



FUTURITY
OF SOCIAL SCIENCE

DOI: <https://doi.org/10.57125/FS.2026.03.20.03>

How to cite: Rizki, S. P., Maulana, H., & Deasyanti. (2026). Examining the role of price and comfort perception in shaping urban transit behaviour: a TPB-based study of TransJakarta users. *Futurity of Social Sciences*, 4(1), 40–57. <https://doi.org/10.57125/FS.2026.03.20.03>

Examining the Role of Price and Comfort Perception in Shaping Urban Transit Behaviour: A TPB-Based Study of TransJakarta Users

Shabrina Putri Rizki*

Faculty of Psychology, State University of Jakarta, Indonesia
<https://orcid.org/0009-0007-7905-7286>

Herdiyan Maulana

Faculty of Psychology, State University of Jakarta, Indonesia
<https://orcid.org/0000-0001-9137-8583>

Deasyanti

Faculty of Psychology, State University of Jakarta, Indonesia
<https://orcid.org/0000-0002-0781-1610>

***Correspondence email:** shaput.work@gmail.com.

Received: October 19, 2025 | **Accepted:** December 27, 2025 | **Published:** January 22, 2026

Abstract: This study examines the influence of price and comfort perceptions on individuals' attitudes, subjective norms, and perceived behavioural control when using public buses in Jakarta (TransJakarta). Unlike prior literature, which predominantly focuses on the relationship between

Theory of Planned Behaviour (TPB) constructs and behavioural intention, this research specifically evaluates the influence of external variables on each constituent dimension of the TPB framework. This empirical effort to examine the antecedents of TPB variables is essential for mapping public transportation service strategies in densely populated urban environments. A quantitative research design was employed using an online survey, with data collected from active TransJakarta users via non-probability snowball sampling. A total of 268 respondents who utilise this transportation mode for daily mobility were recruited (Mean: 1.75; SD: 0.434; Female: 201). Data were analysed using JASP 0.93.3, employing Factor Analysis followed by Path Modelling (SEM) to validate the measurement model and test the structural relationships between variables. The analysis results indicate that individuals' perceptions of comfort are significantly and positively related to all three TPB factors: attitude, subjective norms, and perceived behavioural control (CFI = 0.962, TLI = 0.935, and RMSEA = 0.07). Conversely, price perception did not exhibit a statistically significant influence on these three psychological constructs. This study highlights the critical role of convenience as a primary factor influencing public transport acceptability. Based on these findings, service quality enhancements focused on customer convenience – such as seat availability, cleanliness, and punctuality – may be more effective than fare reductions in improving behavioural intention and ensuring sustainable ridership growth.

Keywords: Theory of Planned Behaviour, price perception, comfort perception, public transportation, TransJakarta, Structural Equation Modelling.

Introduction

The relentless pace of urbanisation across megacities in the developing world, with Jakarta, Indonesia, serving as a quintessential case, has precipitated a complex nexus of urban pathologies. These range from chronic gridlock and severe environmental degradation to systemic paralysis in public mobility. In an ambitious attempt to mitigate these pressures, the Provincial Government of Jakarta has spearheaded the expansion of TransJakarta, a sophisticated Bus Rapid Transit (BRT) system now integrated into the multimodal "JakLingko" framework and supported by Low Emission Zone (LEZ) mandates. However, a profound "implementation gap" persists: despite massive capital injections into infrastructure and heavy fiscal subsidies, the transition from private motorization to public transit remains significantly suboptimal. This discrepancy suggests that the mere provision of "hard" infrastructure is insufficient to catalyze a mode shift without a nuanced understanding of the latent psychological constructs and perceptual filters that govern commuter behavior, as highlighted by Maulana et al. (2025) regarding the cultural and social readiness required for sustainable transitions in Indonesia.

Jakarta's current predicament presents a stark socio-technical paradox: the existence of affordable, dedicated transit corridors has failed to de-escalate the trajectory of private vehicle dependency, which now exceeds 3.6 million cars and nearly 15 million motorcycles. This phenomenon signifies a deep-seated friction between supply-side utility and demand-side psychological readiness. To untangle this complexity, the Theory of Planned Behavior (TPB) offers a robust analytical lens; however, contemporary scholarship argues that the standard TPB model must

be reconfigured to account for external service attributes—specifically Perceived Price and Perceived Comfort—as exogenous antecedents that redefine the internal cognitive landscape of the commuter.

In the economic domain, Perceived Price serves as more than a simple transaction cost; it functions as a vehicle for "Relative Advantage." Drawing on the findings of Radic et al. (2022), the perceived cost-benefit ratio is a critical predictor in calibrating a favorable Attitude toward transit adoption. When the economic value of a "green" service is clearly articulated, it drastically elevates the consumer's evaluative stance (Moon, 2021). Furthermore, the role of price extends into the social sphere through "Social Nudging." As Hauslbauer et al. (2022) demonstrate, pricing policies that favor the collective can manipulate Subjective Norms, transforming a personal financial choice into a socially expected behavior. Concurrently, Kumar et al. (2022) and Yeğın & Ikram (2022) identify financial accessibility as a primary architect of Perceived Behavioral Control (PBC). By neutralizing resource-based barriers, affordable pricing empowers individuals with a sense of volitional control, making the switch to public transit appear not only desirable but structurally feasible.

