AÑO 30 No. 110, 2025
ABRIL-JUNIO

RVG

No. 110, 2025
ABRIL-JUNIO

30 ANIVERSARIO

Revista Venezolana de Gerencia

UNIVERSIDAD DEL ZULIA (LUZ)
Facultad de Ciencias Económicas y Sociales
Centro de Estudios de la Empresa

ISSN 1315-9984

Como citar: Delso-Vicente, A.-T., Diaz-Marcos, L., Aguado-Tevar, Ó., y Almonacid-Durán, M. (2025). Impact of legitimacy, innovation and economic uncertainty on the purchase of electric vehicles in the EU. *Revista Venezolana De Gerencia*, *30*(110), 789-811. https://doi.org/10.52080/rvgluz.30.110.1

Universidad del Zulia (LUZ)
Revista Venezolana de Gerencia (RVG)
Año 30 No. 110, 2025, 789-811
Abril-Junio
ISSN 1315-9984 / e-ISSN 2477-9423

Impact of legitimacy, innovation and economic uncertainty on the purchase of electric vehicles in the EU

Delso-Vicente, Alberto-Tomás*
Diaz-Marcos, Luis**
Aguado-Tevar, Óscar***
Almonacid-Durán, Margarita****

Abstract

The aim of this study is to analyse the interaction between legitimacy, innovation, uncertainty and purchase intention of electric vehicles (EVs) in Germany, Greece, Spain, France, Croatia, Ireland and Italy during the period 2016–2023. The partial least squares structural equation modelling (PLS-SEM) technique is used. Thee main results indicate that legitimacy has a significant and positive impact on purchase intention, while innovation affects legitimacy but not directly on purchase intention. Uncertainty moderates these relationships in complex ways. The findings suggest that strengthening the perception of legitimacy is crucial to increasing EV purchase intention. Furthermore, strategies that promote innovation and manage uncertainty can improve market acceptance in these countries.

Keywords: Legitimacy; Innovation; Uncertainty; Purchase intention; Electric vehicles.

Recibido: 29.10.24 **Aceptado**: 31.01.25

* PhD student at the Rey Juan Carlos University. Professor at the Faculty of Economics and Business Studies. Rey Juan Carlos University. E-mail: Alberto.delso@urjc.es ORCID: https://orcid.org/0009-0000-6410-1132

** Professor in the business area and Managing Director of Nebrija University. E-mail: ldiazmarcos@nebrija.es ORCID: https://orcid.org/0009-0007-6580-0382

*** Professor in the business area and Director of Nebrija University. E-mail: oaguado@nebrija.es ORCID: https://orcid.org/0009-0001-9245-3167

**** Professor at the Rey Juan Carlos University. E-mail: margarita.almonacid@urjc.es ORCID: https://orcid.org/0000-0002-4299-6921

Impacto de la legitimidad, la innovación y la incertidumbre económica en la compra de vehículos eléctricos en la UE

Resumen

El objetivo de este estudio es analizar la interacción entre legitimidad, innovación, incertidumbre e intención de compra de vehículos eléctricos (VE) en Alemania, Grecia, España, Francia, Croacia, Irlanda e Italia durante el periodo 2016-2023. Se utiliza la técnica de modelización de ecuaciones estructurales por mínimos cuadrados parciales (PLS-SEM). Los principales resultados indican que la legitimidad tiene un impacto significativo y positivo en la intención de compra, mientras que la innovación afecta a la legitimidad pero no directamente a la intención de compra. La incertidumbre modera estas relaciones de forma compleja. Los resultados sugieren que reforzar la percepción de legitimidad es crucial para aumentar la intención de compra de VE. Además, las estrategias que promueven la innovación y gestionan la incertidumbre pueden mejorar la aceptación del mercado en estos países.

Palabras clave: Legitimidad; Innovación; Incertidumbre; Intención de compra; Vehículos eléctricos.

