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DRIVING GREEN IN CHINA: SOCIAL INFLUENCE AND NEW ENERGY VEHICLE ADOPTION IN GUANGDONG

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Abstract

This study examines the factors influencing New Energy Vehicle (NEV) adoption among consumers in Guangdong Province, China, through the lens of the Theory of Planned Behavior (TPB). It incorporates peer group homogeneity as a moderating variable, leveraging Guangdong's advanced NEV infrastructure, strong government support, and collectivist cultural context. Utilizing a quantitative methodology with 420 respondents, the study evaluates the impact of green attitude, perceived social influence, and perceived behavioral control on green purchase intentions and behaviors. Findings confirm that these three TPB components significantly predict NEV purchase intention, which in turn mediates actual purchase behavior. Peer group homogeneity significantly moderates these relationships, amplifying the effects of TPB constructs in cohesive social groups. The research highlights the importance of social dynamics in shaping consumer behavior within collectivist societies. This study extends the TPB framework by including group-level influences, offering a more comprehensive model of green consumer behavior. The results offer guidance for businesses and policymakers seeking to promote NEV adoption in similar cultural and economic contexts.

Keywords: New Energy Vehicles, Theory of Planned Behavior, Social Influence, Green Purchase Intention, Peer Group Homogeneity

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Introduction

The global emphasis on sustainability has reshaped consumer preferences, fueling demand for environmentally friendly technologies such as New Energy Vehicles (NEVs) (Dhir et al., 2021). As alternatives to internal combustion engine vehicles, NEVs powered by electricity or hydrogen fuel cells contribute to reducing greenhouse gas emissions and support international efforts toward carbon neutrality and sustainable development (Fan et al., 2021). Although adoption is rising, the factors influencing consumer decisions to purchase NEVs remain complex and context-dependent, especially in regions with diverse cultural and economic characteristics (Filho & Barcelos, 2021).

The Theory of Planned Behavior (TPB) is widely used to explain and predict consumer decisions by focusing on attitudes, subjective norms, and perceived behavioral control (Armitage & Conner, 2001). Attitudes reflect consumers' evaluations of the behavior, subjective norms capture perceived social expectations, and perceived behavioral control relates to their sense of capability in performing the behavior. Despite its popularity, TPB is often limited to individual-level analysis and tends to overlook broader social dynamics that can shape behavior in collectivist societies (Melnik et al., 2021). In such contexts, the influence of peer groups and collective values can be especially strong but has not been fully addressed in TPB applications (Gunawan et al., 2023).

This study introduces peer group homogeneity into the TPB framework to address this gap. Peer group homogeneity refers to the degree of similarity in values, attitudes, and behaviors among members of a social group (Baccara & Yariv, 2016). When individuals are part of cohesive groups, their behavioral intentions may be shaped more strongly by shared beliefs, particularly in collectivist cultures where social harmony and conformity are emphasized (Albrecht et al., 2017). Incorporating this moderate variable enhances the explanatory power of TPB and offers a more comprehensive view of consumer decision-making in socially interdependent contexts.

The study focuses on Guangdong Province, which provides an ideal setting due to its economic advancement, strong government support for NEVs, and widespread environmental awareness (Zheng et al., 2021). The region's mature infrastructure, including charging stations and incentive policies, supports NEV development, yet consumer behavior is still influenced by cost concerns, limited product knowledge, and peer expectations (Fan et al., 2021). These conditions highlight the need to examine not only psychological factors but also the social environments in which purchase decisions occur (Gunawan et al., 2023).

This research investigates how green attitude, perceived social influence, and perceived behavioral control affect NEV purchase intention and how purchase intention leads to actual behavior (Kautonen et al., 2015). It further explores whether peer group homogeneity moderates the strength of these relationships (Albrecht et al., 2017). By integrating individual and group-level influences, this study expands the theoretical application of TPB and provides practical insights for promoting NEV adoption. The findings can inform strategies that leverage social networks and group dynamics to enhance consumer engagement and support the transition toward sustainable transportation (Gunawan et al., 2023).