Parallel to economic considerations, Perceived Comfort emerges as a dominant qualitative determinant that bridges the gap between service delivery and psychological commitment. Friman et al. (2020) posit that service quality, particularly the interplay between physical comfort and information transparency, has a direct and significant causal link to positive user perceptions. This multidimensional comfort acts as a "Cognitive Image" builder, which Soliman (2021) identifies as the primary antecedent for long-term behavioral attitudes. In the Indonesian context, the presence of high-quality, comfortable transit facilities fosters a collective belief that sustainable mobility is a "socially worthy" endeavor, thereby amplifying the Subjective Norm through peer-group validation (Maulana et al., 2025). Crucially, by mitigating physical stressors and operational uncertainties, superior comfort levels reduce perceived travel "Barriers," thereby bolstering the commuter's PBC and fostering a robust Behavioral Intention to abandon private moda in favor of the BRT system (Friman et al., 2020).

By employing Structural Equation Modeling (SEM) to analyze these integrated constructs, this study seeks to provide a granular and nuanced map of the transportation psychology landscape in Jakarta. It transcends narrative accounts of traffic woes by providing a testable empirical model that elucidates how specific service delivery attributes are translated into psychological readiness. Ultimately, this research extends the application of the TPB within the context of emerging megacities and offers critical strategic insights for policymakers to pivot from a monolithic, price-focused subsidy model toward a holistic, comfort-driven service enhancement strategy that aligns with the actual psychological needs of the public.

Research Problem

The research problem is centred on a critical tension between theoretical predictions and empirical realities in urban mobility. While the Theory of Planned Behaviour (TPB) provides a robust framework for predicting transit usage through internal cognitive constructs, a scientific contradiction persists regarding how external service attributes – specifically price and comfort – function as antecedents to these psychological states. Theoretical models suggest that, in developing megacities like Jakarta, fare affordability should be a primary driver of modal shift;

however, despite TransJakarta's heavily subsidised fares and dedicated lanes, private vehicle dependency remains high.

This paradox suggests that existing research, which predominantly treats price and comfort as direct determinants of intention, overlooks the structural tension between economic incentives and experiential barriers. Empirical evidence remains limited concerning how these external perceptions simultaneously shape the internal mechanisms of attitude, subjective norms, and perceived behavioural control. Formulated in this manner, the research problem transcends a narrative of urban congestion. It is redefined as a testable tension: whether service perceptions serve as the foundational exogenous predictors that activate psychological readiness for public transport adoption. This approach provides both a methodologically justified basis for an integrated behavioural framework and an internationally intelligible contribution to transport psychology.

Research Focus

This study investigates the influence of price and comfort perceptions on the three core constructs of the Theory of Planned Behaviour (TPB) – attitude, subjective norms, and perceived behavioural control – within the context of Jakarta's Bus Rapid Transit (BRT) system, TransJakarta. A critical distinction is made between external service attributes (price and comfort) and the internal psychological mechanisms they activate. Rather than treating these perceptions as direct predictors of behavioural intention, this research frames them as exogenous antecedents that shape commuters' cognitive readiness.

Furthermore, the study explicitly examines the interaction between economic factors (subsidised fares) and experiential factors (service comfort) to determine which attribute exerts a greater influence on the internal TPB dimensions. By employing Structural Equation Modelling (SEM), the research seeks to isolate the effects of these external perceptions from general ridership trends, thereby providing a more rigorous analysis of how specific service evaluations translate into a sense of behavioural control and social expectation toward sustainable transit adoption in a developing megacity.

Research Aim and Questions

This study aims to examine how perceived price affordability and perceived comfort influence the attitude, subjective norms, and perceived behavioural control of TransJakarta usage, based on the Theory of Planned Behaviour (TPB). Thus, the research questions are:

1. To what extent does price perception influence attitude, subjective norms, and perceived behavioural control toward using TransJakarta?
2. To what extent does comfort perception influence attitude, subjective norms, and perceived behavioural control toward using TransJakarta?
3. Which of the two external perceptions – price or comfort – has a stronger impact on the core TPB constructs?

Literature Review

This study adopts the Theory of Planned Behaviour (TPB) as the primary theoretical lens to examine psychological factors shaping individuals' decisions to use TransJakarta, Jakarta's Bus Rapid Transit (BRT) system. TPB, developed by Ajzen (2020), asserts that particular behaviour is a

function of attitude, subjective norms, and perceived behavioural control (PBC). Together, these three constructs determine behavioural intention, which serves as the most immediate predictor of actual behaviour.

However, while TPB effectively models internal cognitive processes, it has been criticised for its limited attention to external or contextual factors (Gardner & Abraham, 2008). In the context of public transportation in urban areas – especially in emerging megacities such as Jakarta – external service attributes, such as price and comfort, play critical roles in shaping these psychological determinants. Hence, this study extends TPB by integrating price perception and comfort perception as exogenous variables influencing the core TPB constructs.