1. Introduction

The electric vehicle (EV) market in the European Union (EU) is undergoing significant transformations driven by innovation, economic policy uncertainty (EPU) and legitimacy, factors that influence consumer decision-making. In this context, the present research aims primarily to analyze the interaction between innovation, EPU and legitimacy on EV purchase intention in Germany, Greece, Spain, France, Croatia, Ireland and Italy, with the purpose of contributing to the design of public policies and business strategies that strengthen the EV market in the EU. The accelerated transition towards a sustainable automotive model underlines the need to understand how these factors shape consumer behavior and determine market trends.

Advances in data science and digital marketing have generated substantial changes in the automotive sector, allowing greater accuracy in predicting consumer behavior through big data analysis (Cohen and Levinthal, 1990). In this regard, it is essential to examine the relationship between innovation, legitimacy and UPE in EV purchase decisions, given that these factors are now more quantifiable than in the past. The literature indicates that innovation improves industry efficiency (Teece, 1986), UPE affects consumer confidence (Baker et al., 2016) and legitimacy reflects the degree of social acceptance of EVs (Dowling and Pfeffer, 1975). However, political and economic

uncertainty generates a perception of risk that can delay purchase decisions (Bansal and Clelland, 2004; Baker et al., 2016).

Despite advances in EV research, a gap is identified in the literature regarding the joint analysis of innovation, UPE and legitimacy as determinants of purchase intention. In this regard, this study addresses this gap through an integrative approach that examines the impact of EPU on consumer behavior, in line with previous research (Zameer & Yasmeen, 2022 ; Abbasi and Adedoyin, 2021). The main objective of this work is to analyze the interaction between innovation, EPU and legitimacy on the purchase intention of electric vehicles in these EU countries. The analysis focuses on assessing the impact of state legitimacy on consumer trust and EV purchase intention, the role of innovation in the perception of legitimacy and adoption of these vehicles, and the influence of EPU on market stability and consumer behavior. From a methodological point of view, the research employs the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique, together with time series analysis using dynamic ARDL simulations (Abbasi and Adedoyin, 2021) and the STIRPAT framework (Zameer & Yasmeen, 2022). The data analyzed correspond to the period 2016-2023 and come from Eurostat and national statistical agencies, which guarantees the validity and reliability of the findings. The use of PLS-SEM is justified by its suitability in the analysis of complex models with relatively small samples (Hair et al., 2011), allowing to obtain robust and precise estimates. In this way, the research contributes to the study of the EV market by providing relevant information for the formulation of public policies and the development of commercial strategies in the automotive sector.

2. Theoretical framework

The study of electric vehicle (EV) purchase intention is shaped by key factors like innovation, political-economic uncertainty (PEU), and legitimacy, which have been researched across disciplines like business, economics, and political science. This framework explores how these variables impact the EV market in Germany, Greece, Spain, France, Croatia, Ireland, and Italy, aiming to understand market dynamics and technology adoption in the European context.

Innovation, crucial for competitiveness in the EV industry, involves introducing new products or processes to improve efficiency and meet changing consumer needs (Teece, 1986). Absorptive capacity, the ability to recognize and apply new knowledge, drives innovation and enhances performance (Cohen & Levinthal, 1990). Innovation also affects legitimacy, as distinctive innovation can attract resources and consumer support (Taeuscher, Bouncken, & Pesch, 2021). Schumpeter (1934) introduced “creative destruction,” showing how innovation transforms industries, while Cohen and Levinthal (1990) emphasized absorptive capacity’s role in recognizing and applying knowledge.

Political-economic uncertainty (PEU) influences investment and consumption decisions, affecting market stability and consumer confidence (Baker et al., 2016). Studies show PEU increases carbon emissions as firms turn to cheaper, more polluting fuels (), with similar effects observed in China (Abbasi & Adedoyin, 2021). PEU has gained

attention for its role in market stability, with Baker et al. (2016) developing an index to measure it, linking PEU to environmental sustainability issues (Zameer & Yasmeen, 2022).