Literature Review

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), extends the Theory of Reasoned Action (TRA) by incorporating perceived behavioral control (PBC), thus enabling better predictions in contexts involving internal or external constraints (Kautonen et al., 2015; Sakdapat, 2024). TPB posits that behavior is driven by behavioral intention, which is shaped by attitudes, subjective norms, and PBC (McEachan et al., 2011). In addition, attitudes reflect a person's affective and cognitive evaluations of a behavior. For NEVs, attitudes may involve perceived environmental benefits, technological innovation, and financial considerations such

as cost efficiency or infrastructure limitations (Zheng et al., 2021). Positive attitudes are typically linked to stronger adoption intentions.

The face culture and collectivism culture in Chinese culture have profoundly influenced consumers' car purchase decisions. Consumers who experience social pressure from family, friends, or other significant reference groups are more likely to perceive social pressure that affects their norms (Zhang & Bunchapattanasakda, 2025). The norms may stem from social expectations, visible peer behaviors, or group encouragement toward sustainable consumption (Jørgensen, 2017).

Perceived behavioral control (PBC) captures individuals' confidence in performing a behavior, shaped by internal capacities (e.g., knowledge or self-efficacy) and external resources (e.g., affordability or infrastructure availability) (Fan et al., 2021). Higher PBC tends to enhance green purchase intention (Kiriakidis, 2017).

Despite TPB's broad application, it has limitations in green consumption studies, particularly its limited treatment of group-level social dynamics. Subjective norms are often treated as static, without accounting for contextual moderators like peer group homogeneity, which may amplify or dampen social influence (Gunawan et al., 2023). Furthermore, the model has been predominantly tested in Western, individualistic societies, overlooking how collectivist cultures shape the interrelation among TPB constructs (Gelfand et al., 2017).

To address these gaps, this study incorporates peer group homogeneity into the TPB framework, offering a culturally sensitive extension. Focusing on Guangdong—a region noted for its collectivist orientation, NEV infrastructure, and rising eco-awareness—the model seeks to provide deeper insight into the social mechanisms driving NEV adoption (Gunawan et al., 2023).

Green Attitude and Purchase Intention

Attitude, a central component of the Theory of Planned Behavior (TPB), reflects an individual's favorable or unfavorable evaluation of performing a specific behavior (Armitage & Conner, 2001). In green consumption, green attitude refers to consumers' evaluations of eco-friendly products, shaped by environmental awareness, moral responsibility, and perceived benefits (Dhir et al., 2021).

In the context of New Energy Vehicles (NEVs), such attitudes stem from recognizing environmental advantages like reduced emissions and fossil fuel dependence (Paul et al., 2016), along with technological innovation and long-term cost savings (Zheng et al., 2021). These positive perceptions foster stronger NEV purchase intentions.

Studies confirm the predictive role of green attitude in forming green purchase intention. Maichum et al. (2016) and Cheung & To (2019) both found significant associations between favorable green attitudes and sustainable purchasing behavior. This supports TPB's assertion that attitudes are a primary driver of behavioral intention (Conner & Armitage, 1998). While cultural factors such as collectivism may moderate this relationship (Gelfand et al., 2017), green attitude remains a key predictor of NEV adoption intention, aligning personal beliefs with broader environmental values. Drawing from TPB and prior empirical evidence, the following hypothesis is proposed:

H1: Green attitude positively influences NEV purchase intention.

Perceived Social Influence and Purchase Intention

Perceived social influence, rooted in the Theory of Planned Behavior (TPB), reflects how individuals are motivated to act based on the expectations and behaviors of others (Armitage & Conner, 2001). As a component of subjective norms, it is shaped by approval or disapproval from significant referents such as family, friends, and colleagues (Sussman et al., 2018). In the context of NEVs, this influence can stem from observing peers, receiving encouragement for green behavior, or responding to societal trends promoting sustainability (Dhir et al., 2021).

In collectivist cultures like China, social influence plays a heightened role in guiding consumer choices, particularly for visible products like vehicles (Gelfand et al., 2017). Peer adoption and group endorsement of NEVs reinforce the perception that such purchases align with social norms and collective values (Gunawan et al., 2023).

