high-traffic hubs like KLIA, complementing but competing with formal shuttles (Metro, 2016). To oversee and enforce sweep operations, authorities need to allocate more resources including enforcement personnel and monitoring equipment such as CCTV.

Less informed or low-income passengers may be more vulnerable to the risk of using the illegal taxi service. They may not be aware of the dangers involved or cannot afford the fare of a licensed taxi, leading them to opt for illegal taxi as a cheaper but riskier alternative. Similarly, Ahmad (2018) reported that the existence of illegal taxis reduces the income of licensed operators, thereby weakening their competitiveness in the public transport industry.

In this study, accessibility is conceptualised as a key service attribute influencing

passengers' usage of illegal taxi services at Kuala Lumpur International Airport (KLIA). It encompasses perceived ease of locating a taxi, waiting time, availability during different time periods, and convenience of pick-up locations. However, Accessibility also interacts closely with other service attributes, including affordability and flexibility. Even when transport services are reasonably priced, limited accessibility can deter usage if passengers experience delays or difficulty securing a ride.

Affordability has long been recognized as an essential determinant of transport mode choice, particularly among low- and middle-income users in urban and sub-urban areas. In transport economics, affordability is commonly defined as the proportion of household income spent on transport, with higher cost burdens often leading users to seek alternative or informal mobility options. Numerous studies have shown that when formal transport services are perceived as financially burdensome, passengers tend to substitute them with lower-cost alternatives, including informal or unregulated transport services.

Early study by Fan and Huang (2011) emphasized that traditional affordability measures based solely on fare levels may underestimate the true financial burden on users, as they do not account for travel frequency, trip purpose, or spatial context. Their context-sensitive affordability framework demonstrated that transport costs disproportionately affect users who rely on frequent trips or reside in areas with limited transport options. This finding is particularly relevant in airport environments, where passengers often face premium pricing and limited modal choices.

In developing and emerging economies, empirical studies consistently show that affordability strongly influences travel behaviour. Mohammed and Senadheera (2022), in their study of public transport affordability in Addis Ababa, found that transport expenditure constituted a significant share of monthly income for low-income households, thereby reducing their reliance on formal transport services. Similar findings were reported in Latin American and African cities, where transport costs exceeding acceptable affordability thresholds led users to adopt informal or semi-legal transport modes.

Flexibility in transport services refers to the ability of a system to adapt to users' service-related preferences, thus providing convenience and responsiveness beyond what fixed-schedule or regulated systems can offer. In the context of urban mobility, flexibility encompasses attributes such as on-demand availability, customizable routes, short waiting times, rapid pickup and drop-off, and the capacity for fare negotiation. These features are particularly valued in high-demand, time-sensitive environments such as airports, where passengers' schedules are often constrained by flight timings and luggage handling requirements.

Empirical research found that flexibility significantly influences passengers' choice of transport modes. Studies on ride-hailing and informal transport in developing economies show that users are more likely to select services that accommodate immediate travel needs, provide door-to-door options, and allow route adjustments without strict regulatory constraints. In many instances, the perceived convenience and adaptability of flexible services outweigh concerns related to fare standardization, safety, or legal compliance.

Olayode et al. (2023) proved that waiting time is a statistically significant factor in ride-hailing choices i.e. students were more likely to use informal motorbike ride-hailing when waiting times for formal app-based services were longer estimated to be more than 10 minutes. This shows that service flexibility in terms of rapid availability can drive users toward less regulated transport options when formal services are perceived as slow or inflexible.

Moreover, flexibility interacts with determinants, such as affordability and accessibility, to reinforce mode choice. Even when price differences between regulated and illegal taxis are moderate, the added value of adaptable service—such as immediate availability or shorter

waiting time—can motivate passengers to prefer informal options. Flexibility thus functions not only as a standalone factor but also as a mediator that amplifies the influence of cost considerations and service convenience on transport choice.

2.2 Economic Factors

Economic factors play a central role in shaping passengers' transport mode choice, particularly in contexts where multiple formal and informal alternatives coexist. In transport economics, economic factors generally refer to cost-related considerations that influence individual decision-making, including fare levels, income constraints, perceived value for money, and cost–benefit trade-offs between different transport modes. When formal transport services are perceived as economically burdensome, passengers may seek lower-cost alternatives, even if such alternatives operate outside regulatory frameworks.

