

Understanding Foreign Automobile Purchase Behaviour: An Empirical Integration of the Theory of Planned Behaviour and Signalling Theory

Fatma Zohra Chekima¹, Najihah Hanisah Marmaya¹, Suddin Lada¹, Rudy Ansar^{1*}, Brahim Chekima¹

¹Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah, 88400, Kota Kinabalu, Sabah, Malaysia.

DOI: <https://doi.org/10.47772/IJRISS.2026.100300487>

Received: 26 March 2026; Accepted: 31 March 2026; Published: 14 April 2026

ABSTRACT

Foreign automobile brands in Malaysia face intensifying competition from national brands, yet the drivers of actual foreign automobile purchase behaviour remain insufficiently explained. This empirical paper reports the direct-effect portion of a broader study and examines whether attitude, subjective norm, perceived behavioural control, perceived product quality, and brand credibility explain actual purchase behaviour among Malaysian consumers. Grounded in the Theory of Planned Behaviour and Signaling Theory, the study addresses the limitation of intention-based models by focusing on realised behaviour in a high-involvement context. A cross-sectional survey design was employed using a structured questionnaire administered to Malaysian consumers who had purchased or owned foreign automobiles, yielding 161 valid responses. Data were analysed using SPSS 28 and SmartPLS 4. The measurement model demonstrated satisfactory reliability and validity. The structural model showed that all five predictors had positive and significant effects on actual purchase behaviour. Brand credibility, product quality, and attitude emerged as the strongest direct predictors, while perceived behavioural control and subjective norm also made significant contributions. The findings support the continued relevance of TPB in high-cost consumer decisions and show that signaling variables add substantial explanatory value by reducing uncertainty and reinforcing consumer confidence. Practically, the results indicate that foreign automobile marketers in Malaysia should strengthen positive evaluations, social reassurance, purchase manageability, quality perceptions, and brand trust to improve actual market uptake.

Keywords: Foreign automobile purchase behaviour, Theory of Planned Behaviour, Signaling Theory, Malaysia

INTRODUCTION

The rapid advance of globalisation has expanded consumers' exposure to foreign products and strengthened the appeal of global brands, often associated with prestige, innovation, superior quality, and social status. In Malaysia, these dynamics are clearly visible in the automobile sector, where foreign brands operate in a market that has become increasingly competitive and domestically oriented. Although Malaysia recorded strong overall vehicle sales growth, foreign brands have lost relative market share while national brands, especially Perodua and Proton, have consolidated dominance (Malaysian Automotive Association, 2025; WapCar, 2025; Paultan.org, 2025).

This shift raises an important empirical and managerial question. Why do Malaysian consumers purchase foreign automobiles, and which determinants most strongly shape that behaviour? The study argues that this question cannot be adequately answered by intention-based models alone. In high-involvement decisions, such as automobile purchases, what consumers say they intend to buy may not translate into what they buy. This is especially relevant in a context characterised by substantial financial commitment, extensive information search, and perceived risk (Morwitz, 2014; Morwitz, 2021; Gleim & Lawson, 2014; Chekima et al., 2023).

Against this background, the present empirical paper narrows to its core direct effect. It examines actual foreign automobile purchase behaviour through two complementary theoretical lenses. The first is the Theory of Planned

Behaviour, which explains behaviour in terms of attitude, subjective norm, and perceived behavioural control (Ajzen, 1991, 2002). The second is Signaling Theory, which explains how consumers rely on extrinsic cues, particularly product quality and brand credibility, to reduce uncertainty in high-risk decisions (Akerlof, 1970; Spence, 1973; Erdem & Swait, 2004; Li et al, 2024a; Lada et al, 2024).

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theory of Planned Behaviour

The Theory of Planned Behaviour remains one of the most widely applied frameworks for predicting consumer behaviour. It posits that behaviour is shaped by attitude toward the behaviour, subjective norm, and perceived behavioural control (Ajzen, 1991, 2002; Armitage & Conner, 2010). In the context of foreign automobile purchases, attitude reflects consumers' favourable or unfavourable evaluations of buying a foreign-branded vehicle. Subjective norm captures perceived social pressure from important others, while perceived behavioural control reflects the perceived ease or difficulty of purchasing and owning such a vehicle, including financial ability, access, and supporting infrastructure (Ajzen & Fishbein, 2000; Boo & Tan, 2024; Yadav & Kishor, 2023; Febrilia et al, 2024).

