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NEWS RELEASE

FOR IMMEDIATE RELEASE

Study: Malaysian Undergraduate Youths perspective towards Electrical Vehicle (EV)

Selangor, August 08, 2025 – The Tun Tan Cheng Lock Institute of Social Studies (TCLC) at Universiti Tunku Abdul Rahman (UTAR) recently conducted an online survey to explore the perspectives of Malaysian undergraduate students towards electric vehicles (EV). The study aims to evaluate their awareness, concerns, and purchasing intentions regarding EVs, in light of Malaysia's expanding EV market.

The Malaysian EV market has experienced exponential growth in recent years. According to Automachi (2025), only 278 EV units were sold in 2021. The number surged to 2,631 units in 2022, and surpassed 10,000 units in 2023. By 2024, a total of 14,766 EVs were sold nationwide (Liang, 2025), signalling a transformative shift in consumer mobility preferences.

This survey aims to explore the awareness and attitudes of Malaysian undergraduate youth towards electric vehicles (EVs), as well as the underlying factors shaping these perceptions. It is hoped that the findings will offer a clearer understanding of how Malaysian youth view the adoption of EVs.

The survey targeted Malaysian undergraduate youth aged 16 to 30. Over a four-week data collection period, a total of 328 responses were gathered through an online questionnaire. Among the respondents, 46.34% were female and 53.66% were male. Approximately 94.51% fell within the 16–25 age group, and 93.29% were still actively pursuing their studies.

Approximately 50% of Malaysian Undergraduate Youths See Themselves Owning an EV in the Future

The rapid changes in market dynamics and lifestyle trends in Malaysia have brought electric vehicles (EVs) to the forefront of youth discourse. According to the survey, 98.78% of respondents reported having heard about EVs, while only 1.22% had no knowledge of them. However, only 24.39% claimed to be familiar with EV technology—with 5.79% being very familiar and 18.60% somewhat familiar (Figure 1). This lack of deep understanding may partly explain why a majority of respondents preferred hybrid vehicles (46.04%) or fuel-based cars (39.33%), with only 14.63% expressing a preference for EVs in the near future (Figure 2).

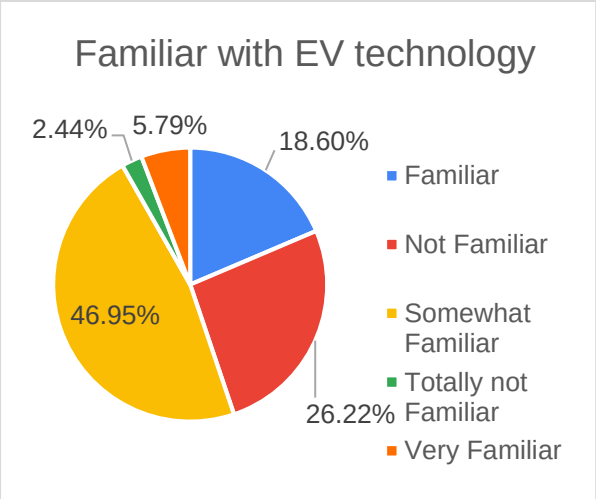

Figure 1

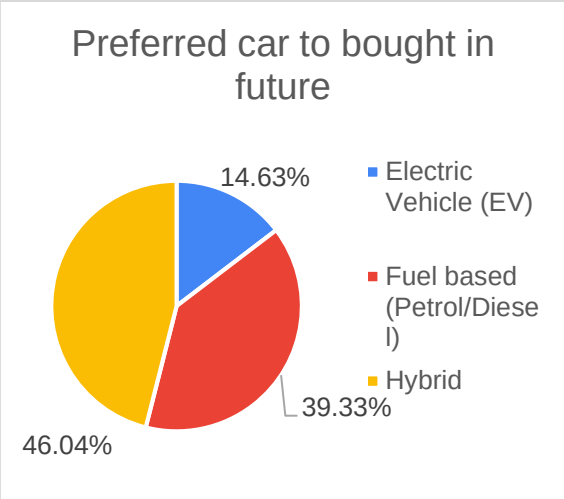

Figure 2

Currently, only 7.93% of respondents or their family members own an EV, highlighting the still-limited penetration of EVs among this demographic.