Legitimacy is key for organizations, reflecting their acceptance within a social system based on norms, values, and regulations (Dowling & Pfeffer, 1975). Higher legitimacy enhances an organization's ability to secure resources and stakeholder support (Zimmerman & Zeitz, 2002). It is built by aligning with societal expectations and helps manage public perception while reducing market risks. Beyond compliance, legitimacy also involves perceptions of fairness and transparency in operations (Sunshine & Tyler, 2003). In organizational theory, legitimacy is essential for gaining stakeholder acceptance and resources (Dowling & Pfeffer, 1975; Zimmerman & Zeitz, 2002).

3. Interaction between Innovation, EPU and Legitimacy

The study of the interaction between innovation, EPU, and legitimacy is crucial for understanding their influence on electric vehicle purchase intentions. Innovation can enhance legitimacy by demonstrating a commitment to sustainable development and advanced technology (Teece, 1986), but EPU can undermine these efforts by creating uncertainty that discourages investment and consumption (Zameer & Yasmeen, 2022). Abbasi and Adedoyin (2021) indicate that EPU has differentiated short- and long-term effects on emissions and sustainability perceptions. Therefore, companies must innovate, manage uncertainty, and maintain legitimacy to succeed in the EV market.

Innovation, defined as the introduction of improved products, services, or processes to gain competitive advantage and create value (Damanpour, 1991; Farida & Setiawan, 2022a; Geissdoerfer et al., 2018), has been examined through various theoretical lenses. McCraw (2007) emphasizes disruptive innovation and entrepreneurial creativity as drivers of economic transformation. Diffusion models, like Rogers' diffusion of innovations, explain how new ideas are adopted and spread (Rogers et al., 2014; Wolf, 2022). Innovation manifests in forms such as product, service, process, and business model innovation (Hermundsdottir & Aspelund, 2021; Kivimaa et al., 2021). Factors influencing innovation success include organizational culture, technology management, strategic partnerships, and learning capabilities (Damanpour, 1991; Hermundsdottir & Aspelund, 2021). The adoption of ICT has further facilitated innovation (Hund et al., 2021; Nylén & Holmström, 2015).

In the context of electric vehicles (EVs), innovation is crucial for shaping purchase intentions (Xie et al., 2022). The perception that EVs feature advanced technology significantly influences consumer decisions. Innovations in battery efficiency, range, and technology enhance their appeal (Alanazi, 2023; Liu et al., 2022), aligning with Omri's (2020) findings on the importance of innovation for adopting sustainable technologies.

The intent to purchase EVs is heavily influenced by innovations in this sector (Krishnan & Koshy, 2021; Lashari et al., 2021). Consumers are more likely to consider buying EVs when they perceive notable innovations (Saputra & Andajani, 2023). Innovation encompasses not only technological

advancements but also disruptive changes in design and sustainability (Higueras-Castillo et al., 2021b). Effective communication that highlights these innovations is vital for influencing purchase decisions (Bunduchi et al., 2022). Thus, the perception of innovation is key to consumers' willingness to adopt EVs (Hwang, 2019).

It is widely accepted that innovation positively impacts purchase intentions (Li et al., 2021b; Rezvani et al., 2015). Al-Adwan et al. (2022) found that innovation in EVs boosts purchase intent, as consumers value the adaptability of innovative companies. Consequently, a perception of innovation increases consumers' willingness to purchase. Based on this, the following hypothesis can be formulated: H1b: Innovation is positively related to the purchase intent of EVs.

In the evolving electric vehicle (EV) landscape, innovation is essential for the credibility of this mobility revolution (Bohnsack et al., 2020; Han et al., 2022). It serves as the foundation for legitimizing EVs in the automotive markets of Germany, Greece, Spain, France, Croatia, Ireland, and Italy (Damanpour, 1991; Farida & Setiawan, 2022b; Geissdoerfer et al., 2018). The relationship between innovation and legitimacy has gained academic interest (Soewarno et al., 2019), with innovation enhancing state legitimacy by promoting sustainable growth and public trust in governmental institutions (Bergek et al., 2013; Nilsson & Nykvist, 2016).

