



## Beyond Purchase Intention: A Narrative Review of Perceived Benefits and Consumer Behaviour towards Electric Vehicles

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### Abstract

The transition toward electric mobility has generated a substantial body of research on the psychological, economic, and social forces that shape consumer behaviour toward electric vehicles (EVs). The majority of this literature, however, has concentrated on purchase intention as the principal outcome variable, leaving the subsequent stages of the consumer decision journey comparatively under-examined. This narrative review synthesizes findings from a broad cross-section of peer-reviewed studies to map how perceived benefits, comprising environmental, economic, functional, hedonic, symbolic, and policy-related dimensions, translate into purchase intention and, more importantly, how intention subsequently unfolds into actual purchase behaviour, post-purchase satisfaction, continuance, and advocacy. Drawing on established behavioural frameworks, including the theory of planned behaviour, the technology acceptance model, the unified theory of acceptance and use of technology, and the value-belief-norm theory, the review identifies consistent evidence that environmental concern and financial value remain robust predictors of intention, while hedonic and symbolic benefits exert an increasingly influential role in maturing EV markets. The review further highlights an emerging and consequential stream of research documenting the intention-behaviour gap, whereby stated willingness to purchase an EV frequently fails to materialize into an actual transaction because of contextual constraints such as budget, charging access, and vehicle body-style preferences. Post-purchase constructs, including satisfaction, task-technology fit, and green self-identity, are shown to determine continuance intention and word-of-mouth behaviour among existing owners. The review concludes by identifying conceptual and methodological gaps, most notably the scarcity of longitudinal and behavioural, as opposed to self-reported, data, and offers directions for future research and policy design intended to convert positive perceptions into durable adoption behaviour.

### 1. Introduction

One of the greatest changes taking place in the global automobile industry is its gradual shift from conventional automobiles to electric vehicles (EVs). This change is brought about by the confluence of several factors related to environmental requirements, technological development, and other policies geared towards reducing greenhouse gas emissions and reliance on fossil fuels. Although much funding has been made available for the construction of charging stations and other facilities for the production and purchase of EVs, adoption rates still vary widely and fall short of meeting many national emission reduction goals (Rezvani et al., 2015; Secinaro et al., 2022).

The considerable amount of literature written on this issue usually investigates the issue from the standpoint of purchase intention, which is generally defined as a measure of people's self-reported intentions to purchase an electric vehicle. One of the advantages of this type of outcome variable is that it can be quantitatively measured using a cross-sectional approach based on surveys and analyzed with the help of behavioral theories, including the theory of planned behavior (Ajzen, 1991). As a result, a lot of empirical research has been conducted in terms of identifying the determinants of people's purchase intention towards electric vehicles, including various aspects related to economics, environment, and social and political factors (Huang & Ge, 2019; Lin & Wu, 2018; Wang et al., 2021; Xu et al., 2019).

However, focusing on intention as the final result of the consumer's decision process poses one major drawback: intention and behavior are not one and the same thing. As research has started to show in increasing numbers, there exists a continuous and often considerable discrepancy between consumers' stated intention to purchase the electric car and their actual purchase behavior, which is highly similar to what can be observed in more general studies of ethics and sustainable consumption. In addition to that, the process of interaction between a customer and the product does not end with the purchase of an EV but continues through feelings of satisfaction, task-technology fit and usage that ultimately determine whether owners stick to electric vehicles, recommend them to other people, or switch back to standard cars when replacing their vehicles (Cruz-Jesus et al., 2023).

This narrative review bridges this research gap by going beyond intention to explore the broader issue of consumers' behavior toward EVs. This is achieved through addressing three interlinked research objectives. First, it provides a consolidation and synthesis of different types of perceived benefit that have been reported in the literature as pre-cursors of favorable EV attitudes and intentions. Perceived benefits include environmental, economic, functional, hedonic, symbolic, and policy-related benefits. The second research objective concerns the literature that relates to the intention-behavior gap and the process of translating intention into action. Thirdly, it looks at the emerging literature on post-purchase consumer behavior, which includes satisfaction and continuance intention. In all, it is hoped that the review will provide insight into the way consumers perceive benefits throughout their experience of adopting EVs.