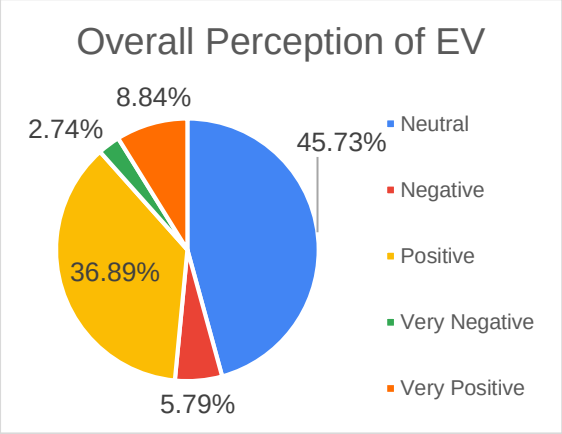

Figure 3

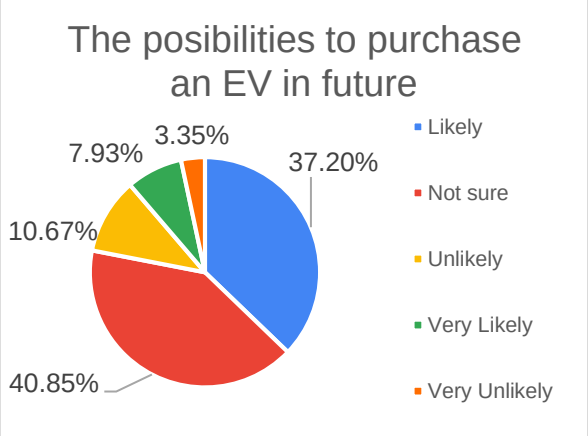

Figure 4

Despite this, respondents did not express outright rejection of EV ownership. In fact, 45.73% of them expressed a positive perception towards EVs—8.84% were very positive, while 36.89% were somewhat positive (Figure 3). A nearly equal proportion—45.12% (7.93% very likely and 37.20% likely)—shared that they would consider purchasing an EV in the future (Figure 4).

When asked about the benefits of EVs, over half of the respondents (52.44%) cited environmental friendliness (zero emissions) as the top advantage. This was followed by energy cost savings (17.68%) and a quiet, smooth driving experience (17.38%) (Figure 5).

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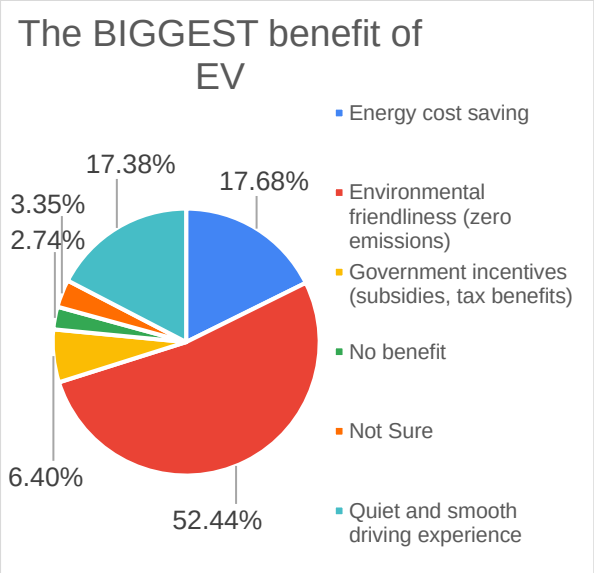