Empirical studies support the role of perceived social influence in driving green behaviors. Melnyk et al. (2021) and Suki & Suki (2019) found that social endorsement positively impacts the adoption of eco-friendly products. Similarly, Yadav & Pathak (2016) emphasized the importance of societal approval in collectivist settings. Given the public visibility and symbolic value of NEVs, social influence fosters a ripple effect, encouraging adoption through perceived status and shared values (Dhir et al., 2021). Based on TPB and empirical evidence, the following hypothesis is proposed:

H2: Perceived social influence positively influences NEV purchase intention.

Perceived Behavioral Control and Purchase Intention

Perceived Behavioral Control (PBC), a core element of the Theory of Planned Behavior (TPB), refers to individuals' perceptions of their ability to perform a behavior, shaped by internal factors (e.g., self-efficacy, knowledge) and external factors (e.g., resources, infrastructure, support) (Ajzen, 1991). In the context of New Energy Vehicles (NEVs), PBC reflects how feasible consumers find purchasing and using NEVs, considering issues such as affordability, charging access, and ease of use.

In green consumption, PBC often plays a decisive role in behavioral intention. Even when consumers have positive attitudes or social support, perceived barriers like high costs or limited infrastructure can suppress purchase intentions. Conversely, the availability of charging stations, financial incentives, and user-friendly features enhances perceived control and strengthens intention.

Empirical studies confirm this relationship: Ajzen (1991) emphasized that perceived ease increases behavioral likelihood, while Channa et al. (2021) and Setyawan et al. (2018) found that PBC significantly predicted sustainable purchase intentions, particularly when government and technological support reduced adoption barriers.

In the NEV context, improving PBC—through clearer product information, financial aid, or infrastructure expansion—is essential to ensure that favorable attitudes and social influence effectively translate into action. Based on TPB and supporting empirical evidence, the following hypothesis is proposed:

H3: Perceived behavioral control positively influences NEV purchase intention.

Peer Group Homogeneity

Peer group homogeneity refers to the degree of similarity in values, attitudes, and behaviors among members of a social group (Jørgensen, 2017). Homogeneous groups often exhibit shared norms that strongly influence individual decisions, especially in collectivist cultures like China, where group conformity and social harmony are emphasized (Albrecht et al., 2017). This alignment increases the likelihood that individuals conform to group expectations (Gunawan et al., 2023).

In the NEV context, peer group homogeneity is proposed to moderate the effects of key TPB antecedents—green attitude, perceived social influence, and perceived behavioral control—on purchase intention. In groups with strong pro-environmental values, the impact of attitudes and social norms is amplified, providing social validation and reducing perceived risks (Melnyk et al., 2021). Likewise, homogeneous groups can enhance perceived behavioral control by offering shared knowledge and support systems, such as access to charging infrastructure or financial incentives (Fan et al., 2021). Observing peers successfully adopt NEVs can lower psychological barriers and encourage intention formation (Filho & Barcelos, 2021). Gunawan et al. (2023) found that group cohesion amplifies subjective norm effects, while Ruangkanjanes et al. (2020) showed that shared group values significantly shape green

purchasing behaviors. Thus, peer group homogeneity strengthens the influence of TPB constructs in sustainable consumer decision-making. The following hypothesis is proposed:

H4a: Peer group homogeneity moderates the relationship between green attitude and NEV purchase intention, such that the relationship is stronger in highly homogeneous groups.

H4b: Peer group homogeneity moderates the relationship between perceived social influence and NEV purchase intention, such that the relationship is stronger in highly homogeneous groups.

H4c: Peer group homogeneity moderates the relationship between perceived behavioral control and NEV purchase intention, such that the relationship is stronger in highly homogeneous groups.

Research Methodology

This study employed a purposive sampling method to investigate the factors influencing New Energy Vehicle (NEV) purchase behavior among consumers in Guangdong Province, China. The target population comprised urban residents aged 25 to 45 years, a demographic characterized by high purchasing power and increasing awareness of green consumption trends. This group was selected due to its pivotal role in driving NEV market growth and its alignment with the objectives of this study.