Since the illegal taxi offers lower fares compared to licensed taxis, causing many passengers to choose illegal taxis. This reduces the number of passengers using licensed taxis and subsequently causes the income of licensed taxi operators to decline significantly. This undermines their economic stability, as these taxi operators have to bear the costs of vehicle maintenance, insurance, and various other fees that are not borne by illegal taxi drivers. A review of existing literature indicates that illegal taxis not only negatively affect the economic sustainability of licensed taxi operators but also pose safety risks to passengers. Smith et al. (2020) observed that illegal taxis often operate in areas with low surveillance, resulting in disorder and unfair competition against licensed services.

Empirical evidence consistently demonstrates that fare affordability is a significant determinant of transport behaviour. Fan and Huang (2011) found that transport costs disproportionately affect lower- and middle-income users, leading to changes in travel behaviour when fares exceed acceptable affordability thresholds. Their study highlights that passengers do not evaluate fares in isolation but consider cumulative transport expenditure relative to income and trip frequency. This finding suggests that high or fixed pricing structures, such as premium airport taxi fares, can discourage reliance on formal services.

In developing and emerging economies, several studies have shown that **cost sensitivity** strongly influences the use of informal and unregulated transport services. Mohammed and Senadheera (2022), in their study of public transport affordability, reported that households facing higher transport cost burdens were more likely to shift towards cheaper and informal transport options. Similarly, research conducted in Latin American and African cities indicates that when transport expenditure exceeds a reasonable share of household income, users prioritise lower-cost mobility over regulatory compliance.

2.3 Enforcement Factors

Enforcement factors refer to the effectiveness, consistency, and visibility of regulatory actions taken to control illegal transport operations. In the context of taxi services, enforcement includes licensing requirements, monitoring activities, penalties for non-compliance, and the presence of enforcement officers in transport hubs. Weak enforcement environments often reduce the perceived risks associated with using or operating illegal taxi services, thereby contributing to their continued usage.

Enforcement challenges including limited monitoring capacity and inconsistent penalties, further contribute to the persistence of illegal taxi services. The safety of passengers is also often at risk as illegal taxi vehicles may not undergo regular safety checks and do not have passenger insurance. Furthermore, illegal taxi interferes with licensed public transport operations, causing unfair competition and affecting the income of legitimate taxi drivers. Information and public education are very important. The lack of awareness campaigns by the

authorities contributes to consumer indifference to the safety risks and legal implications associated with the use of illegal taxi. Greater efforts in educating consumers on the importance of using legal public transport and the risks of using illegal taxi can increase this awareness.

Empirical evidence suggests that inadequate enforcement significantly facilitates the growth of illegal taxi services. Studies on informal transport systems indicate that when regulatory oversight is inconsistent or enforcement presence is limited, illegal operators are able to function openly and attract passengers. For example, Gwilliam (2017) highlights that weak regulatory capacity in transport systems allows informal taxi services to thrive, particularly in high-demand areas where passenger flow is concentrated, such as airports and central business districts.

Weaknesses in law enforcement and the possibility of corrupt practices among enforcement officers also contribute to the ineffectiveness of action against illegal taxi. These problems not only violate the law but also undermine the safety and trust of passengers in the public transportation system. Weak monitoring and penalties (e.g., fines below monthly earnings of RM10,000+) enable operations, with JPJ raids like *Ops Fokus* seizing vehicles but failing to eliminate touting. Studies emphasize that inconsistent authority actions sustain illegal services by lowering compliance risks (Bernama, 2024).

Lim (2019) highlighted that passenger who rely on illegal taxis are exposed to higher risks, as these vehicles may not comply with established safety standards. Tan (2021) further emphasized that weaknesses in law enforcement are among the main factors contributing to the prevalence of the illegal taxi activities at KLIA. However, increase enforcement would mean more costs and adds to the financial burden on local authorities and government as more resources and man power are needed.