Figure 5

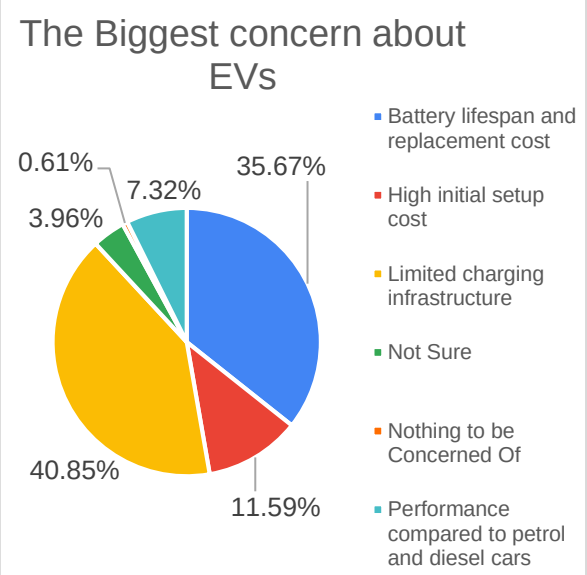

Figure 6

However, concerns remain. The most significant worry was the lack of adequate charging infrastructure (40.85%), followed by battery lifespan and replacement costs (35.67%), and high initial purchase costs (11.59%) (Figure 6). These concerns likely contribute to the large proportion of respondents (45.73%, Figure 3) who maintain a neutral perception of EVs, and the 40.85% (Figure 4) who remain uncertain about purchasing one in the future.

In summary, while nearly half of Malaysian undergraduate youths hold a positive view of EVs, the ownership rate remains low. This suggests strong potential for future EV market growth, particularly as this demographic reaches vehicle-purchasing age. Nonetheless, key barriers such as infrastructure and battery reliability must be addressed. If the government can expand charging networks and improve EV battery technology, it is likely that those currently neutral will shift toward embracing EVs over traditional fuel-based vehicles.

Durability Emerges as the Most Critical Factor in EV Purchase Decisions

When it comes to key factors influencing the intention to purchase an electric vehicle (EV), durability stands out as the top priority among Malaysian undergraduate youth, with 84.70% of respondents identifying it as the most important consideration. This was followed closely by maintenance cost (83.23%) and after-sales service (82.32%). Interestingly, aesthetic appeal—including shape and design—ranked lowest among the youth group, with only 59.15% of respondents considering it a significant factor (Figure 7).

Regarding EV body types, sedans were the most preferred (35.98%), followed by multi-purpose vehicles (MPVs) and coupes, both at 32.62%. This suggests a practical approach to vehicle selection, with youth prioritizing utility and familiarity over design novelty (Figure 8).