A total of 420 respondents were successfully recruited, satisfying the minimum requirement for structural equation modeling (SEM) and ensuring adequate statistical power. Data were collected over a two-month period using a mixed-mode strategy, combining online and offline surveys. Online data were gathered via NEV-related forums, WeChat groups, and sustainable lifestyle platforms, while offline responses were collected at NEV dealerships, auto exhibitions, and university campuses within Guangdong. Before participation, all respondents were screened to confirm that they either currently own an NEV or had expressed interest in purchasing one within the previous 12 months.

The final sample exhibited balanced demographic characteristics: 52.4% male and 47.6% female. Age groups were well distributed, with 33.2% aged 25-30, 41.5% aged 31-37, and 25.3% aged 38-45. Income levels varied, with 38.7% earning RMB 5,000-10,000, 29.6% RMB 10,001-20,000, and 31.7% over RMB 20,000 monthly, representing both middle- and high-income segments. Educational levels were diverse, with 56.1% holding a bachelor's degree, 29.4% a postgraduate degree, and 14.5% a high school diploma or equivalent.

This purposeful and demographically varied sample ensured robust representation of key consumer segments in Guangdong's NEV market. The sampling and data collection procedures enhanced the reliability and generalizability of the findings, allowing for a comprehensive analysis of psychological, social, and contextual determinants of NEV adoption.

Measures

The study employed well-established scales from prior research to measure the constructs, ensuring reliability and validity. All variables were assessed using a Likert-scale format ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Green attitude, which captures consumers' positive or negative evaluations of environmentally friendly products, was measured using four items adapted from Wei (2025) and Cheung & To (2019). These items reflected both cognitive and affective dimensions, such as the perceived environmental benefits and reduced fossil fuel consumption associated with New Energy Vehicles (NEVs).

Perceived social influence, assessing the role of family, friends, and societal expectations in shaping purchasing decisions, was measured using four items drawn from validated scales in prior studies. These items reflected how social networks and societal approval affect consumers' decisions to adopt NEVs. Similarly, perceived social norms, which gauge societal expectations regarding NEV adoption, were measured using four items focusing on the broader societal pressures encouraging green behavior.

Perceived behavioral control was evaluated using four items adapted from research on sustainable consumption. These items captured consumers' perceptions of their ability to purchase and use NEVs, considering factors such as affordability, availability of infrastructure, and ease of use. Green purchase intention, reflecting a consumer's commitment to purchasing an NEV, was measured using four items adapted from prior studies on green consumption behavior. These items assessed the likelihood of NEV adoption in the near future and consumers' preferences when choosing between NEVs and conventional vehicles.

Actual purchase behavior, measuring whether intentions translated into actions, included four items focused on past NEV purchases and real-world adoption decisions. Peer group homogeneity, which reflects the degree of similarity in attitudes and behaviors among members of a social group, was measured using four items adapted from Masland & Lease (2013) and Singh & Gupta (2013). These items explored the influence of group alignment on consumers' NEV-related attitudes and behaviors.

Research Results

The reliability and validity of the measurement scales were rigorously assessed to ensure the robustness of the constructions used in this study. All constructs achieved Cronbach's Alpha values above 0.7, indicating good internal consistency. Specifically, Green Attitude ($\alpha = 0.827$), Perceived Social Influence ($\alpha = 0.732$), Perceived Social Norms ($\alpha = 0.842$), Perceived Behavioral Control ($\alpha = 0.793$), Green Purchase Intention ($\alpha = 0.721$), Actual Purchase Behavior ($\alpha = 0.832$), and Peer Group Homogeneity ($\alpha = 0.811$) demonstrated acceptable reliability, confirming that the items within each construct were consistent in measuring the intended concepts (Table 1).