McCraw (2007) emphasizes that disruptive innovation drives economic change and supports EV adoption credibility. Wolf (2022) further explores how these innovations shape perceptions of legitimacy and trust. Innovation takes various forms, including improved products, services, processes, and business models (Hermundsdottir & Aspelund, 2021; Kivimaa et al., 2021), and in the EV context, it adapts to consumer needs in the aforementioned countries (Qu & Mardani, 2023; Lusch, 2015). Thus, innovation influences perceptions of legitimacy (Bunduchi, Smart, Crisan-Mitra & Cooper, 2022; Guo et al., 2019).

The legitimacy of EVs is also shaped by process innovation, which enhances internal efficiencies (Agrawal et al., 2023; Anand et al., 2013). Business model innovation redefines value creation and plays a critical role in legitimizing the EV market (Geissdoerfer et al., 2018; Zhao et al., 2016). Factors like organizational culture, technology management, and strategic collaboration directly impact perceived legitimacy (Damanpour, 1991; Hermundsdottir & Aspelund, 2021). Additionally, adopting information and communication technologies is vital for legitimization in the digital age (Hund et al., 2021; Nylén & Holmström, 2015).

A positive relationship is expected between a company's innovation level and its perceived legitimacy (Höflinger et al., 2018). This synergy between EV innovation and state legitimacy highlights the need for progressive policies to strengthen the social contract between the state and citizens, promoting sustainability (Block & Keller, 2015; Juntunen et al., 2019). As companies excel in innovation, consumers in these countries will view them as more credible, enhancing their societal legitimacy.

Based on these considerations, the following hypothesis can be formulated: H1a: Innovation is positively related to state legitimacy.

The significance of legitimacy for organizations has been widely studied. Meyer and Rowan (1977) asserted

that legitimacy is vital for survival, leading researchers to explore actions that foster it (Lu, 2015). Legitimacy is defined as the acceptance of an organization by stakeholders, including employees, customers, and society (Suchman, 1995). Foundational theories help explain the relationship between legitimacy and purchase intention. Suchman's Legitimacy Theory (1995) stresses the need for social acceptance through appropriate actions. Institutional Theory (DiMaggio & Powell, 1983) examines how legitimacy is achieved through policies and innovations, while Stakeholder Theory (Freeman, 2010) focuses on meeting stakeholder expectations (Alexiou & Wiggins, 2018). These theories clarify how the perception of legitimacy in EVs, based on reputation and quality, influences purchase intentions.

According to legitimacy theory, organizations must appear justified to gain social acceptance (Suchman, 1995). Researchers like Deegan (2002) and Gray (1996) have studied communication strategies linking social accounting to legitimacy. Institutional Theory highlights the role of environmental norms in achieving legitimacy, connected to compliance with standards (Díez-Martín et al., 2022). Factors like manufacturer reputation and consumer opinion impact the legitimacy of EVs (Buhmann & Criado, 2023; Salari, 2022).

Previous studies emphasize legitimacy and reputation in consumer decisions (Blanco-González et al., 2023; Del-Castillo-Feito et al., 2020). Companies with strong quality records are viewed as more legitimate, particularly regarding high-performance EVs. As EV legitimacy increases, consumers are more likely to prefer them.

Research by Parray et al. (2023) and Stanaland et al. (2011) highlights the role of reputation and legitimacy in shaping perceptions. High-quality EVs are seen as more legitimate, influencing purchasing decisions (Alanazi, 2023; Sanguesa et al., 2021). As legitimacy rises, consumers are more inclined to choose these vehicles.

According to Parray et al. (2023), the legitimacy of EVs is crucial for purchase intention, with consumers considering reputation, quality, and compliance (Soewarno et al., 2019). However, research on the interplay between legitimacy and innovation in the EV sector is limited, making this examination particularly relevant.