Integrating Price Perception within the Theory of Planned Behaviour (TPB) Model

Based on research by Hauslbauer et al. (2022) regarding public transport ticketing, the perception of affordable pricing functions as a facilitating factor in decision-making. In the context of TransJakarta, the low and flat-rate fare structure eliminates financial barriers that typically act as constraints; when prices are perceived as non-burdensome, individuals feel they possess full control to choose TransJakarta as their daily mode of transport (Maulana et al., 2025). Radic et al. (2022) explain pricing through the concept of Relative Advantage, which refers to the extent to which a service is perceived as more economically beneficial compared to other alternatives. Users perform a comparative evaluation between the costs of using private vehicles (fuel, parking, physical effort) and the low fares of TransJakarta.

The relationship between price perception and Attitude can be explained through the concept of relative advantage. Research results by Radic et al. (2022) indicate that cost advantage and time efficiency are significant predictors that shape positive evaluations or supportive attitudes toward a service. This phenomenon is reinforced by the findings of Moon (2021), who asserts that the economic value perceived by consumers in the context of "green" or sustainable services drastically enhances their attitudinal evaluation. In the case of TransJakarta, when commuters perceive the fare as an advantageous value compared to the operational costs of private vehicles, a positive attitudinal disposition toward modal shifting is formed.

Hypothesis H1: Price Perception has a positive effect on Attitude toward using TransJakarta.

Furthermore, price is linked to Subjective Norms through the mechanism of social nudging. Hauslbauer et al., (2022) through their experimental study, revealed that favorable pricing and ticketing policies are often collectively validated by the social environment. If a fare is considered inexpensive by the wider community, it creates a perception that using public transportation is a normative action expected by one's surroundings. Thus, competitive price perception can strengthen positive social pressure for individuals to subscribe to or utilize public transport services.

Hypothesis H2: Price Perception has a positive effect on Subjective Norms toward using TransJakarta.

Lastly, price perception is a primary determinant in shaping Perceived Behavioral Control (PBC). Consistently, Yeğin & Ikram (2022) and Kumar et al. (2022) found that financial factors

determine whether an individual feels capable of acting. Affordable pricing plays a vital role in eliminating resource barriers. When TransJakarta fares are perceived as low, financial hurdles become minimal, allowing individuals to experience self-efficacy and full control to choose the service without significant economic constraints. Overall, price affordability is key for commuters to feel that switching to public transit is a behavior entirely within their control.

Hypothesis H3: Price Perception has a positive effect on Perceived Behavioural Control toward using TransJakarta.

Integrating Comfort Perception within the Theory of Planned Behaviour (TPB) Model

Based on a study by Friman et al. (2020), comfort is a key element of service quality that directly influences perceived accessibility—namely, the ease with which individuals can carry out their daily activities with the assistance of a transportation system. Comfort in this context is divided into two primary dimensions:

1. In-Vehicle Comfort: Includes the availability of seating, maintained air temperature (air conditioning), and bus cleanliness.
2. Station Facility Comfort: Includes adequate bus stop conditions, protection from the weather (heat/rain), and sufficient lighting. Friman emphasizes that uncomfortable services act as a "barrier" that diminishes people's intention to use public transportation.

Soliman (2021), in a study on revisit intention, positions a convenient transport system as a component of the service's cognitive image. Consistent comfort creates a perception that the service is of high quality. This is crucial within the context of TransJakarta; comfort is not merely about reaching a destination, but rather how the travel experience influences a user's decision to utilize the service again in the future (reuse intention).

The correlation between comfort and Attitude is based on the formation of a cognitive image of the service. Research by Friman et al. (2020) demonstrates that service quality, which encompasses the dimensions of comfort and information availability, has a significant direct relationship with the formation of positive user perceptions. Echoing this, Soliman (2021) found that cognitive image—in which transport comfort serves as a primary constituent component—is a major predictor in shaping individual attitudes. When comfort aspects such as bus cleanliness and air temperature are rated favorably, commuters will develop an attitudinal evaluation that supports the use of TransJakarta as a beneficial travel option.

Hypothesis H4: Comfort perception has a positive effect on attitude toward using TransJakarta.

Furthermore, service comfort contributes to the strengthening of Subjective Norms. Within the context of Indonesian society, Maulana et al. (2025) suggest that the provision of adequate pro-environmental facilities creates a collective perception that "such behavior deserves support." Comfortable services encourage users to provide positive recommendations or word-of-mouth to their social circles. This automatically reinforces social pressure and subjective norms, wherein

individuals feel that the people around them support and expect them to utilize such high-quality public transportation.

Hypothesis H5: Comfort perception has a positive effect on subjective norms toward using TransJakarta.