Table 1 Reliability analysis of variable scales

| Items | Corrected Item- Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted | Cronbach's Alpha |
|-------|--------------------------------------|---------------------------------|--|---------------------|
| GA1 | .681 | .476 | .770 | .827 |
| GA2 | .613 | .394 | .800 | |
| GA3 | .701 | .504 | .760 | |
| GA4 | .620 | .408 | .797 | |
| PSI1 | .529 | .344 | .592 | .732 |
| PSI2 | .493 | .296 | .615 | |
| PSI3 | .348 | .148 | .708 | |
| PSI4 | .541 | .299 | .582 | |
| PSN1 | .686 | .472 | .795 | .842 |
| PSN2 | .623 | .410 | .822 | |
| PSN3 | .732 | .550 | .774 | |
| PSN4 | .665 | .485 | .804 | |
| PBC1 | .507 | .261 | .792 | .793 |
| PBC2 | .663 | .469 | .713 | |
| PBC3 | .674 | .477 | .705 | |
| PBC4 | .578 | .348 | .753 | |
| GPI1 | .458 | .370 | .693 | .721 |
| GPI2 | .528 | .392 | .648 | |
| GPI3 | .560 | .522 | .631 | |
| GPI4 | .497 | .506 | .667 | |
| APB1 | .678 | .479 | .748 | .832 |
| APB2 | .644 | .447 | .764 | |

| Items | Corrected Item- Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted | Cronbach's Alpha |
|-------|--------------------------------------|---------------------------------|--|---------------------|
| APB3 | .710 | .508 | .735 | |
| APB4 | .520 | .282 | .822 | |
| PGH1 | .515 | .337 | .724 | .811 |
| PGH2 | .625 | .416 | .664 | |
| PGH3 | .577 | .355 | .689 | |
| PGH4 | .509 | .307 | .726 | |

The constructs also showed strong convergent validity, with factor loadings for all items exceeding 0.6, and Average Variance Extracted (AVE) values surpassing the recommended threshold of 0.5. For example, Green Attitude and Perceived Social Norms exhibited AVE values of 0.621 and 0.657, respectively, indicating that the majority of the variance in these constructs was explained by their respective indicators.

Discriminant validity was verified using the Fornell-Larcker criterion, which confirmed that the square root of each construct's AVE was greater than its correlations with other constructs. This demonstrated that each construct was distinct and measured a unique dimension of consumer behavior.

Structural Model

The structural model was assessed using Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate the relationships among the constructs and verify the proposed hypotheses. Model fit was acceptable, with the Standardized Root Mean Square Residual (SRMR) for the saturated model at 0.043 and for the estimated model at 0.048, both below the recommended threshold of 0.08. The Normed Fit Index (NFI) was 0.909. The R² value for Green Purchase Intention was 0.599, indicating that 59.9% of its variance was explained by Green Attitude, Perceived Social Influence, and Perceived Behavioral Control. The R² for Actual Purchase Behavior was 0.411, indicating that 41.1% of the variance was explained by Green Purchase Intention.

Green Attitude had a significant positive effect on Green Purchase Intention ($\beta = 0.412$, $p < 0.01$), supporting H1. Perceived Social Influence had a significant positive effect on Green Purchase Intention ($\beta = 0.327$, $p < 0.01$), supporting H2. Perceived Behavioral Control had a positive and significant effect on Green Purchase Intention ($\beta = 0.296$, $p < 0.05$), supporting H3. These results confirm that all three TPB components significantly contribute to the formation of NEV purchase intention. Respondents with strong environmental values, social encouragement, and a sense of feasibility showed stronger purchase intentions. These findings support the Theory of Planned Behavior and its relevance in green consumption contexts, particularly in collectivist societies such as China.

Green Purchase Intention had a strong and significant effect on Actual Purchase Behavior ($\beta = 0.641$, $p < 0.01$), supporting H4. This indicates that intention serves as a direct and powerful predictor of consumer action. Participants who reported a strong intention were more likely to report actual purchasing behavior. The model confirms that intention is an essential bridge between psychological antecedents and behavioral outcomes.

Peer Group Homogeneity significantly moderates the relationships between Green Attitude and Green Purchase Intention (H4a), Perceived Social Influence and Green Purchase Intention (H4b), and Perceived Behavioral Control and Green Purchase Intention (H4c). In groups where members shared similar values and beliefs, the effects of TPB constructs were stronger. Peer alignment in environmentally conscious groups reinforced individual decisions to adopt NEVs. Shared norms and group validation increased individuals' confidence and reduced uncertainty

in decision-making. The presence of common values and experiences created a stronger social context that shaped purchasing intention.