The rest of this review is structured as follows. Section 2 describes the methodology used to conduct this narrative review. Section 3 provides an overview of the key theoretical perspectives which have been influential in empirical studies within this field. Section 4 highlights the most important aspects of perceived benefit

that have been identified in the literature. Section 5 analyses the link between perceived benefit and intention to buy. Section 6 presents a critical analysis of the intention-to-behaviour gap. Section 7 examines post-purchase consumer behaviour. Section 8 analyses barriers and perceived risks that may mediate the benefit-behaviour connection. Section 9 focuses on cross-cultural and regional differences. Section 10 covers theoretical and practical implications while Section 11 discusses limitations and directions for future research.

## 2. Research Methodology

This review utilizes a approach of narrative rather than a systematic review approach as it fits more with the goal of compiling a literature base that is broad and fast-moving conceptually rather than listing all the studies published. The choice of a narrative approach is fitting when the goal is to chart the evolution of a particular field, identify the recurring theories within that field, and note the convergences and divergences in various studies undertaken (Secinaro et al., 2022).

The relevant literature was collected by conducting searches in academic databases and publisher websites, like Science Direct by Elsevier, Springer Nature Link, Emerald Insight, MDPI, Wiley Online Library, and Frontiers, by using combinations of keywords such as "electric vehicle", "perceived benefit", "purchase intention", "consumer behavior", "adoption intention", "continuance intention", and "intention behavior gap". Priority was given to those papers that have discussed the psychological, economic, or social determinants of consumer behavior related to electric vehicles, used any well-established behavioral theories, or empirical findings through surveys, experiments, or bibliometric analysis. The relevant theoretical foundations include, but not limited to, the theory of planned behavior by Ajzen (1991) and the hedonic consumption concept by Hirschman and Holbrook (1982). Peer-reviewed articles have preference over other types of literature. If working papers, conference proceedings, and reliable institution-related reports are included into consideration, it is explicitly stated in the text. The current review is based on 37 sources overall, mainly dated back to the time period from 2018 to 2026, but a few works that form the basis for further theories and that were written before the given time period have been included too; this set can be seen as illustrative, not comprehensive, and those who need a detailed search procedure are referred to the systematic and bibliometric reviews listed (e.g., Rezvani et al., 2015; Secinaro et al., 2022; Hoang, Pham, & Vu, 2022; Hassan, Mahmoud, Al-Sharafi, Ibrahim, & Albashrawi, 2026).

In keeping with narrative review norms, no quality assessment or meta-analysis procedure was performed formally. Rather, the literature was reviewed thematically based on the perceived benefit dimension or consumer behavior stage that each study covered. In this way, quantitative surveys, qualitative studies, mixed-method studies, and even previous systematic and bibliometric reviews (Rezvani et al., 2015; Secinaro et al., 2022) can be included within one narrative, although it should be noted that the synthesis is one that depends on the subjective interpretation of the authors.

## 3. Theoretical Perspectives on Electric Vehicle Consumer Behaviour

The research conducted on EV consumers' behavior has utilized only a few well-established behavioral theories that have been developed in fields other than transportation but used in large numbers to investigate green and sustainable behavior. The Theory of Planned Behavior (TPB), originally put forward by Ajzen (1991), has been the most frequently used theoretical framework in this body of literature. This theory assumes that a behavioral intention is formed as a result of attitude towards the behavior, subjective norms, and perceived behavioral control, and that the behavioral intention is the closest determinant of the actual behavior. A great number of studies in EV consumption have used the basic structure of the TPB model and expanded it through the inclusion of more variables such as perceived benefits, environmental concern, or perceived risks that affect attitude and behavioral intention directly (Adnan et al., 2018; Jaiswal et al., 2021; Zhang et al., 2018).

The second framework, which has been widely used in research, is the technology acceptance model (TAM) and its extension, unified theory of acceptance and use of technology (UTAUT), which view EVs as a new technology whose adoption is determined by such variables as perceived usefulness, perceived ease of use, performance expectancy, effort expectancy, social influence, and facilitating conditions. Since EVs are the combination of the traditional characteristics of cars and innovative technologies like battery management system and connected charging systems, TAM and UTAUT frameworks have proved their worth as tools to explain the adoption intention in technologically savvy consumer groups (Poon et al., 2024; Wang et al., 2023). For instance, according to Xu et al. (2019), using the structural equation modelling method in combination with neural network technique, one could prove that perceived usefulness and perceived ease of use are important predictors of purchase intention even when considering demographic variables.