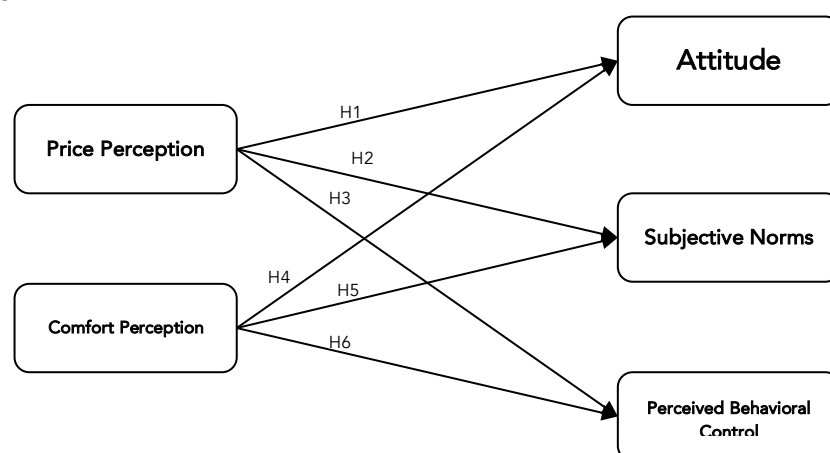
Lastly, comfort perception is closely related to Perceived Behavioral Control (PBC) through the reduction of travel barriers. Friman et al. (2020) found that the comfort and functionality aspects of a transport mode effectively lower the perceived difficulty experienced by users. The more comfortable and functional the TransJakarta service—for instance, through effective passenger density management and ease of access at bus stops—the higher the sense of control (PBC) felt by the individual. Users will perceive themselves as having the full capability and ease to utilize the service, as it is considered uncomplicated and minimizes both physical and psychological barriers.

Hypothesis H6: Comfort perception has a positive effect on perceived behavioural control regarding the use of TransJakarta.

By examining these relationships within an extended TPB framework using Structural Equation Modelling (SEM), the study aims to provide a nuanced understanding of how price and comfort perceptions shape transit-related behaviour in Jakarta. This integration not only reinforces the relevance of TPB in urban transportation research but also highlights the importance of incorporating user-centric service perceptions into policy planning and implementation.

The model below visually represents the hypothesised relationships, where Price Perception and Comfort Perception act as exogenous variables influencing the three endogenous core TPB constructs:

Figure 1
Conceptual Framework



Source: Author's own development. The conceptual framework of this study extends the Theory of Planned Behaviour by positioning price perception and comfort perception as exogenous antecedents.

Research Methodology

General Background

This study employed a quantitative research design to examine how user perceptions of price and convenience influence key psychological constructs in the Theory of Planned Behaviour (TPB) – namely, attitudes, subjective norms, and perceived behavioural control – in the context of TransJakarta use. The rationale for using a TPB-based structural framework was to explore the cognitive and social mechanisms shaping public transportation use. To achieve this, survey data were collected using an online questionnaire from individuals who are active TransJakarta users residing in the JABODETABEK (Jakarta, Bogor, Depok, Tangerang, Bekasi) areas. The collected data were then analysed using Structural Equation Modelling (SEM) to assess the validity of the measurement model and test the hypothesised relationships between variables. SEM was deemed appropriate for this study because it allows simultaneous estimation of multiple relationships between observed and latent constructs while accounting for measurement error. The methodology was designed to ensure empirical rigour and theoretical alignment, offering relevant insights for transportation policy and behavioural research. The following sections describe the sampling procedure, data collection, instrument design, and statistical techniques used to conduct the analysis.

Participants

The general respondents of this study consisted of individuals residing in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek) who use TransJakarta as a mode of transportation in their daily activities. These public transportation users represent a relevant demographic, as they directly experience pricing conditions and service convenience – two important dimensions evaluated in this study. Given the broad and dynamic nature of TransJakarta's user base, this study employed non-probability snowball sampling. This method was chosen because it allows efficient access to specific user groups that may be difficult to reach through random sampling, particularly in urban mobility settings. Initial respondents were selected based on their confirmed use of TransJakarta services, and they were then encouraged to share the survey link with other eligible users in their networks. This approach ensured that all participants had experience with TransJakarta, thereby increasing the validity and contextual relevance of their responses regarding price and convenience perceptions.

Instrument and Procedures

Data were collected using an online questionnaire distributed to active TransJakarta users residing in Jakarta, Bogor, Depok, Tangerang, and Bekasi (Jabodetabek). The questionnaire was adapted to the TransJakarta context, drawing on validated constructs from previous research. The questionnaire consisted of several sections: demographics, user frequency, and items measuring price perception, perceived convenience, and the three main information components of the Theory of Planned Behaviour (attitude, subjective norm, and perceived behavioural control). All measurement items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Items on price perception and perceived convenience were adapted from the transportation and consumer behaviour literature (e.g., Friman et al., 2020), while constructs related

to the TPB were adapted from Maulana et al. (2024). The questionnaire was distributed via digital platforms, including social media and online communication applications (WhatsApp, Line, etc.), to facilitate efficient and widespread dissemination to participants. Before full-scale distribution, a pilot test was conducted with a small group of TransJakarta users to ensure clarity, relevance, and reliability. The final dataset was then analysed using Structural Equation Modelling (SEM) to generate noise and structural models.

Data Collection and Analysis

The data collected from the online questionnaire, the items of which are presented in the table (Table 4) below, were analysed using Structural Equation Modelling (SEM). The SEM is a multivariate statistical technique that enables the simultaneous examination of complex relationships between observed and latent variables. SEM is particularly suitable for this study because it allows for the evaluation of both measurement models (confirmatory factor analysis) and structural models, providing a comprehensive analysis of how price perception and comfort perception influence the core constructs of the Theory of Planned Behaviour (TPB): attitude, subjective norms, and perceived behavioural control.