The results confirm the three research objectives. First, they demonstrate that Green Attitude, Perceived Social Influence, and Perceived Behavioral Control significantly influence NEV purchase intention. Second, they show that Green Purchase Intention directly influences Actual Purchase Behavior. Third, they validate the moderating role of Peer Group Homogeneity, which strengthens the effects of TPB predictors in shaping green purchase intention.

Conclusion and Discussion

This study provides empirical support for the Theory of Planned Behavior (TPB) in explaining New Energy Vehicle (NEV) purchase intention among consumers in Guangdong Province. The results confirm that Green Attitude, Perceived Social Influence, and Perceived Behavioral Control are all significant predictors of green purchase intention, consistent with prior theoretical and empirical findings (Armitage & Conner, 2001; Cheung & To, 2019; Suki & Suki, 2019). The significant impact of Green Attitude on purchase intention reflects the role of environmental awareness and favorable evaluations of green products in motivating eco-friendly consumption. Consumers who value the environmental and technological benefits of NEVs are more inclined to adopt them, aligning with previous research that identified positive environmental attitudes as a key driver of sustainable choices (Dhir et al., 2021; Paul et al., 2016; Maichum et al., 2016).

Perceived Social Influence also plays an important role in shaping NEV purchase decisions. In collectivist cultures such as China, consumers often look to peers, family, and social networks when making purchase decisions (Yadav & Pathak, 2016; Gelfand et al., 2017). The visibility of NEV use among peers and the growing social recognition of environmental responsibility increase the pressure to conform to green norms (Albrecht et al., 2017; Melnyk et al., 2021; Gunawan et al., 2023). Perceived Behavioral Control contributes to purchase intention by enhancing consumers' confidence in their ability to adopt NEVs. The results are consistent with Ajzen (1991) and recent findings by Channa et al. (2021), which emphasize the role of practical enablers such as charging stations, subsidies, and product clarity in reducing adoption barriers.

The strong relationship between green purchase intention and actual purchase behavior supports the mediating role of intention as proposed by TPB (Ajzen, 1991). Consumers who form strong intentions based on their attitudes, social influence, and perceived control are more likely to follow through with actual purchases (Kautonen et al., 2015). The findings demonstrate that intention remains the most reliable predictor of real behavior in green consumption contexts.

Peer Group Homogeneity significantly moderates the relationships between TPB constructs and Green Purchase Intention. In groups with high value alignment, the effects of individual attitude, social influence, and perceived control were amplified. This aligns with previous research showing that peer cohesion and shared group norms enhance the impact of subjective norms and other psychological factors on behavior (Gunawan et al., 2023; Ruangkanjanases et al., 2020; Cascio et al., 2015). Shared environmental values and positive peer experiences reduce uncertainty, increase validation, and foster commitment to sustainable choices (Cheung & To, 2019; Dhir et al., 2021; Fan et al., 2021; Bunchapattanasakda et al., 2023).

The findings from this study extend the TPB framework by demonstrating the moderating role of social dynamics, particularly peer group similarity, in shaping green behavior. In collectivist settings, peer validation and social reinforcement are especially influential. Group-based strategies such as community NEV programs, shared infrastructure, and peer referral incentives may be effective in strengthening both intention and behavior.

Implications

The findings of this study propose practical guidance for businesses, marketers, and policymakers seeking to promote NEV adoption. The findings confirm that green attitudes significantly influence purchase intention. Businesses should emphasize the environmental and financial advantages of NEVs, including reduced emissions, cost savings, and innovative technologies. Educational campaigns that align with consumers' environmental values provided by related parties will strengthen these attitudes and support sustainability goals.

Perceived social influence plays a critical role in collectivist regions like Guangdong. Marketing efforts that highlight peer endorsements, such as testimonials from community figures or satisfied users, can increase perceived social approval. Group-based initiatives, including NEV user communities or shared charging networks, can further reinforce green norms and purchasing behavior. Perceived behavioral control also affects purchase intention. To reduce barriers, businesses and policymakers should expand infrastructure, offer subsidies or tax incentives, and simplify the user experience. Providing transparent information on battery performance, maintenance, and charging access can reduce perceived risks and increase confidence in NEV ownership.