2.4 Usage of Illegal Taxi Services

The usage of illegal taxi services refers to the extent to which passengers engage in transport services that operate without proper licensing, regulatory approval, or formal authorisation by transport authorities. In the transport and urban mobility literature, illegal taxi services are often described as informal, unregulated, or unauthorised transport services that provide paid passenger trips outside established regulatory frameworks. The dependent variable captures passengers' behavioural decisions to utilise such services despite awareness of their illegal status.

In airport environments, the usage of illegal taxi services is particularly prevalent due to high passenger volume, time pressure, and travel uncertainty. Studies indicate that passengers arriving at airports often prioritise immediate transport availability over regulatory compliance, especially after long flights or during peak arrival periods. When illegal taxi operators are visibly present and enforcement is perceived as minimal, passengers may normalise their usage, further reinforcing demand.

The usage of illegal taxi services in this research is conceptualised as the dependent variable representing passengers' behavioural outcomes in response to economic, accessibility, flexibility, and enforcement factors. Understanding the determinants of this usage is essential for developing effective transport policies and regulatory interventions aimed at reducing illegal taxi operations while improving the quality and attractiveness of formal transport services.

3. Research method

The study adopted a quantitative research design to develop and examine a conceptual framework explaining the persistence of illegal taxi services at Kuala Lumpur International Airport (KLIA). The conceptual framework was formulated based on an extensive review of prior literature on informal transport services, public transportation usage behaviour, and

regulatory enforcement. Key factors frequently identified in the literature namely accessibility, affordability, economic factors, and enforcement were operationalized as independent variables, while continuance intention to use illegal taxi services as the dependent variable.

Data were collected using a structured questionnaire designed to measure each construct in the framework. The instrument items were adapted from validated studies and refined to suit the local context. Convenience sampling was employed, and data were collected through an online survey administered via Google Forms. The questionnaire consisted of two sections: demographic information and measurement items for the study constructs, rated using a Likert scale. The questionnaire items were adapted from prior validated studies and modified to suit the local context of KLIA.

The collected data would be analysed using Statistical Package for the Social Sciences (SPSS). Reliability analysis (Cronbach's alpha) was conducted to assess the internal consistency of the measurement scales. Descriptive statistics and mean score analysis were used to examine respondents' perceptions and evaluate the relative influence of each factor within the conceptual framework. The proposed relationships in the conceptual framework were examined using regression analysis to identify the factors that significantly contribute to the continuance intention to use illegal taxi services.

4. Results and discussion

The study proposes a conceptual framework in which accessibility, affordability, economic factors, and enforcement effectiveness are key determinants of the continuance intention to use illegal taxi services at Kuala Lumpur International Airport (KLIA) as shown in Figure 1 below.

Independent Variables

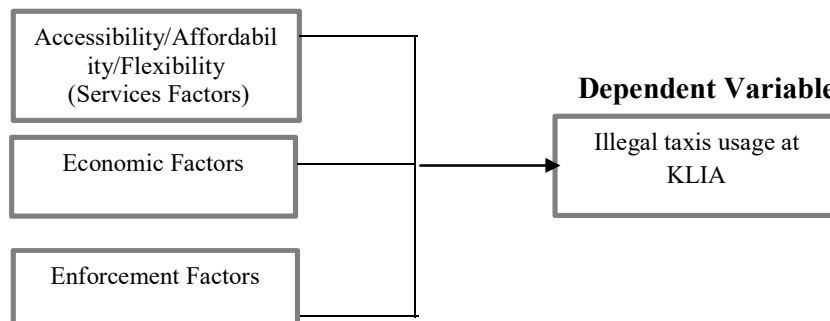


Fig. 1. Conceptual framework of the research study

The first independent variable accessibility is expected to influence users' intention because convenient pick-up locations, flexible routes, and shorter waiting times reduce the effort required to use a service. In the context of KLIA, easy access to illegal taxis may make them an attractive alternative to licensed services, particularly during peak travel periods or when official taxis are limited.

Second, affordability is included as a determinant since lower fares can motivate users to choose illegal taxis over licensed alternatives. Economic considerations, such as perceived value for money and overall cost savings, are likely to shape decisions, consistent with rational choice theory, where individuals weigh the costs and benefits of their transportation options.