The data analysis process was conducted in several stages: 1. Preliminary Screening and Descriptive Statistics: The dataset was first screened for missing values, outliers, and normality. Descriptive statistics were then used to summarise demographic variables and general patterns in the responses; 2. Reliability and Validity Testing: The reliability of each construct was assessed using Cronbach's alpha and composite reliability (CR) values, with thresholds of 0.70 indicating acceptable internal consistency. Convergent validity was tested using Average Variance Extracted (AVE), and discriminant validity was examined to ensure that constructs were statistically distinct from one another 3. Confirmatory Factor Analysis (CFA): CFA was conducted to confirm the measurement model and assess how well the observed indicators represented their underlying latent constructs. Fit indices such as CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), and RMSEA (Root Mean Square Error of Approximation) were used to evaluate model adequacy. A good model fit is indicated by CFI and TLI values above 0.90 and RMSEA values below 0.08; 4. Structural Model Evaluation: Once the measurement model achieved acceptable fit, the structural model was tested to examine the hypothesised relationships among variables. Path coefficients, standard errors, and significance values (p-values) were used to interpret the strength and direction of each relationship.

All analyses were performed using the appropriate statistical software package, JASP (Version 0.95.3). This approach ensured that the findings were both statistically robust and theoretically grounded, allowing for meaningful conclusions about the role of price and comfort perceptions in shaping TPB-related behaviours in the context of TransJakarta usage.

Results

Measurement Model Analysis

Our proposed model indicates acceptable overall fit, with fit indices meeting standard thresholds: CFI = 0.962, TLI = 0.935, and RMSEA = 0.07 (Table 1). These values indicate that the model adequately represents the empirical data and supports the constructs' validity. The structural

model was examined to assess the influence of price and comfort perceptions on the three TPB components: attitude, subjective norms, and perceived behavioural control.

Table 1

Overall Model Fit

Fit indices

Index	Value
Comparative Fit Index (CFI)	0.962
Tucker-Lewis Index (TLI)	0.935
Bentler-Bonett Non-normed Fit Index (NNFI)	0.935
Bentler-Bonett Normed Fit Index (NFI)	0.939
Parsimony Normed Fit Index (PNFI)	0.557
Bollen's Relative Fit Index (RFI)	0.897
Bollen's Incremental Fit Index (IFI)	0.962
Relative Noncentrality Index (RNI)	0.962
Root mean square error of approximation (RMSEA)	0.075
RMSEA 90% CI lower bound	0.066
RMSEA 90% CI upper bound	0.085
RMSEA p-value	1.238×10^{-5}
Standardized root mean square residual (SRMR)	0.084
Hoelter's critical N ($\alpha = .05$)	128.753
Hoelter's critical N ($\alpha = .01$)	138.448
Goodness of fit index (GFI)	0.900
McDonald fit index (MFI)	0.655
Expected cross validation index (ECVI)	2.346
Log-likelihood	-5960.793
Number of free parameters	126.000
Akaike (AIC)	12173.585
Bayesian (BIC)	12626.050
Sample-size adjusted Bayesian (SSABIC)	12226.552

Source: Author's own development from JASP.

Complementing the overall model fit, the analysis of Factor Loadings further confirms the robustness of the measurement model. As shown in the provided table, all indicators for the latent variables (H, K, N, P, and S) demonstrate strong and statistically significant relationships with their respective constructs (Table 2):

Table 2*Factor Loadings*

Latent	Indicator	Std. estimate	Std. error	z-value	p	95% Confidence interval	
						Lower	Upper
H	H1	0.713	0.077	9.302	< .001	0.562	0.863
	H2	0.710	0.076	9.284	< .001	0.560	0.860
	H3	1.220	0.125	9.795	< .001	0.976	1.464
	H4	1.054	0.109	9.657	< .001	0.840	1.268
	H5	1.002	0.126	7.936	< .001	0.755	1.250
K	K1	0.784	0.028	27.983	< .001	0.729	0.839
	K2	0.778	0.029	26.688	< .001	0.721	0.836
	K3	0.692	0.033	20.741	< .001	0.626	0.757
	K4	0.527	0.048	10.992	< .001	0.433	0.621
N	N1	0.549	0.050	10.875	< .001	0.450	0.647
	N2	0.734	0.036	20.545	< .001	0.664	0.804
	N3	0.626	0.042	14.865	< .001	0.544	0.709
	N4	0.698	0.038	18.315	< .001	0.623	0.772
P	P1	0.796	0.024	33.613	< .001	0.749	0.842
	P2	0.738	0.028	26.000	< .001	0.682	0.793
	P3	0.834	0.020	41.756	< .001	0.795	0.873
	P4	0.759	0.028	27.583	< .001	0.705	0.813
	P5	0.640	0.038	16.937	< .001	0.566	0.714
	P6	0.847	0.020	43.167	< .001	0.809	0.885
	P7	0.661	0.036	18.401	< .001	0.591	0.731
S	S1	0.684	0.037	18.574	< .001	0.611	0.756
	S2	0.914	0.034	26.676	< .001	0.847	0.981
	S3	0.782	0.033	23.863	< .001	0.718	0.847

Source: Author's own development from JASP.