A third approach, value-belief-norm (VBN) theory, places EV adoption in a more general context of pro-environmental behavior and posits that values determine environmental worldviews, which subsequently stimulate personal norms and the belief in consequences of one's actions, leading to pro-environmental behavior, including EV purchase. The approach has been particularly helpful in addressing the issue of green self-identity, a concept that describes the degree of individuals' self-identification as being environmentally responsible, in terms of influencing purchase intention and continuance intention (Whitmarsh & O'Neill, 2010). Other normative approaches, including norm activation theory, have also been used to explain the relationship between the awareness of consequences and ascription of responsibility through cultural concepts, such as *mianzi* ("social face") in Chinese culture, in the context of purchase intention for new energy vehicles (Zhao et al., 2022).

Lastly, the theory of expectation confirmation (ECT) and its extension into the expectation confirmation model (ECM) have gained more relevance in the smaller but increasing literature on post-purchase behavior of EV users. The two theories account for continuance intention as determined by the confirmation/disconfirmation of pre-purchase expectations, usefulness after use, and satisfaction. In an integrated approach that includes ECT and the task technology fit model, Cruz-Jesus et al. (2023) demonstrate that the satisfaction and continuance intention of EV users are determined jointly by the fit of the vehicle and infrastructure to the users' driving tasks and the match of the vehicle with their green self-concept.

Together, however, these theoretical constructs are not mutually exclusive, and hybrid approaches involving constructs from TPB, TAM/UTAUT, VBN, and ECT/ECM have been receiving increasing support in the literature in order to account for the multifaceted nature of decisions related to EVs, spanning from awareness to acquisition and long-term use (Rehman et al., 2026; Secinaro et al., 2022).

## 4. Dimensions of Perceived Benefits

The concept of "perceived benefit" is a multi-dimensional one in the context of EVs and refers to how consumers evaluate the benefits that EVs provide in comparison with the traditional car. From the review of literature, five different dimensions of the "perceived benefit" can be identified including: environmental/ecological benefits, economic/financial benefits, functional/utilitarian benefits, hedonic/symbolic benefits, and social/policy benefits.

#### 4.1. Environmental and Ecological Benefits

Environmental awareness ranks highly as a consistent predictor of positive EV attitudes and intentions in research carried out within varied national settings. Environmental awareness of EVs' role in lowering tailpipe emissions, urban air quality improvement, and climate change mitigation correlates with greater buying intention when this awareness is internalized in personal environmental accountability or green self-identification (Whitmarsh & O'Neill, 2010; Zhao et al., 2022). Ding et al. (2018), in their thorough examination of low-carbon consumption behavior, similarly note environmental awareness as a primary precursor to green products' adoption, a direct extrapolation into the EV situation.

It is important to highlight that the connection between environment-related concern and purchase intention is often mediated. For instance, several studies suggest that the effect of environment-related concern on purchase intention is mediated by the effect of the former on attitude, personal norms, or sustainability perceptions (Wang et al., 2022; Zhao et al., 2022). The mediation process indicates that the messages about the environment will not influence consumers' decision-making process unless they create a feeling of personal responsibility.

#### 4.2. Economic and Financial Benefits

The economic benefits, such as reduced operational costs, minimized maintenance costs, and savings in fuel costs when compared with internal combustion engine vehicles, form another key aspect of benefit. According to Lin and Wu (2018) in their study in first-tier Chinese cities, expected cost savings were among the significant reasons why consumers purchased the EV. In contrast, according to Dong et al. (2020), in their research among households from eight economic regions in China, cost-related factors such as purchase price and total ownership costs ceased being the major predictor of purchase intention after the government had provided financial incentives to minimize the gap between price points, and instead, psychological factors combined with functional factors such as cruising range and availability of charging facilities took precedence.

The apparent economic advantage of having an EV, however, depends on the overall economic context. The impact of government subsidies in terms of purchase assistance, tax credits, and reduced registration fees works together with the initial perception of economic advantage to enhance or counterbalance the higher purchase cost usually associated with EVs compared to similar conventional cars. According to data from the United States, the tax subsidies on the federal level have already contributed greatly to increasing sales of EVs, and some research concluded that, without such subsidies, the purchases of EVs would be around 29 percent less (National Bureau of Economic Research, 2019). Moreover, the more recent study of the subsidies that were included into the Inflation Reduction Act found that those incentives have provided positive net benefits to customers, manufacturers, and the environment, although the majority of incentivized purchases would probably happen regardless of the incentive (Stanford Institute for Economic Policy Research, 2024).