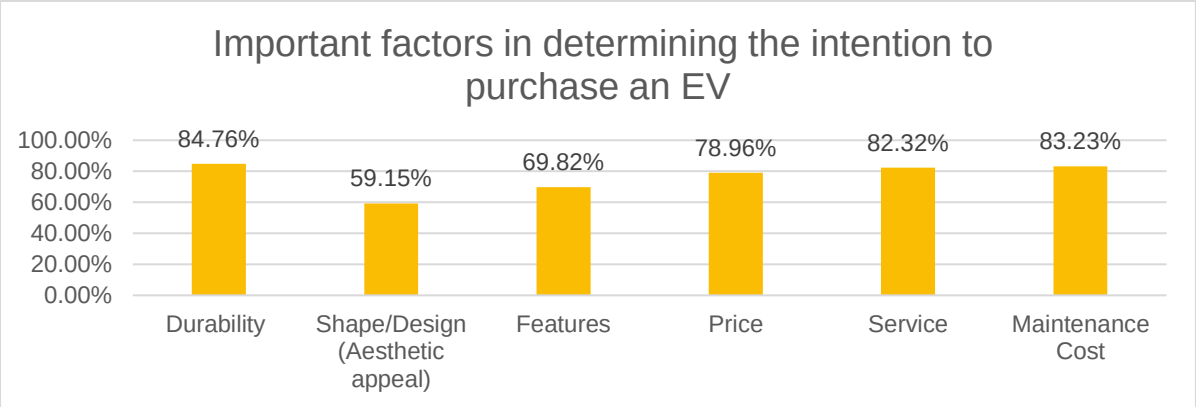

Figure 7

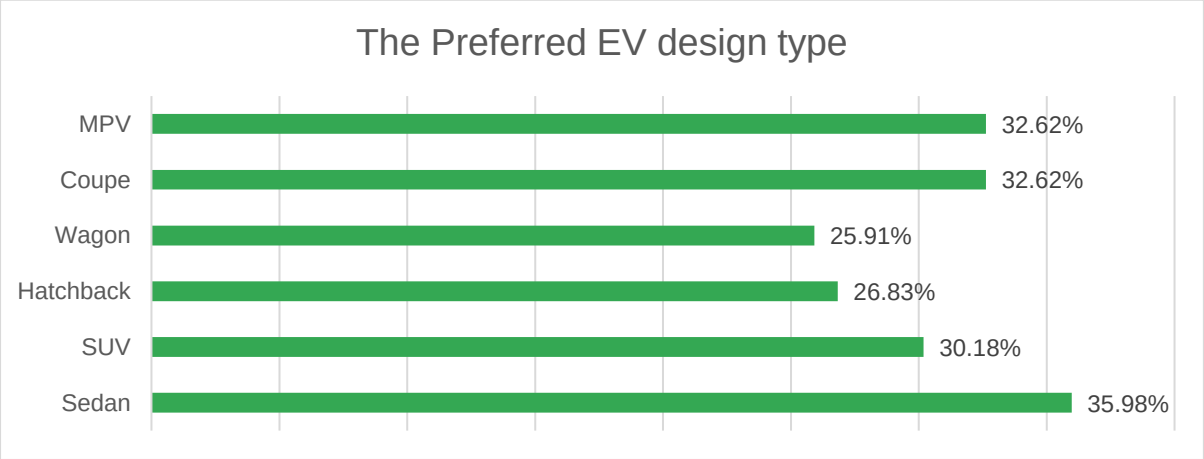

Figure 8

Price remains the core factor influencing EV adoption. When asked about the minimum acceptable price range, the most preferred option among respondents was RM80,000 to RM120,000 (41.46%). In terms of price acceptance, if EV prices exceed RM120,000, the overall acceptance rate falls to 40.24% (covering the RM120,000 to above RM200,000 ranges combined). Conversely, if prices remain at or below RM120,000, the overall acceptance rate rises sharply to 81.71% (covering the RM80,000 to RM120,000 ranges combined). These findings clearly indicate that affordability is a decisive factor for many potential buyers (Figure 9).