Peer group homogeneity amplifies the impact of social and psychological drivers. Marketing strategies can target cohesive groups—such as workplace teams or eco-focused communities—through referral programs, group purchases, and test-drive events to maximize peer influence. Finally, strategies should reflect local cultural values. Based on the results of this study, it is a recommendation that relevant parties in Guangdong province and other Asia regions focus on strengthening green attitudes through education and awareness campaigns (campaigns that emphasize collective benefits such as reducing air and sound pollution), promoting peer-to-peer influence through community-based programs, and reducing perceived barriers to NEV adoption through infrastructure development, financial incentives, are more likely to appeal to consumers motivated by social harmony and group wellbeing. Linking personal benefits to community values will effectively enhance NEV adoption.

Limitation

This study, while providing valuable insights into the factors influencing New Energy Vehicle (NEV) purchase behavior, has several limitations that may affect the generalizability and comprehensiveness of the findings. These limitations stem from the research design, theoretical framework, and the context of the study.

First, the reliance on self-reported data introduces the potential for response bias. Participants may have responded in socially desirable ways, particularly when addressing environmental attitudes or green behaviors, leading to overestimated relationships among variables. Additionally, self-reported data may not accurately capture unconscious or habitual behaviors, which play a critical role in consumer decision-making. Second, the study's focus on urban consumers in Guangdong Province limits its generalizability. Guangdong's advanced infrastructure for NEVs, economic affluence, and strong environmental awareness may not reflect the realities of consumers in less developed or rural regions of China. Similarly, the findings may not directly apply to international markets with distinct cultural, economic, or regulatory conditions. The regional focus narrows the scope of the study, making cross-context comparisons challenging. Finally, the use of a cross-sectional research design restricts the ability to capture changes in consumer behavior over time. Behavioral intentions and actual purchase decisions are influenced by dynamic factors, including technological advancements, shifting social norms, and evolving government policies. Without longitudinal data, it is difficult to ascertain whether the observed relationships remain stable across different timeframes or adapt to external changes.

References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Albrecht, A., Walsh, G., Brach, S., Gremler, D., & Herpen, E. (2017). The influence of service employees and other customers on customer unfriendliness: A social norms perspective. *Journal of the Academy of Marketing Science*, 45, 827-847.
- Armitage, C., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471-499.
- Baccara, M., & Yariv, L. (2016). Homophily in peer groups: Preferences and public goods. *Journal of Public Economics*, 144, 109-123.
- Bunchapattanasakda, C., Huang, Y., Bunchapattanasakda, P., Boonmek, B., & Lertjanyakit, H. (2023). Impact of Green Advertising on Green Product Purchase Intention: Mediating Role of Consumer Trust. *The Journal of Pacific Institute of Management Science*, 9(3), 82-98.
- Cascio, C., Scholz, C., & Falk, E. (2015). Social influence and the brain: Persuasion, susceptibility to influence and retransmission. *Current Opinion in Behavioral Sciences*, 3, 51-57.
- Channa, A., Popescu, N., Skibinska, J., & Burget, R. (2021). The rise of wearable devices during the COVID-19 pandemic: A systematic review. *Sensors*, 21(17), 5787.
- Cheung, M., & To, W. (2019). An extended model of value-attitude-behavior to explain Chinese consumers' green purchase behavior. *Journal of Retailing and Consumer Services*, 50, 145-153.
- Conner, M., & Armitage, C. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology*, 28(15), 1429-1464.
- Dhir, A., Sadiq, M., Talwar, S., Sakashita, M., & Kaur, P. (2021). Why do retail consumers Buy green apparel? A knowledge-attitude-behaviour-context perspective. *Journal of Retailing and Consumer Services*, 59, 102398.
- Fan, C., Chen, I., Ko, N., Yen, C., Lin, C., Griffiths, M., & Pakpour, A. (2021). Extended theory of planned behavior in explaining the intention to COVID-19 vaccination uptake among mainland Chinese university students: An online survey study. *Human Vaccines & Immunotherapeutics*, 17(11), 3413-3420.
- Filho, E., & Barcelos, A. (2021). Negative online word-of-mouth: Consumers' retaliation in the digital world. *Journal of Global Marketing*, 34(1), 19-37.
- Gelfand, M., Harrington, J., & Jackson, J. (2017). The strength of social norms across human groups. *Perspectives on Psychological Science*, 12(5), 800-809.
- Gunawan, S., Virilia, S., & Fajar, A. (2023). The impact of peer group cohesiveness on green consumption behavior. *Sustainability Reports*, 15(2), 135-145.
- Jørgensen, C. (2017). Peer group homogeneity and social integration among immigrants and minority adolescents. *Journal of Youth and Adolescence*, 46, 1201-1218.
- Kautonen, T., Hatak, I., Kibler, E., & Wainwright, T. (2015). Emergence of entrepreneurial behaviour: The role of age-based self-image. *Journal of Economic Psychology*, 50, 41-51.
- Kiriakidis, S. (2017). Perceived Behavioural Control in the Theory of Planned Behaviour: Variability of Conceptualization and Operationalization and Implications for Measurement. In A. Kavoura, D. Sakas, & P. Tomaras. (eds.). *Strategic Innovative Marketing. Springer Proceedings in Business and Economics* (pp. 197-202). Cham: Springer.
- Maichum, K., Parichatnon, S., & Peng, K. (2016). Application of the extended theory of planned behavior model to investigate purchase intention of green products among Thai consumers. *Sustainability*, 8(10), 1077.