#### 4.3. Functional and Utilitarian Benefits

Utilitarian benefits pertain to performance characteristics of electric vehicles in relation to such aspects as driving range, acceleration rate, charging time, and reliability. A notable contribution towards the understanding of how instrumental factors such as cost and driving range affect the adoption intention was made by Schuitema et al. (2013), whose research has shown that these factors explain a considerable proportion of variance of adoption intention in plug-in hybrid vehicles that serve as a primary car within a household. Moreover, it was found that instrumental factors partially mediate the impact through their effect on the hedonic and symbolic perceptions.

Usefulness perception and ease of use perception, which are two main constructs of the technology acceptance model, are two highly associated utilitarian dimensions that have been proven to act as mediators between policy incentives and purchase intentions in the Chinese market, where test-drive experiences play an additional role in the same context (Chen et al., 2025). On the other hand, utilitarian benefits are usually accompanied by utilitarian risks, primarily range anxiety, which is a psychological fear of running out of power before reaching the next recharging station (Chen et al., 2025).

#### 4.4. Hedonic and Symbolic Benefits

One particular stream of research is becoming more and more important because it focuses on hedonic and symbolic values connected with owning an EV, thus shifting focus from a strictly rational model of consumption and decision-making process. Hedonic consumption, according to Hirschman and Holbrook (1982), is defined as the sensory, fantasy and emotional side of consumption of goods, and the concept is well applied to EVs since such characteristics of an EV as silence, quick acceleration and pleasantness of driving play a significant role in the evaluation made by consumers. The tool measuring hedonic and utilitarian attitude of consumers to goods was created by Voss et al. (2003).

Hedonic benefits refer to the degree to which EV ownership is linked to a desirable social identity, such as that of being an eco-friendly citizen, an environmentally friendly technology adopter, or a status-oriented individual. According to Schuitema et al. (2013), symbolic and hedonic benefits serve as mediators for the relationship between instrumental attributes and adoption intention, and self-image congruence and pro-environmental identity influence the attitude towards electric vehicles regardless of performance-related aspects of EVs. In collectivist cultures, hedonic benefits may also vary depending on the specifics of culture in question; Zhao et al. (2022) showed that "mianzi" concept in China, which involves public image and social status maintenance, positively moderated the impact of green self-identity on new energy vehicles purchase intention, whereas Lv et al. (2024) also indicated that perceived value, positive emotions, product "coolness," and mianzi jointly influenced the purchase intention of new energy vehicles. The studies above provide evidence for the importance of hedonic and symbolic benefits, which do not seem to be irrelevant in explaining EV adoption by consumers in certain markets despite the lack of sufficient environmental and economic benefits.

#### 4.5. Policy-Related and Social Benefits

Fifth dimension relates to the subjective benefits resulting from the policy and social environment, such as subsidies, tax rebates, availability of special lanes or parking spaces, as well as the endorsement of EVs by one's social circle. The findings of Wang et al. (2021) showed that both policy perception and consumer's social attributes had an impact on the willingness to buy battery electric vehicles in China, suggesting that policy-based benefits are processed mentally together with the social and normative ones. In addition, Sreen et al. (2018) showed in the general green purchase literature that cultural values and gender moderate the effect of green attitudes on purchase intention, which is particularly relevant for the EV market with collectivist

orientation and gender differences in consumption behavior.

Normative beliefs, which represent either the approval or expectations from significant others, have also been found to be positive factors for encouraging purchase intention for EVs, especially when combined with visible government incentives in smart-city mobility initiatives. Fuller et al. (2021) have similarly found that the social and municipal environment influenced the purchase intention of consumers towards electric and hybrid vehicles in London, Ontario.

## 5. From Perceived Benefits to Purchase Intention

The predominant empirical finding from the literature examined is that the perceived benefits – either environmental, economic, functional, hedonic, symbolic, or policy related – affect the purchase intention primarily through the intermediary role of attitude. This finding aligns with the fundamental reasoning of the theory of planned behaviour, in which attitude is considered the main psychological link between the individual's beliefs concerning the consequences of a particular behaviour and intention to engage in such behaviour (Ajzen, 1991). For example, according to Jaiswal et al. (2021), who tested an expanded technology acceptance model in the Indian context, the overall attitude of consumers regarding EVs was influenced by both positive and negative beliefs, resulting in adoption intention, and the impact of financial incentive policy was a moderator of the attitude-intention link.

Apart from basic mediation relationships, some research papers have provided examples of more complicated moderated mediation processes. Bozpolat (2024), analyzing the Turkish market, has proven that consumers' perception of cost-benefit ratios and social prestige determines their purchase intentions, which means that both types of benefits act together and not as alternatives. Likewise, in relation to China, Huang & Ge (2019) have revealed that consumer purchase intention regarding electric vehicles in Beijing was driven by the factors of policy knowledge, perceived usefulness, and social pressure.