Every indicator across all latent constructs yielded a p-value <.001, indicating that the items are highly significant representatives of their underlying factors. The standardised estimates for most indicators are well above the recommended threshold of 0.50 (and many exceed 0.70), which signifies high indicator reliability.

Hypothesis Model Analysis

These findings suggest that comfort perception plays a substantial role in shaping users' psychological readiness to use TransJakarta. The positive, strong path coefficients indicate that when users perceive the service as physically and psychologically comfortable, they are more likely to form positive attitudes, feel greater social support, and experience a stronger sense of control over their use of public transport.

Specifically, comfort perception significantly influences attitude ($\beta = 0.628$, $p < 0.001$), subjective norms ($\beta = 0.717$, $p < 0.001$), and perceived behavioral control ($\beta = 0.808$, $p < 0.001$), indicating that users who perceive TransJakarta as comfortable are more likely to form favorable attitudes, experience stronger social support, and feel a greater sense of control in using the service. In contrast, price perception shows no statistically significant effect on these constructs. The influence of price perception on attitude ($\beta = 0.048$, $p = 0.173$), subjective norms ($\beta = 0.013$, $p = 0.724$), and perceived behavioural control ($\beta = -0.021$, $p = 0.480$) was weak and non-significant (Table 3).

Table 3

Hypothesis Model Analysis

Regression coefficients

Outcome	Predictor	Std. estimate	Std. Error	z-value	p	95% Confidence interval	
						Lower	Upper
N	H	0.013	0.037	0.354	0.724	-0.059	0.085
	K	0.717	0.045	15.826	< .001	0.628	0.806
P	H	-0.021	0.030	-0.706	0.480	-0.080	0.038
	K	0.808	0.032	24.884	< .001	0.744	0.871
S	H	0.048	0.035	1.363	0.173	-0.021	0.116
	K	0.628	0.047	13.224	< .001	0.535	0.721

Source: Author's own development from JASP.

Conversely, the lack of statistically significant effects on price perception implies that fare affordability may no longer be a decisive factor for TransJakarta users – possibly due to its already low fares and government subsidies. This could mean that once basic affordability is met, quality-related aspects such as comfort become the dominant concern in user decision-making.

Table 4

The Questionnaire Template

No	Section	Description
1	Price Perception	- The cost of using TransJakarta is expensive. - The cost of using TransJakarta requires a significant amount of money. - The cost of using TransJakarta is higher than using a private car. - The cost of using TransJakarta is higher than using a motorcycle. - The cost of using TransJakarta is higher than I expected.

2	Comfort Perception	1. Traveling with TransJakarta is comfortable. 2. The buses and facilities of TransJakarta look modern. 3. The buses and facilities of TransJakarta are clean. 4. Traveling with TransJakarta gets me to my destination faster than other public transportation.
3	Attitude	1. I like the idea of having TransJakarta as a public transportation option. 2. In my opinion, using TransJakarta is something cool. 3. TransJakarta is an ideal mode of transportation in a big city like Jakarta.
4	Subjective Norms	1. Most people I know suggest choosing TransJakarta. 2. My family and friends encourage me to choose TransJakarta. 3. My religious beliefs are an important factor that encourages me to choose TransJakarta. 4. The rules and environment at my workplace/campus/school support me in using TransJakarta.
5	Perceived Behavioral Control	1. I will use TransJakarta as much as possible when traveling. 2. The facilities at TransJakarta bus stops make me confident in using TransJakarta. 3. In the future, I can use TransJakarta more often as a public transportation option. 4. I am capable of using TransJakarta as my daily mode of transportation. 5. I am able to find TransJakarta bus stops around me when traveling. 6. I always have the ability to make time to use TransJakarta. 7. I have full control over when and where I can use TransJakarta.

Source: Author's own development. All items are adapted from established psychological literature and measured using a 5-point Likert scale.

Discussion

The findings of this study offer a nuanced understanding of the behavioural mechanisms underlying the adoption of public transportation in Jakarta. By extending the Theory of Planned Behaviour (TPB), this research demonstrates that external service attributes do not influence internal psychological constructs uniformly. Specifically, the dominant role of comfort perception suggests that experiential quality is a primary antecedent to cognitive readiness, whereas price perception – in a heavily subsidised environment – remains psychologically peripheral.

The central role of comfort in shaping attitudes, subjective norms, and perceived behavioural control aligns with international empirical evidence. For instance, studies on high-capacity transit

systems in Europe and Asia have similarly identified that physical comfort and service reliability often outweigh economic incentives once a baseline of affordability is met (Awad-Núñez et al., 2021; Chen et al., 2023). However, this study makes a unique contribution by revealing that comfort functions not merely as a post-usage evaluative factor but also as a proactive cognitive consideration that activates the TPB framework. This aligns with the "Involvement Load" logic in pedagogical and behavioural studies, where the quality of the "experience" determines the depth of internal commitment to a specific action.