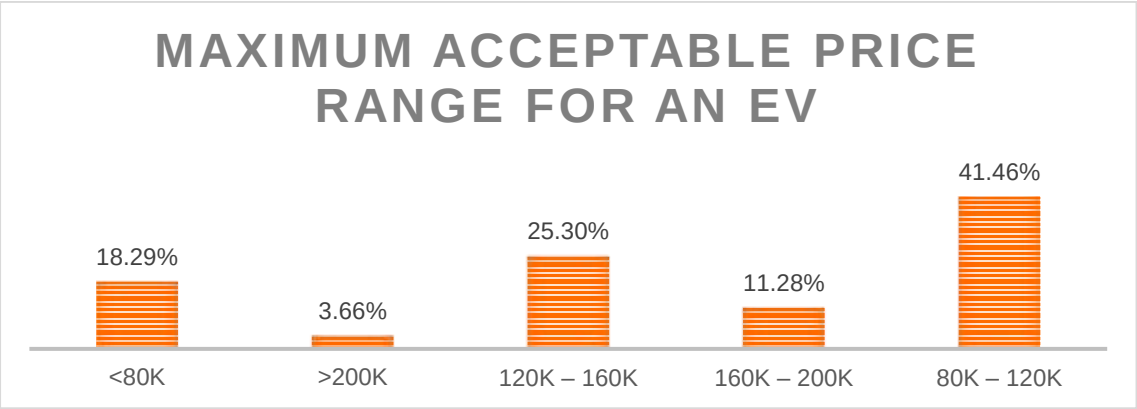

Figure 9

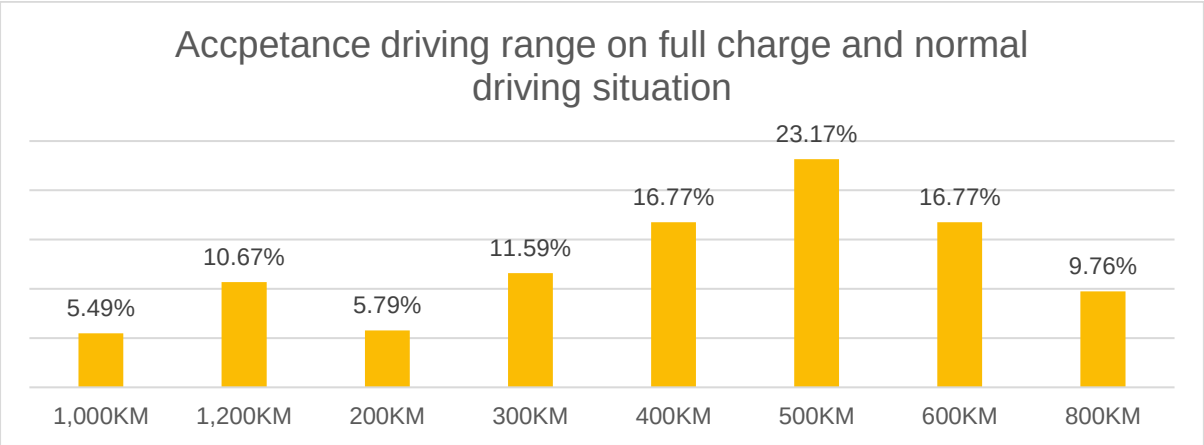

Figure 10

Driving range on a full charge is another major consideration. Only 34.15% of respondents would accept a range of 400 km or less (200 km: 5.79%, 300 km: 11.59%, 400 km: 16.77%). However, acceptance rates increase sharply with extended range: 57.32% would be satisfied with a 500 km range, and 74.09% if it reaches 600 km. This clearly indicates that range anxiety remains a barrier, and improved battery performance is crucial to boost consumer confidence (Figure 10).

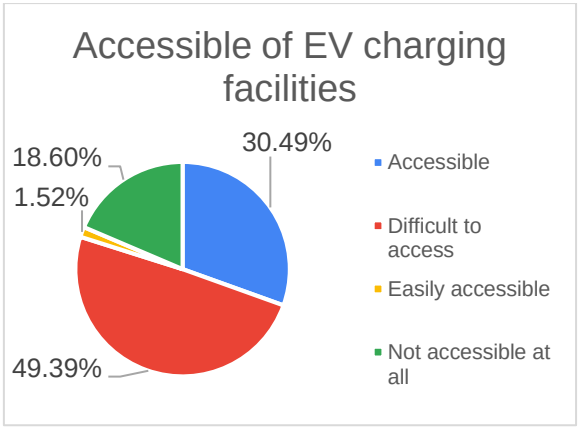

Figure 11

Despite rising interest, charging infrastructure remains insufficient. Only 32.01% of respondents stated that charging facilities are accessible in their area (1.52% found them “easily accessible” and 30.49% “accessible”). The lack of reliable charging infrastructure is likely to deter many from committing to EV ownership, reinforcing the importance of coordinated infrastructure development alongside EV promotion (Figure 11).

Overall, the survey findings suggest that Malaysian youth are optimistic yet cautious about EV adoption. Stability, reliability, and affordability are key prerequisites. If EV technology continues to advance—particularly in areas such as battery durability, lower maintenance costs, efficient after-sales service, and extended driving range—and if prices can be brought within the RM80k–RM120k range through technological maturity and mass production, EVs are likely to become a mainstream option among young Malaysian consumers.