Prior literature cited in the study suggests that favourable attitudes toward foreign vehicles often stem from beliefs about superior engineering, innovation, prestige, and long-term reliability. Social influence is also relevant, particularly in collectivist settings where family and peers affect major consumption decisions. Perceived behavioural control matters because foreign automobile purchases require substantial resources and planning, making feasibility central to realised behaviour rather than only intention (Ajzen, 1991, 2002; Boo & Tan, 2024; Che Wel et al., 2018).

Accordingly, the following hypotheses were retained from the study's direct-effect model:

H1: Attitude has a positive relationship with actual foreign automobile purchase behaviour.

H2: Subjective norm has a positive relationship with actual foreign automobile purchase behaviour.

H3: Perceived behavioural control has a positive relationship with actual foreign automobile purchase behaviour.

Signaling Theory

The study extends TPB by incorporating Signaling Theory. In high-involvement markets, consumers cannot fully verify intrinsic product attributes before purchase, so they depend on observable signals to infer underlying quality and trustworthiness. In foreign automobile markets, perceived product quality and brand credibility serve as such signals. Product quality summarises consumers' judgements of overall excellence or superiority, while brand credibility reflects whether the brand is seen as believable, trustworthy, and capable of delivering on its promises (Akerlof, 1970; Spence, 1973; Zeithaml, 1988; Erdem & Swait, 2004; Chekima & Chekima, 2019).

The study argues that these two signaling variables are especially important in Malaysia, where foreign brands compete not only on technical attributes but also on how convincingly they communicate quality, reliability, and long-term value. Product quality and brand credibility, therefore, function as independent causal inputs rather than merely background perceptions. This follows Ajzen's (2020) call to enrich TPB with conceptually distinct predictors that improve explanatory power.

The corresponding hypotheses are:

H4: Perceived product quality has a positive relationship with actual foreign automobile purchase behaviour.

H5: Brand credibility has a positive relationship with actual foreign automobile purchase behaviour.

METHODOLOGY

The study adopted a positivist, quantitative, non-experimental, correlational design and employed a cross-sectional survey. Data were collected through a structured questionnaire administered to Malaysian consumers who had purchased or currently owned a foreign automobile. The study used non-probability purposive sampling, including only respondents with relevant direct experience. The survey covered several Malaysian states, including Kuala Lumpur, Selangor, Johor, Penang, and Sabah, to improve geographic spread and contextual relevance (Bougie & Sekaran, 2019; Levin, 2006; Yong et al., 2021; Chekima et al., 2023; Bouteraa et al., 2023a; Li et al., 2024b).

The final sample comprised 161 valid responses, exceeding the minimum sample size of 138 established using GPower and the 10-times rule commonly cited in PLS-SEM research (Hair et al., 2011; Hair et al., 2022). Responses were captured using a 5-point Likert scale. Given the study's narrow scope, the focal constructs are attitude, subjective norm, perceived behavioural control, product quality, brand credibility, and purchase behaviour. Data analysis was conducted using SPSS 28 for descriptive statistics and SmartPLS 4 for measurement and structural model assessment. The structural model used bootstrapping with 5,000 subsamples and a two-tailed significance level of 0.05.

RESULTS

Respondent Profile

The sample of 161 respondents was slightly male dominated (63%), concentrated mainly in the 31 to 50 age range, generally well-educated, and skewed toward the M40 (middle class) and T20 (upper class) income categories in Malaysia. This profile is consistent with the financial and practical realities of foreign automobile ownership in Malaysia.

Measurement Model Assessment

The study reported satisfactory evidence of measurement quality. For the focal constructs retained in this article, composite reliability values ranged from 0.895 to 0.949 and were all above the recommended threshold. Convergent validity was also satisfactory, with AVE values above 0.50 for all focal constructs, specifically 0.776 for attitude, 0.740 for subjective norm, 0.730 for perceived behavioural control, 0.755 for product quality, 0.707 for brand credibility, and 0.754 for purchase behaviour. Discriminant validity was supported by HTMT, with all relevant values below the 0.85 threshold. Common method variance was also unlikely to be a serious concern, as all full collinearity VIF values were below 3.3 (Kock, 2015; Henseler et al., 2015; Hair et al., 2022).

Structural Model Assessment

The structural model shows that all five direct hypotheses were supported. Attitude had a positive and significant effect on purchase behaviour, with $\beta = 0.285$, $p < 0.001$. Subjective norm also had a positive and significant effect, with $\beta = 0.113$, $p = 0.017$. Perceived behavioural control also significantly predicted purchase behaviour, with $\beta = 0.199$, $p < 0.001$. Among the signaling variables, product quality showed a positive and significant effect ($\beta = 0.277$, $p < 0.001$), while brand credibility had the strongest direct coefficient ($\beta = 0.311$, $p < 0.001$).