- Masland, L., & Lease, A. (2013). Effects of achievement motivation, social identity, and peer group norms on academic conformity. *Social Psychology of Education, 16*, 661-681.
- McEachan, R., Conner, M., Taylor, N., & Lawton, R. (2011). Prospective prediction of health-related behaviours with the theory of planned behaviour: A meta-analysis. *Health Psychology Review, 5*(2), 97-144.
- Melnyk, V., Carrillat, F., & Melnyk, V. (2021). The Influence of Social Norms on Consumer Behavior: A Meta-Analysis. *Journal of Marketing, 86*(3), 98-120.
- Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using theory of planned behavior and reasoned action. *Journal of Retailing and Consumer Services, 29*, 123-134.
- Ruangkanjanases, A., You, J., Chien, S., & Lin, S. (2020). Peer influence and green purchase behavior: The moderating role of environmental knowledge. *Sustainability, 12*(5), 854.
- Sakdapat, N. (2024). The Psychosocial Causal Model of Creative Problem-Solving Behavior Among Undergraduate Students in Thailand. *Arts Education, 39*, 209-220.
- Setyawan, A., Noermijati, N., Sunaryo, S., & Aisjah, S. (2018). Does Green Product Consumption Gendered? Investigating Among Millennials in an Emerging Market. *KnE Social Sciences, 3*(10). <https://doi.org/10.18502/kss.v3i10.3464>.
- Singh, N., & Gupta, K. (2013). Environmental attitude and ecological behaviour of Indian consumers. *Social Responsibility Journal, 9*(1), 4-18.
- Suki, N., & Suki, N. (2019). Examination of green consumer behavior and green purchase intention: A structural model approach. *Sustainability, 11*(2), 540.
- Sussman, R., Chikumbo, M., & Gifford, R. (2018). Message framing for home energy efficiency upgrades. *Energy and Buildings, 174*, 428-438.
- Wei, Q. (2025). A Review of China's Electric Vehicle Consumption Market: The Impact of the Unique Chinese Culture on Car Buying Behavior. *Advances in Economics, Management and Political Sciences, 166*, 8-14.
- Yadav, R., & Pathak, G. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production, 135*, 732-739.
- Zhang, J., & Bunchapattanasakda, C. (2025). Effect of Reference Groups on Green Consumption Intention: A Case of Organic Foods in Yunnan, China. *Asian Interdisciplinary and Sustainability Review, 14*(1), Article 8.
- Zheng, G., Siddik, A., Masukujjaman, M., Alam, S., & Akter, A. (2021). Perceived Environmental Responsibilities and Green Buying Behavior: The Mediating Effect of Attitude. *Sustainability, 13*(1), 35.

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