Third, economic factors extend beyond affordability to include perceived convenience, time savings, and reliability, which collectively contribute to the perceived utility of illegal taxi services. These factors are expected to strengthen the intention to use informal transport services when official options are seen as less efficient or more costly.

Fourth, the final independent variable that is enforcement represents the regulatory dimension of the framework. The presence and perceived strength of law enforcement are hypothesized to moderate user behavior. Strong enforcement may deter usage, while weak or inconsistent enforcement can reinforce the persistence of illegal taxi services despite potential penalties.

In general, the conceptual framework highlights the interaction between factors which are accessibility, affordability, economic factors and enforcement mechanism with then usage of illegal taxi service. It provides a theoretical basis for understanding why illegal taxi services continue to operate at KLIA, guiding future empirical investigation and policy development.

Basically, based on the conceptual framework, the hypothesis of the study would be:

H₁: Accessibility has a significant impact on the usage of illegal taxi services at Kuala Lumpur International Airport (KLIA).

H₂: Economic Factors contribute significant impact on the usage of illegal taxi services at Kuala Lumpur International Airport (KLIA).

H₃: Enforcement factors have significant impact on the usage of illegal taxi services at Kuala Lumpur International Airport (KLIA).

5. Conclusion

This study examined the persistence of illegal taxi services (*Prebet Sapu*) at Kuala Lumpur International Airport (KLIA) through a conceptual framework focusing on accessibility, affordability, economic factors, and enforcement effectiveness as determinants of continuance intention. The framework highlights the complex interplay between user-driven considerations—such as convenience, cost, and perceived economic benefit—and regulatory mechanisms.

The intention of the study is to provide not merely the theoretical insights but also the empirical analysis into why informal transport services continue to operate despite regulatory measures, emphasizing that enforcement alone may be insufficient without addressing users' economic and accessibility concerns. These findings offer valuable guidance for policymakers and transport authorities in designing integrated interventions that enhance legal transport accessibility, ensure affordability, and strengthen enforcement mechanisms to reduce reliance on illegal taxi services.

6. Implications

The findings of this study carry important theoretical, practical, and policy implications. From the perspective of theoretical implications, the study validates the proposed conceptual framework, demonstrating that accessibility, affordability, economic factors, and enforcement effectiveness jointly influence passengers' continuance intention to use illegal taxi services. It highlights the interplay between user-driven considerations and regulatory mechanisms, contributing to the literature on informal transport services and consumer behaviour in airport contexts. This framework can serve as a basis for future research exploring additional determinants, such as safety, social influence, or service quality, in shaping informal transport usage.

From the practical point of view centralizing the transport operators and airport management, the study emphasizes the importance of improving the accessibility and affordability of legal transport options. Enhancing convenience, fare competitiveness, and availability of official taxis may reduce passengers' reliance on illegal services. On the other hand, the part of policy and enforcement implications, the study would suggest that enforcement alone is insufficient to deter illegal taxi usage. Policymakers should adopt integrated strategies that combine strict enforcement with initiatives addressing economic and accessibility concerns, such as

optimizing taxi queues, providing clear signage, and improving public transport connectivity to and from KLIA.

7. Research limitations

This study has several limitations that should be considered when interpreting the findings regarding passengers' reliance on illegal taxi services (*Prebet Sapu*) at KLIA. Firstly, since data is collected at a single point in time, the findings may reflect more to associations rather than the cause-and-effect relationships between the independent and dependent variables. Secondly, the sample was restricted to a specific group of passengers at KLIA, which may not represent all categories of airport users or passengers at other locations. Variations in fare structures, enforcement practices, and availability of alternative transport services may limit the generalizability of the results to other airports or regions.

Thirdly, the study relied solely on self-administered questionnaires, which are susceptible to recall bias and social desirability bias. Respondents may have under- or over-reported their actual usage of illegal taxis or their perceptions of accessibility and enforcement. Finally, the conceptual framework focused on three primary determinants: economic factors, accessibility, affordability and enforcement effectiveness.

Thus, other potentially influential factors, such as perceived service quality, safety and security concerns, social influence, or awareness of official transport channels, were not included which may limit the understanding of the full range of factors contributing to the persistence of illegal taxis at KLIA.

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