The model demonstrated substantial explanatory power. Purchase behaviour achieved $R^2 = 0.485$, indicating that the predictors collectively explained 48.5 percent of the variance in actual foreign automobile purchase behaviour. Predictive relevance was also supported. All Q^2 predict values for the purchase behaviour indicators were positive, and the PLS-SEM model outperformed the linear benchmark model across all four indicators, indicating good out-of-sample predictive performance. Effect size analysis showed that attitude, product quality, and brand credibility each had medium effects, while perceived behavioural control had a smaller but still meaningful effect, and subjective norm had a small effect (Hair et al., 2022).

DISCUSSION

The findings confirm that behavioural evaluations and market signals jointly shape actual foreign automobile purchase behaviour in Malaysia. From the TPB side, attitude remained one of the strongest predictors, suggesting that favourable personal evaluations of foreign cars strongly support actual purchase. This is important because the article focuses on realised behaviour, not intention alone. The result, therefore, strengthens the argument that positive evaluation continues to matter when consumers move from preference to action (Ajzen, 1991, 2020; Che Wel et al., 2018).

Subjective norm and perceived behavioural control were also significant, though smaller in magnitude. This indicates that social pressure and perceived feasibility still matter in a high-cost product category, but they are not the sole drivers. Instead, they operate alongside stronger attitudinal and signaling forces. For foreign automobile marketers, this suggests that social approval and purchase manageability help consumers act on favourable preferences, but these factors do not replace quality and trust considerations.

The signaling results are especially important. Product quality and brand credibility emerged as major direct predictors, with coefficients comparable to attitude. This supports the study's core extension of TPB. In a high-risk context, such as purchasing a foreign automobile, consumers rely on perceived quality and credible brand execution to reduce uncertainty and justify their actions (Bouteraa et al., 2023b). These variables do not merely decorate the model. They materially improve its explanatory power.

IMPLICATIONS

This narrowed empirical paper contributes to two main ways. First, it supports applying TPB to actual behaviour rather than to intention alone. The study explicitly argued that actual behaviour is a more appropriate outcome for high-involvement purchases because intention measures often overstate the likelihood of action. The present results support that position by showing that TPB variables remain meaningful even when the dependent variable is actual purchase behaviour.

Second, the paper demonstrates the value of integrating Signaling Theory into behavioural modelling. Product quality and brand credibility were not peripheral beliefs. They were strong explanatory variables. This finding helps resolve some of the ambiguity identified in the study regarding whether product-related cues should be treated merely as evaluations or as genuine causal signals in consumer decision-making (Ajzen, 2020; Erdem & Swait, 2004; Spence, 1973).

The findings also suggest that foreign automobile marketers in Malaysia should focus on five areas. First, they should strengthen favourable attitudes by reinforcing beliefs about safety, innovation, reliability, prestige, and long-term value. Second, they should support social reassurance by making ownership socially acceptable and aspirational within relevant peer and family networks. Third, they should reduce barriers that weaken perceived behavioural control, such as financing difficulty, information complexity, and uncertainty about service access. Fourth, they should highlight verifiable product-quality signals, including engineering quality, safety, durability, and technological features. Fifth, they should maintain strong brand credibility through transparent communication, dependable performance, and reliable after-sales service.

The results also support a broader managerial lesson from the study. Foreign brands should be cautious about relying too heavily on intention data for forecasting and strategy. In the automobile sector, behaviour-based understanding offers more grounded guidance for demand assessment, positioning, and market recovery efforts.

CONCLUSION

This empirical paper reports the core direct effect of the study and shows that attitude, subjective norm, perceived behavioural control, product quality, and brand credibility all significantly explain actual foreign automobile purchase behaviour in Malaysia. Among these, brand credibility, product quality, and attitude were the strongest predictors. The findings therefore support a two-block explanation of behaviour, one behavioural and one

signaling-based, and confirm that actual purchase behaviour can be meaningfully explained through a tighter integration of the Theory of Planned Behaviour and Signaling Theory.