It is noteworthy that the importance of various benefit dimensions seems to differ depending on the maturity level of the market and consumer segments. In the case of emerging electric vehicle markets, financial and policy-based benefits tend to be most influential because of the importance of price difference between electric and traditional vehicles, while in those markets where there exists established electric vehicle infrastructure and smaller price differences, hedonic and symbolic benefits gain more importance in terms of intention formation (Rezvani et al., 2015; Schuitema et al., 2013).

Another aspect to keep in mind is the difference in the importance of benefit-intention association depending on generational and demographic factors. In particular, younger customers as well as individuals who have high levels of personal innovativeness give more importance to hedonic, technical, and symbolic aspects of the product, while older or more risk-averse customers attach more importance to the reliability and financial stability associated with the product (Poon et al., 2024).

Summary Table 1 presents a summary of the five benefits dimensions discussed above along with the theoretical models that are typically applied to explain them, together with an example of a study based on that model and its location. The next section will focus on the intention-action gap.

**Table 1: Summary of Five Benefits Dimensions**

| Benefit dimension          | Common framework(s)        | Representative study                                   | Region | Key finding                                                                                        |
|----------------------------|----------------------------|--------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------|
| Environmental / ecological | VBN; TPB                   | Whitmarsh & O'Neill (2010)                             | UK     | Pro-environmental self-identity predicts consistency across green behaviours                       |
| Economic/ financial        | TPB; policy-effect models  | Wang, Cao, & Zhang (2021)                              | China  | Incentive perceptions and social attributes jointly shape purchase intention                       |
| Functional/ utilitarian    | TAM                        | Chen, Selamat, & Lee (2025)                            | China  | Perceived usefulness/ease of use mediate policy-incentive effects; test-drive experience moderates |
| Hedonic/ symbolic          | Hedonic consumption theory | Chaturvedi, Kulshreshtha, Tripathi, & Agnihotri (2023) | India  | Hedonic motives most strongly predict intention (single-study finding)                             |
| Policy-related/ social     | TPB; policy-effect models  | Stanford Institute for Economic Policy Research (2024) | USA    | IRA subsidies generated net positive benefits despite partial deadweight loss                      |

## 6. Beyond Intention: The Intention-Behaviour Gap

While purchasing intention has traditionally acted as the primary outcome variable of interest within the EV consumer literature, there is now a growing and increasingly methodological literature which seeks to challenge the idea that the translation from intention to action is consistent. This has been a matter of contention within the wider realm of consumer literature on ethics and sustainability, whereby there is a wide range of evidence that attitudes and intentions do not always correlate with behaviour, and this is known as the intention/attitude-behaviour gap.

Examples of direct proof of this problem in the EV context are a number of research conducted using a simulated vehicle purchase game, where 2,647 respondents participated in Canada, which found that while the purchase intention was statistically positively associated with the simulated purchase behavior, it was not a good predictor and explained only about 11 percent of variance in the simulated behavior. There were some customer segments found in this research, such as "green image with no action" segment and "low intention" segment, which were responsible for a significant portion of intention-behavior gap, as actual purchase behavior was more determined by budget limitations, vehicle body-type preference and presence of home charging infrastructure than the environmental concern that led to intention formation (Wang & Mohamed, 2025).

A systematic review of literature dedicated to examining the shift from intention to actual behavior with regards to battery electric vehicle adoption even more emphasized this issue, as it stated that the great majority of publications are based on self-reports by participants of surveys that are not owners of EVs, whose lack of product-related knowledge and experience can lead to a substantial difference between stated intentions and the actual behavior of those who are presented with an actual choice to make. Determinants of BEV adoption were classified according to their influence on intention and actual behavior into psychological, behavioral, product-related, contextual and demographic factors (Hoang, Pham, & Vu, 2022).

Similarly, complementary research that used an innovative measurement technique to study energy vehicle usage in China found that although purchase intention was the most critical single factor influencing purchasing behavior in the literature on the topic, the gap between intentions and behavior cannot be assumed to be fully bridged, as it had been shown earlier in the ethical consumption literature (Lin & Shi, 2022).