Tesla Remains the Leading EV Brand Among Malaysian Youth

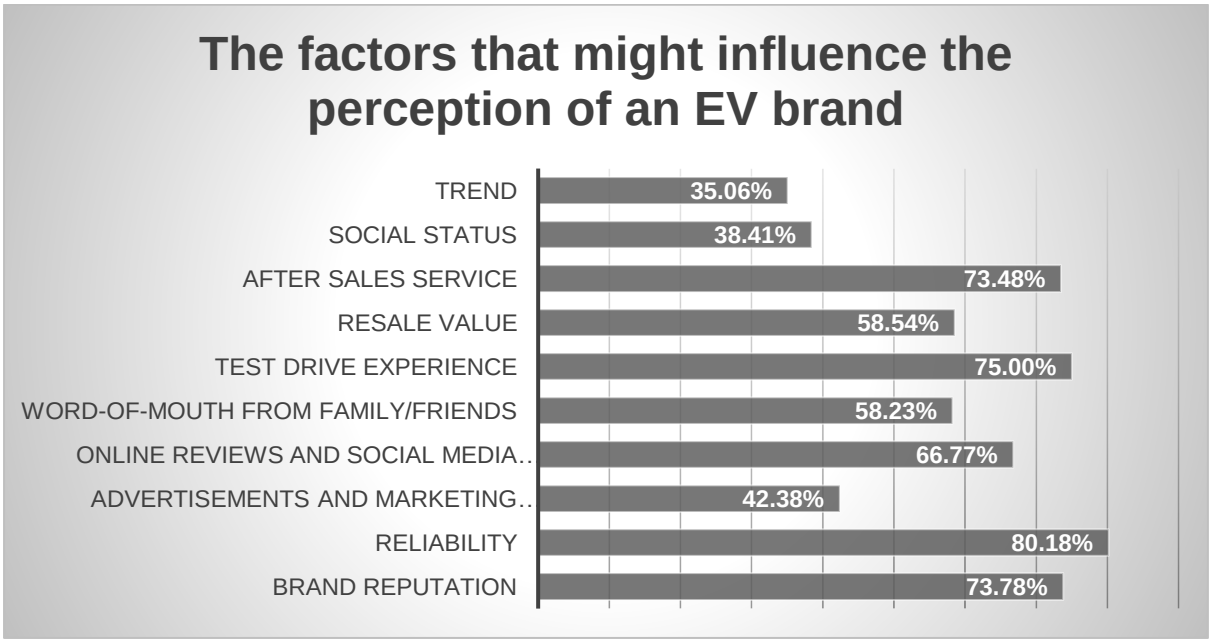

Figure 12

According to the survey, reliability is the most important factor shaping respondents' perceptions of EV brands, cited by 80.18% of participants. This was followed closely by test drive experience (75.00%), brand reputation (73.78%), and after-sales service (73.48%). In contrast, factors such as trends (35.06%) and social status (38.41%) ranked significantly lower, suggesting that functionality and dependability outweigh image-based considerations among Malaysian undergraduate youth (Figure 12).