State legitimacy can greatly affect purchase intentions. The perceived legality of a product enhances consumer trust, as people prefer products complying with state regulations (Kim et al., 2008; Nuttavuthisit & Thøgersen, 2017). Ethical justifications from companies also boost willingness to purchase (Van de Ven, 2008; Wilson, 2012). Social consent, reflecting societal acceptance, is essential for positive consumer perceptions (Bian & Forsythe, 2012). Thus, consumers perceiving high state legitimacy are more likely to trust companies, leading to increased purchase intentions (Guo et al., 2021; Stanaland et al., 2011).

Based on this evidence, the following hypothesis will be tested: H2: State Legitimacy is positively related to purchase intent.

Uncertainty is a crucial aspect of the environment in which individuals and organizations operate, necessitating adaptation for survival (Bell, 1982; Dantzig, 1955; Duncan, 1972; Milliken, 1987). While often seen as negative, uncertainty prompts actors to take steps to mitigate it (Mascarenhas,

1982; Whitecross & Smithson, 2023). Recent studies suggest an "uncertainty regulation" approach, recognizing that functional uncertainty can be actively managed (Peters et al., 2017). This model seeks to align internal uncertainty, related to individual attitudes and abilities, with a preferred comfort level (Carriero et al., 2018). Individuals' actions can significantly influence their uncertainty experience (Peters et al., 2017; Whitecross & Smithson, 2023; Yoon et al., 2021).

In the EV market, uncertainty significantly affects the dynamics between legitimacy, innovation, and purchase intent (Ye et al., 2021). This uncertainty may arise from charging infrastructure, future costs, or technological advancements (Unterluggauer et al., 2022). Purchase intent is shaped by legitimacy, innovation, and uncertainty levels (Krishnan & Koshy, 2021; Lashari et al., 2021). Strategies that highlight legitimacy and innovation while addressing uncertainties can enhance purchase intent (Higueras-Castillo et al., 2021a; Saputra & Andajani, 2023). Effective communication to reduce uncertainties is crucial for EV adoption (Bunduchi et al., 2022; Hwang, 2019).

Griffin & Grote (2020) argue that aligning uncertainty with innovation capability affects a company's perceived legitimacy. Consumers evaluate EV purchases based on state legitimacy, innovation, and uncertainty (Corradi et al., 2023). Emphasizing the legitimacy of EVs and innovation while addressing uncertainties positively influences purchase intentions (Al-Adwan et al., 2022; Li et al., 2022). In high uncertainty contexts, perceived state legitimacy may increasingly rely on innovation capability, as consumers view innovation as a sign of reliability (Hofman et al., 2020; Zhou et al., 2021). This leads to the hypothesis:

H3a: Uncertainty positively moderates the relationship between state legitimacy and innovation.

According to Al-Adwan et al. (2022), high uncertainty may strengthen the relationship between innovation and purchase intention. Consumers tend to value innovation more when purchasing under uncertainty, viewing it as a sign of a company's adaptability (Peña-García et al., 2020). Uncertainty about charging infrastructure and EV station availability significantly impacts purchase intent (LaMonaca & Ryan, 2022). Concerns about charging access make this area crucial for research. Thus, the hypothesis is:

H3b: Uncertainty positively moderates the relationship between purchase intention and innovation.