Studies that have tried to explicitly bridge this gap have looked at the different levels of predictive significance of hedonic, gain, and normative motivations for EV purchases. In one such study conducted using 411 valid survey responses, the results show that hedonic motivation had the highest impact on EV purchase intentions along with significant effects from gain and normative motivations. The study shows that there was a positive correlation between the three motives. The result obtained in just one survey involving 411 respondents is suggestive rather than conclusive (Chaturvedi, Kulshreshtha, Tripathi, & Agnihotri, 2023); in other words, an intervention that increases hedonic appeal along with economic and normative appeal may be more effective in bridging the intention-behavior gap. Taken together, the above studies point to the fact that in order to close the intention-behavior gap, both psychological factors that lead to intentions and structural factors that prevent behavior need to be tackled, including financing structure, charging accessibility, and vehicle style availability.

## 7. Post-Purchase Consumer Behaviour: Satisfaction, Continuance, and Loyalty

Another key aspect of consumer behavior in addition to purchase intention is the experience of EV users after purchasing the product, which tends to receive less attention from researchers in comparison with the intentions formed prior to purchases in spite of the significance of the issue for future market development and favorable word-of-mouth. Specifically, Cruz-Jesus et al. (2023) combined the task-technology fit model and the expectation-confirmation theory using the dataset consisting of 290 EV owners in Europe and were able to explain 22 percent of the variation in EV satisfaction and 40 percent of the variation in continuance intention, where the green self-identity was a moderating variable that influenced the relationship between satisfaction and continuance unexpectedly in the sense that low task-technology fit might be complemented by high green self-identity and vice versa, while being successful at both aspects did not add any value. The pattern of substitution is contrary to the mostly additive and compensatory nature of the logic underlying most of the benefit intention research reviewed in Section 5 above, and it is based on only one study, with the question of whether it is a truly generalizable phenomenon yet to be determined by replication efforts.

Similarly, complementary studies exploring the applicability of the expectation-confirmation model in China have established that government support, task-technology fit, satisfaction, environmental concern, and usefulness collectively predict continuance intentions of EV users, with satisfaction alone accounting for a large share of the variance in continuance intentions. Notably, these studies have revealed that government support is a stronger predictor of continuance intentions of female users than male users, highlighting the significance of this aspect of demography in post-purchase behavior that requires further exploration (Yu, Teoh, Bian, et al., 2025). Complementarily, research examining specifically the behavior of Chinese EV drivers has indicated that perceived performance and driving enjoyment of the vehicles significantly affect the confirmation of pre-purchase expectations, with satisfaction being the most significant predictor of continuance intentions, with after-sales support and perceived value for money serving as moderators (Ooi, Xu, & Yeap, 2025).

All of the above research findings cumulatively suggest that post-purchase satisfaction acts as a critical mediating construct between pre-purchase expectations, which have largely been based on the benefits described in Section 4, and post-purchase outcomes such as ownership retention, purchase intentions, and positive word of mouth. This relationship has been further substantiated in another study by Rehman et al. (2026), which showed that customer satisfaction leads to increased purchase intention for electric vehicles, with personal innovativeness, financial constraints, and charging-risk influencing the intensity of satisfaction-purchase intention relationship.

Of particular significance is the fact that the antecedents of post-purchase satisfaction and continuance seem to vary significantly from the antecedents of purchase intention before purchase. While environmental concerns and financial benefits have usually been shown to be the main determinants of purchase intention before the purchase, the determinants of satisfaction and continuance post-purchase are adequacy of infrastructure, pleasure of driving, and task-technology fit. The reason for this variance is that before purchase, the evaluation process relies on beliefs, whereas after purchase, the evaluation process takes a more experiential nature.

## 8. Barriers and Perceived Risks as Boundary Conditions

However, the perception of benefits does not work in isolation because its impact on purchase intention as well as behavior is always seen to be mediated by perceived barriers and risks. One of the most frequently mentioned barriers of electric vehicles, range anxiety, which means the psychological fear of being left helpless without enough energy in the battery, still continues to stand despite the significant increase in the actual driving range of commercial electric vehicles within the last few years. Research shows that range anxiety is highly correlated with the existence of charging infrastructure and that people's confidence in the reliability of charging stations rather than their numbers determines whether the presence of the infrastructure reduces range anxiety (Hassan, Mahmoud, Al-Sharafi, Ibrahim, & Albashrawi, 2026).