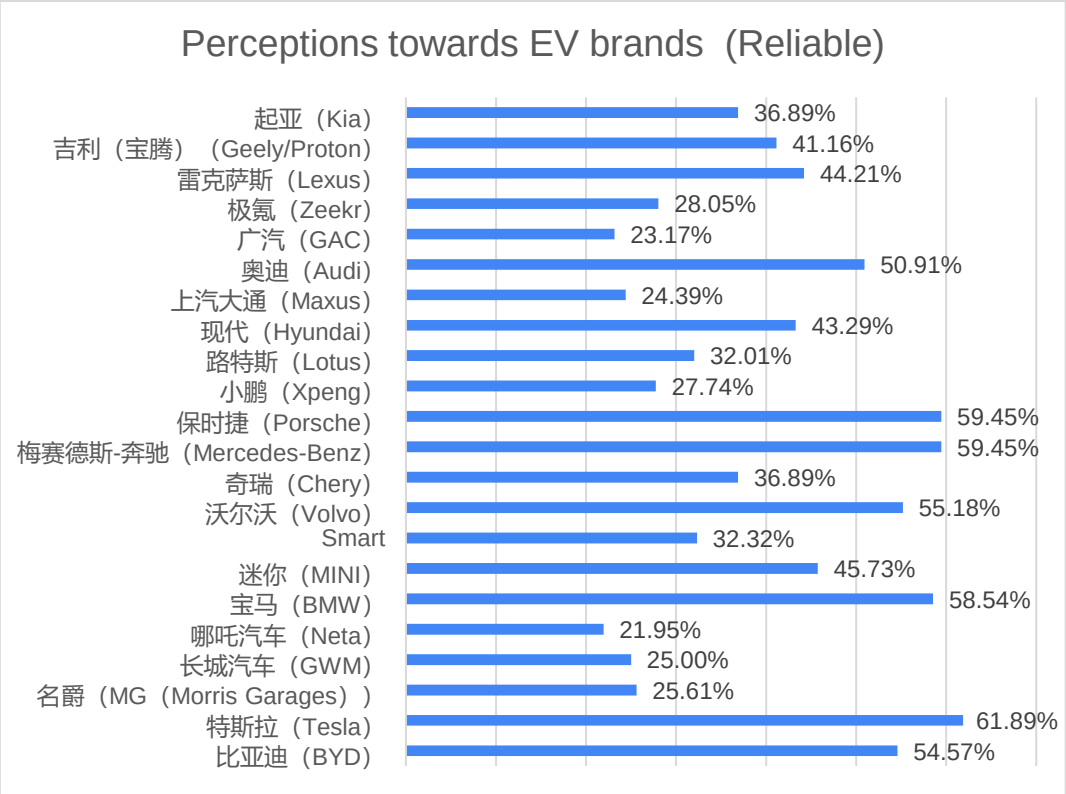

Figure 13

These preferences directly influence both brand awareness and brand perception. Tesla tops the list in brand awareness, with an impressive 92.38% recognition rate, followed by BMW (73.48%) and BYD (72.56%) (Figure 13). When asked about perceptions of brand reliability, Tesla again led with 61.89%, followed by Porsche and Mercedes-Benz (both at 59.45%), BMW (58.54%), Volvo (55.18%), and BYD (54.57%) (Figure 14). This underscores Tesla's dominance in both visibility and consumer trust among young Malaysians.

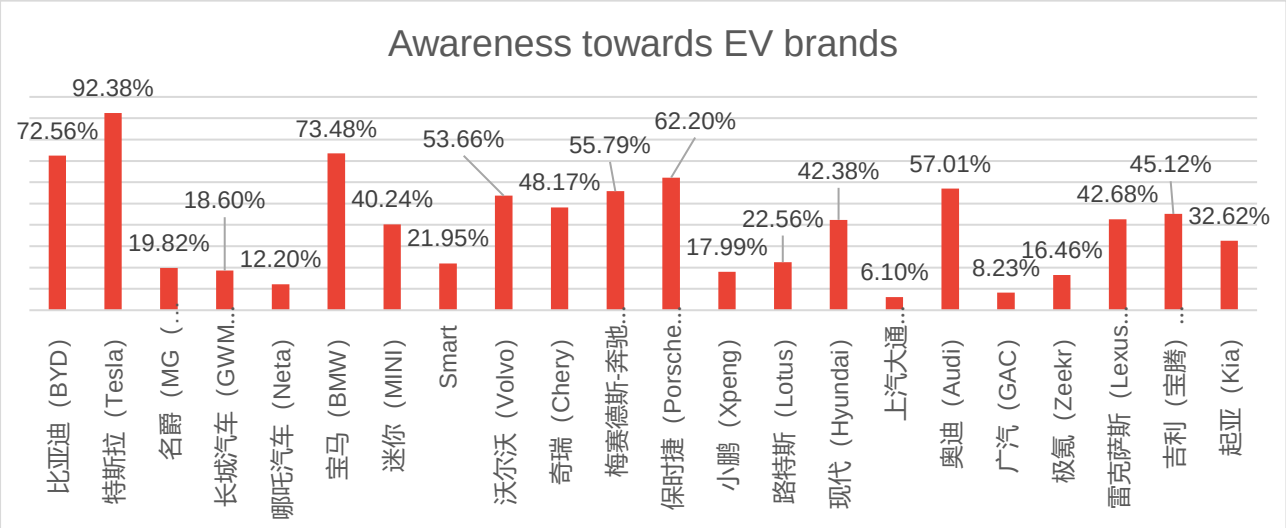

Figure 14

Interestingly, while Western brands enjoy strong recognition, a majority of respondents (60.98%) believe that China is currently leading Malaysia's EV market, ahead of the United States (19.21%) and Japan (11.59%) (Figure 15). This indicates a growing perception of China's dominance in EV innovation and market penetration.