REFERENCES

1. Akerlof, G. A. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84(3), 488–500.
2. Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 179–211.
3. Ajzen, I. (2002). Perceived behavioural control, self-efficacy, locus of control, and the theory of planned behaviour. *Journal of Applied Social Psychology*, 32(4), 665–683.
4. Ajzen, I. (2020). The Theory of Planned Behaviour: Frequently Asked Questions. Retrieved from TPB author site. (Review updating foundational TPB constructs.)
5. Ajzen, I., & Fishbein, M. (2000). Attitude and the attitude–behaviour relation: Reasoned and automatic processes. *Review of Social Psychology*, 11(1), 1–33.
6. Armitage, C. J., & Conner, M. (2010). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499.
7. Boo, S. Y., & Tan, C. (2024). Electric vehicles purchase intention: The role of mediators using an extended TPB model. *Journal of Contemporary Marketing Science*, 7(2), 158–183.
8. Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill-building approach* (8th ed.). Wiley.
9. Bouteraa, M., Al-Daihani, M., Chekima, B., Ansar, R., Tamma, E., Lada, S., Baddou, A., Elkheloufi, A., & Ming Fook, L. (2023). A Multi-Analytical Approach to Investigate the Motivations of Sustainable Green Technology in the Banking Industry. *International Journal of Social Ecology and Sustainable Development*, 15(1), 1–32.
10. Bouteraa, M., Tamma, E., Aichouche, M. E. H., Achour, S., Lada, S., Ansar, R., Fook, L. M., & Chekima, B. (2023). International Joint Ventures’ Knowledge Acquisition: Critical Literature Review. *Sustainability*, 15(8), 6364.
11. Che Wel, C. A., Shah Alam, S., Khalid, N. R., & Mokhtaruddin, S. A. (2018). Effect of ethnocentrism and patriotism on the buying intention of Malaysian national car. *Jurnal Pengurusan*, 52, 169–179.
12. Chekima, F. Z., & Chekima, B. (2019). Celebrity Credibility Influence on Cosmetic Product Purchase Intention. *Exploring the Dynamics of Consumerism in Developing Nations*, 153–175. <https://doi.org/10.4018/978-1-5225-7906-9.ch007>
13. Chekima, B., Bouteraa, M., Ansar, R., Lada, S., Fook, L. M., Tamma, E., Abdul Adis, A.-A., & Chekima, K. (2023). Determinants of Organic Food Consumption in Narrowing the Green Gap. *Sustainability*, 15(11), 8554. <https://doi.org/10.3390/su15118554>
14. Erdem, T., & Swait, J. (2004). Brand credibility, brand consideration, and choice. *Journal of Consumer Research*, 31(1), 191–198.
15. Febrilia, I., Rahmi, R., Lada, S., & Chekima, B. (2024). Online Impulse Buying: Investigating the Role of E-Commerce Attributes, Customer Motivation, and Urge to Buy Impulsively. *The Journal of Behavioral Science*, 19(1), 95–108. <https://so06.tci-thaijo.org/index.php/IJBS/article/view/266699>
16. Gleim, M. R., & Lawson, S. J. (2014). Spanning the gap: An examination of the factors leading to the green gap. *Journal of Consumer Marketing*, 31(6/7), 503–514.
17. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). Sage.
18. Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152.
19. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
20. Kock, N. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e-Collaboration*, 11(4), 1–10.

21. Lada S, Chekima B, Ansar R, Lim MF, Bouteraa M, Abdul Adis A, Abd Karim MR, Yong K (2024). Strategic alternatives for Muslim-friendly homestay in Sabah Malaysia: a SWOT/TOWS analysis. *Journal of Islamic Marketing*, Vol. 15 No. 6 pp. 1534–1559.
22. Li, X., Lim, M.-F., Ramlee, A. N. A., & Chekima, B. (2024). Brand Authenticity: A 21-Year Bibliometric Review and Future Outlook. *Sage Open*, 14(3).
23. Li, L., Xiaobing, L., & Chekima, B. (2024). Assessing the growth and spatial-temporal evolution of China's digital economy. *Asian Development Policy Review*, 13(1), 12–24. <https://doi.org/10.55493/5008.v13i1.5219>
24. Levin, K. A. (2006). Study design III: Cross-sectional studies. *Evidence-Based Dentistry*, 7(1), 24–25.
25. Malaysian Automotive Association. (2025). Market review 2024.
26. Morwitz, V. (2014). Consumers' purchase intentions and their behavior. *Foundations and Trends in Marketing*, 7(3), 181–230.
27. Morwitz, V. G. (2021). Consumers' purchase intentions and their behavior. *Consumer Psychology Review*, 4(1).
28. Paultan.org. (2025, January 8). Top 20 best-selling car brands in Malaysia in 2024: Perodua still leads, Proton 2nd, Toyota 3rd.
29. Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374.
30. WapCar. (2025, January 21). Malaysia new car sales hit record 816,747 units in 2024; MAA forecasts 780k in 2025.
31. Yadav, S., & Kishor, N. (2023). Global vs local: A choice influenced by consumer ethnocentrism level. *NMIMS Management Review*, 31(4), 240–255.
32. Yong, K., Zainal, N. T. A., & Chekima, B. (2021). The Relationship between Entrepreneurial Competencies and Entrepreneurial Success Among Homestay Entrepreneurs in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 11(6).
33. 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.