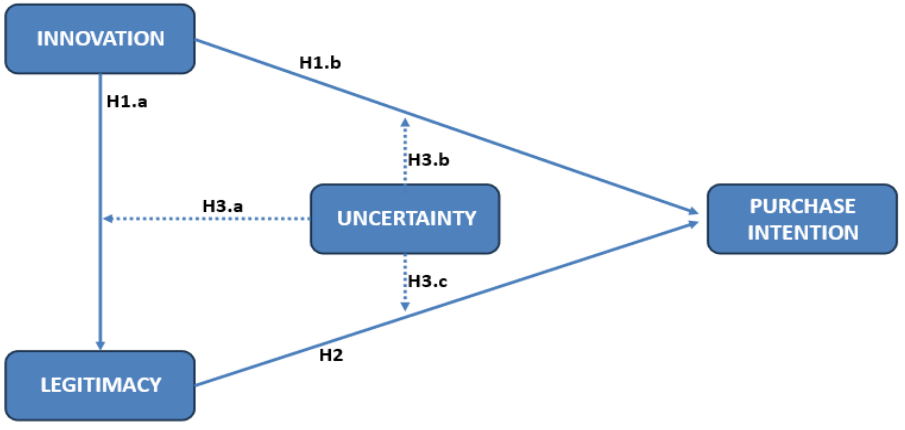
In high uncertainty periods, a company's perceived state legitimacy can greatly influence purchase intentions. Consumers may prefer legitimate companies to reduce uncertainty (Islam & Hussain, 2023; Y. Wu & Huang, 2023). Market uncertainty can also affect the legitimacy-purchase intent relationship (Al-Adwan et al., 2022; Pavlou et al., 2007). Strategies emphasizing EV legitimacy, fostering innovation, and addressing uncertainty enhance purchase intentions (Higueras-Castillo et al., 2021b; Saputra & Andajani, 2023; Tu & Yang, 2019). Communicating legitimacy and innovation effectively in marketing is critical (Bunduchi et al., 2022; Hwang, 2019). Additionally, reducing uncertainty through quality assurance and consumer education is vital for driving purchase intent (Angkiriwang et al., 2014; Featherman et al., 2021). Therefore, the hypothesis is:

H3c: Uncertainty positively moderates the relationship between

state legitimacy and purchase intention.

The research model in Diagram 1 proposes that in Germany, Greece, Spain, France, Croatia, Ireland, and Italy, better innovation leads to greater legitimacy (H1a) and purchase intent (H1b).

Diagram 1
Proposed model and hypothesis



Moreover, legitimacy positively impacts purchase intent (H2). We also propose that uncertainty moderates the relationships between legitimacy and innovation (H3a), purchase intention and innovation (H3b), and legitimacy and purchase intention (H3c).

4. Methodological approach

We have created a dataset from three publicly available datasets from European countries. The countries to be studied are therefore the following: Germany, Greece, Spain, France, Croatia, Ireland, and Italy.

We collected data from secondary sources (The purchase intention from Eurostat (https://ec.europa.eu/eurostat/, 2023), innovation Scoreboard from European Commission (*Innovation Scoreboard*, n.d.), Economic Policy Uncertainty (EPU, n.d.), Fragile States Index (*State Legitimacy*, n.d.)). These countries are listed in Table 1. Data in the datasets was the most recent available. For this study, we collected data from 2016 to 2023 incorporating variables. In addition, we included two indicators, Purchase Intention. These characteristics are listed in chart 1, along with their descriptions.

Chart 1
Descriptions of features

Item	Variable	Definition	source
Legitimacy	State Legitimacy	Trust in the legal system Trust in the relationship with the political system Trust in the govern system	Fragile States Index
Policy Uncertainty	EPU	Economic Policy Uncertainty	EPU index
Innovation	Innovation	Regional innovation scoreboard	European Commission
PI	Purchase Intention	Purchase intention	Eurostat

For methodology, we employed a multivariate analysis using partial least squares (PLS), consistent with prior research (Díez-Martín et al., 2022; Fernández-Portillo et al., 2020) that studied diverse datasets across multiple countries and variables. SmartPLS software was used to assess hypotheses and validate the theoretical framework, as this technique is robust and offers greater accuracy than alternatives (Chin et al., 2003; Sarstedt et al., 2021).

Innovation significantly shapes consumer behavior in various markets. Agag and El-Masry's (2016b) study in online travel communities shows that integrating innovation diffusion theory with the technology acceptance model and trust elements enhances consumers' participation, leading to increased purchase intentions and positive word-of-mouth (WOM). This presents opportunities for businesses in Germany, Spain, and France to utilize online platforms for driving innovation and consumer engagement.