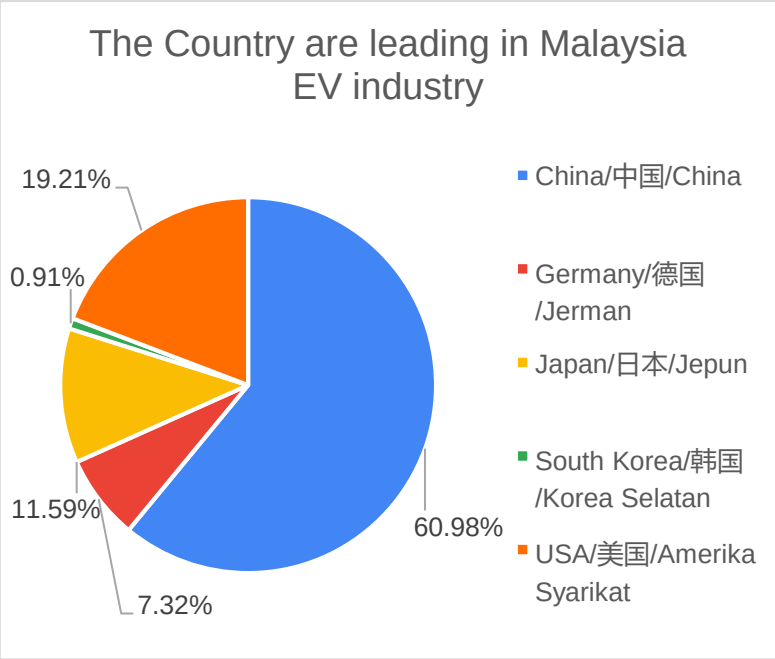

Figure 15

In addition to brand-specific perceptions, car reviews also play a significant role in shaping consumer opinion. About 35.98% of respondents (6.10% very influenced, 29.88% influenced) stated that expert and peer car reviews impact their perception of EVs (Figure 16).

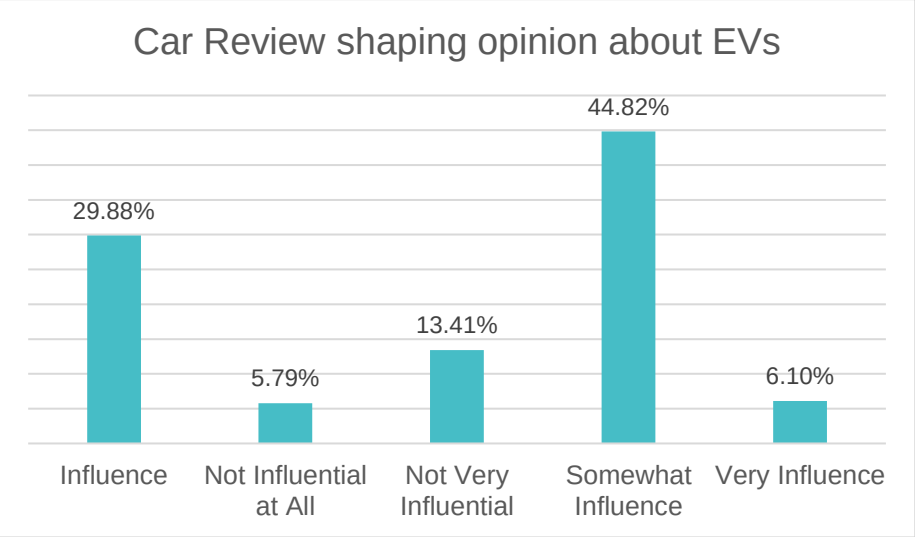

Figure 16

Overall, the findings suggest that brand reliability is the cornerstone of consumer trust and brand awareness in the EV sector. Additionally, car reviews serve as influential tools in shaping opinions, especially among first-time or undecided buyers. Therefore, investing in brand

credibility, transparent communication, and professional car review engagement could serve as effective strategies for EV brands aiming to penetrate the Malaysian youth market.

Conclusion

The study reveals that while Malaysian undergraduate youths are highly aware of electric vehicles and generally view them positively, actual ownership and strong purchasing intention remain modest. Key factors such as durability, maintenance cost, and battery range play a central role in influencing future adoption. Price sensitivity and insufficient charging infrastructure remain major barriers.

Nevertheless, the findings highlight a clear pathway forward: with technological advancements, strategic pricing, and improved infrastructure, the EV market holds significant growth potential among Malaysia's younger generation. Brands like Tesla currently lead in visibility and trust, but long-term success will depend on continued investment in reliability, service quality, and informed public engagement. As Malaysia advances toward a more sustainable mobility future, its youth are poised to be a driving force in this transition.

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Mr. Lee Kin Keong
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About TCLI's studies 敦陈祯禄社会研究所研究项目

This study is among TCLI's initiatives to understand various social phenomena occurring in Malaysia. Results of TCLI's studies are published on TCLI's website at http://tcli.resources.utar.edu.my/Report.php.

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Should there be any enquiry about the information in this news release, please feel free to contact TCLI Director Dr. Chin Yee Mun at chinym@utar.edu.my.