Informational and financial barriers also relate to economic benefits in terms of their impact on adoption. The high purchase cost, lack of trust in new battery technology, and lack of consumer information have all been found to be important barriers for electric vehicles, especially in those markets that are at a less advanced stage in the process of diffusion; the relative importance of each of these barriers depends on the income level of the country, policy development, and available charging facilities (Hassan, Mahmoud, Al-Sharafi, Ibrahim, & Albashrawi, 2026). Perceived risk, which includes not only the risk associated with financial matters (for example, concerns regarding depreciation and battery life), but also the functional risk (uncertainty regarding reliability) have both been found to negatively impact the adoption of EVs, despite the positive impact of economic benefits, with different consumers depending on their hedonic/utilitarian orientation having differing perceptions of the relative importance of each type of risk.

As a mediator or moderator construct of the link between perceived risk and adoption outcomes, trust has gained increasing prominence within the larger body of research on vehicle technologies, inclusive of both electric and autonomous vehicles. According to models drawn from the unified theory of acceptance and use of technology framework, trust in the technology, whether in the vehicle, batteries or the overall charging infrastructure, reduces the level of perceived risk, which makes perceived benefits more salient, while moderating factors such as convenient access to charging stations positively influence the link between perceived risk and adoption intentions (Wang et al., 2023).

These results combined indicate that perceived benefits and perceived barriers do not function independently as separate add-ons to consumer behavior, but rather interact in a way such that their combined effect on intention and action is dependent on the unique combination of risk tolerance, financial status, and access to infrastructure that characterizes the individual consumer. This interaction explains why studies carried out in various infrastructures yield different magnitudes of the same benefits, as the barriers affecting their impact differ systematically.

## 9. Cross-Cultural and Regional Perspectives

In terms of research on EV consumers' behaviour, there is a significant amount of literature covering a wide array of national and cultural contexts. Moreover, comparing different findings allows us to identify both stable cross-national patterns and differences related to context. Regarding the case of China, which has become the largest EV market in the world, all research conducted in this country was particularly focused on the interplay of governmental incentives and psychological factors related to the consumers themselves. This literature shows that the former influences the latter both directly and indirectly via influencing the perception of usefulness and ease of use of electric cars and being moderated by such factors as test-drives and oil price fluctuations (Chen et al., 2025). In addition, one should pay special attention to such culturally specific symbolisms as mianzi (Lv et al., 2024; Zhao et al., 2022).

In India, where there is a large, fast-growing, but price-sensitive market, much research has focused on the importance of economic and policy factors, along with continuing worries regarding charging infrastructure and range. Jaiswal et al. (2021) showed that financial incentive policy was an important moderator of the effect of consumer attitude on adoption intention in the Indian market, while Khurana et al. (2020) showed that attitude mediated the effect of antecedent belief on adoption intention for Indian consumers, highlighting the central role of attitude formation in psychology even in a price-sensitive market. Additional Indian studies utilising the theory of planned behaviour have found significant positive effects of attitude, perceived behavioral control, and environmental concern on purchase intention (Shalender & Sharma, 2021), where government investment in infrastructure has been talked about as an enabling factor.

Similarly, research conducted in Southeast Asian countries such as Malaysia and Indonesia, using extended models of technology acceptance and behavioral models, has found perceived usefulness, incentive policy for financial gain, and generation gap to be important factors influencing adoption intention, as multi-group analyses have shown that Generation Z consumers give more importance to technological and hedonic characteristics than other generations (Adnan et al., 2018; Poon et al., 2024).

In the North American and European contexts, on the other hand, more attention has been paid to infrastructural and post-purchase constructs, owing to the maturity of their charging networks and high penetration of EVs in those markets. The Canadian literature on the intention-action gap using simulated purchasing exercises, as well as the European literature on post-purchase satisfaction and continuance intention using task-technology fit and expectation-confirmation approaches, jointly indicate that for mature markets, the focus of research and policy is no longer on increasing awareness and intentions but rather on tackling infrastructural obstacles preventing conversion from intention to action, as well as retaining satisfaction and loyalty among current owners (Wang & Mohamed, 2025; Cruz-Jesus et al., 2023).

A middle ground is represented by the Turkish and other emerging European markets, where the interplay between cost-benefit and social prestige impacts the purchase intention, thus showing a development stage of the market when financial and symbolic aspects have equal significance (Bozpolat, 2024). It can be concluded from the above comparison that although the theoretical links between perceived benefit and intention/behaviour are generally generalizable, the weights of particular benefit factors and their moderating barriers are strongly conditioned by the developmental stage of EV in a particular market.