Conversely, the negligible impact of price perception contrasts with findings in other developing contexts, such as Malaysia and rural Indonesia, where fare sensitivity remains a critical barrier (Ismail et al., 2023; Fitriani & Rahman, 2022). This divergence can be explained by the maturity of Jakarta's subsidy policy. When public transit fares are consistently low and stable, price ceases to be a "salient belief" in the TPB model. Consequently, the "testable tension" identified in this research is resolved in favour of service quality over financial cost, suggesting that commuters in megacities prioritise preserving "cognitive and physical energy" (comfort) over marginal monetary savings.

Methodological Limitations

Despite the empirical contributions, several limitations must be addressed to ensure a balanced interpretation of the results. First, the sample size ($N = 268$) and the non-probability sampling technique may limit the generalizability of the findings to the entire population of Jakarta. Second, a potential group imbalance in respondent demographics – specifically the high proportion of female respondents – might have influenced the weight placed on comfort perception, as gender-based differences in safety and comfort priorities are well-documented in transport literature. Furthermore, the study may be subject to novelty bias if respondents were evaluating recent service improvements or new JakLingko integrations, which could temporarily inflate positive attitudes. Lastly, while this study focused on perception, the omission of actual travel time data as a control variable may overlook a significant situational constraint. Acknowledging these limitations is essential for future research, which should employ larger, more balanced cohorts and longitudinal designs to further validate the structural relationships identified in this model.

Conclusions and Implications

This study aimed to investigate the influence of price perception and comfort perception on the psychological constructs of the Theory of Planned Behaviour (TPB) – attitude, subjective norms, and perceived behavioural control – in the context of TransJakarta usage. The findings, based on Structural Equation Modelling, demonstrated that comfort perception significantly and positively influences all three TPB components, while price perception showed no significant effect. These results suggest that in an urban setting like Jakarta – where public transportation services are already subsidised and affordable – user comfort becomes the dominant driver of behavioural readiness to use public transit.

From a theoretical perspective, this study extends the TPB framework by demonstrating that comfort perception is a critical exogenous variable that influences behavioural determinants in

public transportation contexts. The results affirm that psychological constructs such as attitude and perceived control are not formed in isolation but are deeply shaped by users' service experience.

Practically, the findings highlight the strategic importance of improving service comfort in public transport systems. Service providers and policymakers should prioritise interventions that enhance cleanliness, seating availability, air circulation, noise reduction, and overall ride comfort to boost both commuter satisfaction and consistent ridership. While affordable pricing remains essential, this study suggests that comfort may play a more decisive role in influencing transit-related behaviour once basic affordability is achieved.

Suggestions for Future Research

Building upon the identified limitations, several avenues for future research are proposed to refine the understanding of transit behaviour in megacities. First, to enhance the external validity of the findings, future studies should employ probability-based sampling techniques, such as stratified random sampling, to ensure a more representative cross-section of Jakarta's diverse commuter demographics. Specifically, comparative analyses between occasional and regular riders could reveal whether the psychological weight of perceived comfort remains consistent across varying levels of service familiarity.

Second, future research should expand the current structural model into a full-path behavioural analysis. By integrating 'Behavioural Intention' and 'Actual Usage Frequency' as endogenous outcomes, researchers can assess the strength of the intention-behaviour gap and determine whether psychological readiness directly translates into a sustained modal shift.

Lastly, to achieve a more granular understanding of service attributes, future studies should treat price and comfort as multidimensional constructs. Deconstructing comfort into physical (e.g., seating, air conditioning) and psychological (e.g., safety, personal space) dimensions, while framing price through the lens of perceived fairness and value-for-money, would allow for a more precise identification of the specific triggers that drive commuter decisions. Such advancements would provide policymakers with targeted evidence to optimise public transport adoption in emerging urban environments.

Acknowledgements

None.

Conflict of Interest

None.

Funding

The author received no funding for this research.

Reference

- Ajzen, I. (1991). The theory of planned behaviour. *Organisational Behaviour and Human Decision Processes*, 50(2), 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314-324. <https://doi.org/10.1002/hbe2.195>
- Awad-Núñez, S., Julio, R., Moya-Gómez, B., Gómez, J., & Sastre, J. (2021). Acceptability of sustainable mobility policies under a post-COVID-19 scenario: Evidence from Spain. *Transport Policy*, 101, 81-88. <https://doi.org/10.1016/j.tranpol.2021.04.010>
- Bangun, C. S., Suhara, T., & Husin, H. (2023). The application of theory of planned behavior and perceived value on online purchase behavior. *Technomedia Journal*, 8(1), 12-25. <https://doi.org/10.33050/tmj.v8i1sp.2074>
- Chen, C., Wang, S., & Li, Z. (2023). What influences satisfaction and loyalty in public transport? A review of the literature. *Transportation Research Part A: Policy and Practice*, 166, Article 103567. <https://doi.org/10.1016/j.tra.2022.11.008>
- Eboli, L., & Mazzulla, G. (2011). A methodology for monitoring public transport service quality over time. *Procedia - Social and Behavioral Sciences*, 20, 754-763. <https://doi.org/10.1016/j.sbspro.2011.08.083>
- Friman, M., Lättman, K., & Olsson, L. E. (2020). Public transport quality, safety, and perceived accessibility. *Sustainability*, 12(9), Article 3563. <https://doi.org/10.3390/su12093563>
- Gardner, B., & Abraham, C. (2008). Psychological determinants of car use: A compensatory beliefs model. *Transport Policy*, 15(3), 187-195. <https://doi.org/10.1016/j.tranpol.2008.03.001>
- Halik, A., & Tampi, J. (2025). Strategic pricing and consumer behavior in Indonesian modern retail. *Lex Localis - Journal of Local Self-Government*, 22(3), 951-960. <https://doi.org/10.52152/801052>
- Hasan, H., & Suciarto, S. (2020). The influence of attitude, subjective norm, and perceived behavioral control towards organic food purchase intention. *Journal of Management and Business Environment*, 2(1), 1-18. <https://doi.org/10.24167/jmbe.v1i2.2260>
- Hauslbauer, A. L., Schade, J., Drexler, C. E., & Petzoldt, T. (2022). Extending the theory of planned behavior to predict and nudge toward the subscription to a public transport ticket. *European Transport Research Review*, 14(1). <https://doi.org/10.1186/s12544-022-00528-3>
- Hsu, C. L., & Lin, J. C. C. (2022). Understanding the determinants of continuous usage intention in public transport apps. *Transportation Research Part D: Transport and Environment*, 108, Article 103321. <https://doi.org/10.1016/j.trd.2022.103321>

- Ismael, K., Ahmad, N., & Rosli, M. (2023). Evaluating the quality of the public transport service during the COVID-19 pandemic from the perception of two user groups. *European Transport Research Review*, 15, Article 5. <https://doi.org/10.1186/s12544-023-00578-1>
- Kumar, N., Garg, P., & Singh, S. (2022). Pro-environmental purchase intention towards eco-friendly apparel: Augmenting the theory of planned behavior with perceived consumer effectiveness and environmental concern. *Journal of Global Fashion Marketing*, 13(2), 134-150. <https://doi.org/10.1080/20932685.2021.2016062>
- Liu, Y., & Zhang, Y. (2022). Integrating norm activation model and theory of planned behavior to understand sustainable transport behavior: Evidence from China. *International Journal of Environmental Research and Public Health*, 19(15), Article 9032. <https://doi.org/10.3390/ijerph14121593>
- Maulana, H., Nur, H., Erik, E., Firdaus, F., & Damanik, N. (2025). Pro-environmental choices in Indonesia's campus life: examining the extended theory of planned behavior (TPB) for sustainable behavior in a university setting. *International Journal of Sustainability in Higher Education*, 26(4), 872-889. <https://doi.org/10.1108/IJSHE-11-2023-0572>
- Moon, S. J. (2021). Investigating beliefs, attitudes, and intentions regarding green restaurant patronage: An application of the extended theory of planned behavior with moderating effects of gender and age. *International Journal of Hospitality Management*, 92. <https://doi.org/10.1016/j.ijhm.2020.102727>
- Purba, R., et al. (2022). Pengaruh kualitas dan kepuasan layanan terhadap kepercayaan dan loyalitas pengguna bus TransJakarta [The influence of service quality and satisfaction on trust and loyalty of TransJakarta bus users]. *Jurnal Manajemen Transportasi & Logistik*, 9(1). <https://doi.org/10.55511/jpsttd.v14i1.649>
- Radic, A., Quan, W., Koo, B., Chua, B. L., Kim, J. J., & Han, H. (2022). Central bank digital currency as a payment method for tourists: application of the theory of planned behavior to digital Yuan/Won/Dollar choice. *Journal of Travel and Tourism Marketing*, 39(2), 152-172. <https://doi.org/10.1080/10548408.2022.2061677>
- Sari, N. P. R. P., & Giantari, I. G. A. K. (2021). The role of brand image in mediating the effect of price perception and product quality on purchase intention. *European Journal of Business and Management Research*, 6(5), 47-51. <https://doi.org/10.24018/ejbmr.2021.6.5.955>
- Soliman, M. (2021). Extending the Theory of Planned Behavior to Predict Tourism Destination Revisit Intention. *International Journal of Hospitality and Tourism Administration*, 22(5), 524-549. <https://doi.org/10.1080/15256480.2019.1692755>
- Vogiatzis, N., et al. (2023). Passenger perception of commuter line service quality in Indonesia. *International Journal of Data and Network Science*, 7(4), 1729-1738. <https://doi.org/10.5267/j.ijdns.2023.7.018>

- Yeğın, T., & Ikram, M. (2022). Analysis of Consumers' Electric Vehicle Purchase Intentions: An Expansion of the Theory of Planned Behavior. *Sustainability (Switzerland)*, 14(19). <https://doi.org/10.3390/su141912091>
- Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2-22. <https://doi.org/10.1177/002224298805200302>
- Zhang, Y., et al. (2021). Behavioral intention to use public transport based on theory of planned behavior. *Journal of Sustainable Development*, 14(3), 112-125. <https://doi.org/10.1051/mateconf/20164703008>