## 10. Theoretical and Managerial Implications

These findings have various implications for both theory and practice. As far as theory is concerned, the research reviewed in this paper indicates that there is a need for researchers to be more consistent when it comes to combining pre-purchase and post-purchase constructs into a unified model of consumers' behavior, rather than viewing purchase intention and post-purchase satisfaction as two different fields of study with distinct theoretical frameworks used for the analysis. Also, the interplay between hedonic, utilitarian and symbolic dimensions of benefits and between perceived benefits and perceived risks implies that additive models, which seek to estimate independent main effects of particular benefit dimensions on the consumers' decision-making process, are likely to miss out on the whole picture (Schuitema et al., 2013; Wang et al., 2023).

In terms of management, it can be deduced from the findings in the literature review that communication policies for automotive marketing need to take into account the maturity level of the market in addition to the consumer segment. In cases where the decision-making of consumers is largely based on the financial and policy aspects of cars, then total cost of ownership and other messages relating to savings in terms of financial and running costs will be most convincing. In mature markets or in young and innovative consumers, on the other hand, messages relating to hedonic and symbolic attributes of cars will be more convincing (Lv et al., 2024; Rehman et al., 2026).

Policymakers have a particularly significant implication drawn from this research – policies focused exclusively on influencing consumers' attitudes and intentions through awareness campaigns could fall short of their objectives in terms of encouraging purchase unless they include provisions for overcoming the practical obstacles to purchase, such as access to financing, reliable charging networks, and availability of desired body types of vehicles, which are likely to stand between consumers' intentions and actual purchase. In light of the established importance of satisfaction and continuance intention in fostering sustainable growth, both policymakers and manufacturers share a mutual benefit from not just encouraging initial purchase but also supporting consumers afterwards and strengthening their green self-identity as electric mobility customers, based on the evidence that together they determine whether the early adopters become lifelong advocates of

electric cars (Cruz-Jesus et al., 2023; Rehman et al., 2026).

## 11. Limitations and Future Research Directions

Several weaknesses can be seen in the reviewed literature and, therefore, in the research agenda for the future. First, virtually all of the studies reviewed above were based on cross-sectional self-report surveys where respondents may not be EV owners, posing serious doubts regarding methodological bias and ecological validity of self-reported intention as a predictor of purchasing behavior. Future research would greatly profit from using longitudinal design, which will include tracking the same respondents from forming an intention to buying and even owning EVs, and/or by using behavioral or transactional data sources instead of self-report surveys.

Second, whereas there have been a few attempts at employing a simulated purchasing game or experiment to simulate actual behavior within the context of a controlled experiment, this method is an exception rather than the rule, and additional innovations in this direction, including natural field experiments and observation of behavior on car market sites, would make claims regarding the intention-action gap more evidentially based.

Fourth, the post-purchase research is much smaller in scale compared to the literature concerning pre-purchase intentions, with many issues left only partially answered, such as the development of satisfaction and intention to continue throughout the entire ownership cycle, the influence of the degradation of the battery and perceived resale value on the ultimate decision to replace the car, and the influence of the secondary market for EVs on the whole diffusion process. Fifth, most of the reviewed studies are performed within one single country and, while the current review tried to highlight cross-regional trends in the literature, comparative cross-cultural research using the same instrument of measurement in multiple countries is relatively scarce.

Moreover, as EV markets keep maturing, and as the interdependence between EV technology and other technological innovations such as vehicle-grid integration, autonomous driving, and car sharing increases, any future research on driver behavior will need to build upon current behavioral models to accommodate the pros and cons of such bundles of technologies rather than focusing only on the EV as an individual product group.

## 12. Conclusion

In this review of narratives, the extensive body of literature is summarized in order to support the claim that a holistic approach towards the comprehension of consumer behavior related to electric cars should transcend from viewing purchase intention as the only outcome of academic and business interest. Perceived benefits, covering areas such as environmental, financial, instrumental, hedonic, symbolic, and policy-related considerations, have remained strong and reliable predictors of purchase intentions across different countries and cultures, normally working through the mediating effect of attitude, while moderated by perceived risk and trust.

However, the increasing body of knowledge on the gap between intention and behavior shows that while stated intention does lead to actual purchase behavior, this connection is not always perfect due to various real-life and situational limitations such as financial considerations, charging availability, and personal preferences regarding body style of the vehicle, which tend to outweigh psychological and attitude-based factors behind intention formation. What's more, a small yet theoretically relevant number of publications dedicated to post-purchase behavior shows that satisfaction, task-technology fit, and green self-identity together define the future actions of EV owners including continued use and recommending technology to others. Future research combining pre-purchase and post-purchase concepts in a longitudinal and comparative cross-cultural framework will be necessary to understand better how perceived benefits lead to actual adoption of electric cars.

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