Research by Lu and Chen, and Ma provides insights into consumer behavior under uncertainty. Lu and Chen found that effective communication in live streaming commerce reduces product uncertainty, boosting consumer trust and purchase intentions, particularly relevant in unstable economies like Greece and Italy. Ma's study on logistics shows that managing delivery times and shipping charges mitigates perceived risk, influencing satisfaction and purchase intentions, crucial for countries like Ireland and Croatia facing economic uncertainties.

Legitimacy, as outlined by Odou et al. (2023) relates to the perceived authenticity and ethical standing of a business. In retail, supporting local producers and transparently communicating these efforts can boost a retailer's legitimacy, especially in France and Italy, where local production and sustainability are highly valued. The findings suggest that retailers can enhance legitimacy and consumer loyalty by emphasizing support for local and sustainable practices.

Purchase intention is a key measure of consumer behavior. Teng and Lu's research on organic food in Taiwan shows that consumer involvement and motives significantly mediate purchase intentions. This is relevant for markets like Germany and Ireland, where organic and sustainable consumption is on the rise. Other studies highlight that brand image (Islam and Hussain), green innovation (Chen et al., 2021), and corporate social responsibility (Li et al.,

2021a) also shape purchase intentions, particularly in Spain and Greece, where businesses can leverage these factors for differentiation and loyalty.

In summary, integrating innovation, managing uncertainty, enhancing legitimacy, and focusing on factors influencing purchase intention are essential for navigating consumer markets. Insights from these studies are particularly relevant for Germany, Greece, Spain, France, Croatia, Ireland, and Italy, where cultural, economic, and political dynamics impact market behavior. Businesses in these regions can adopt these strategies to improve consumer engagement, build trust, and drive growth.

5. Uncertainty and intention to purchase electric vehicles: Results

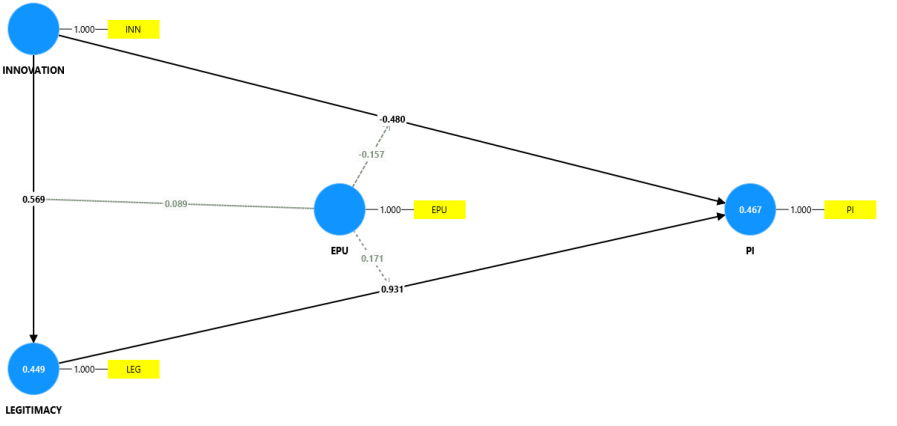
This study analyzes the interaction between state legitimacy, innovation, and economic policy uncertainty on EV purchase intention in Germany, Greece, Spain, France, Croatia, Ireland, and Italy. Using partial least squares structural equation modeling (PLS-SEM) with SmartPLS, several hypotheses were tested to explore these relationships.

To obtain results, all validation steps for PLS-SEM were followed, adhering to guidelines by Hair et al. (2011). Structural model validation is essential, and our model achieved a standardized root mean square residual (SRMR) value < 0.1 (Williams et al., 2009). The measurement instrument's reliability and validity were assessed for Type A reflective constructs, showing loadings (λ) > .707, Cronbach's α > .7, composite reliability > .7, and AVE > .5 (Fernández-Portillo et al., 2019). Discriminant validity was confirmed through the Fornell-Larcker criterion and HTMT correlations > .85 (Fernández-Portillo et al., 2019).

For multicollinearity, Type B formative construct indicators were filtered to ensure Variance Inflation Factors (VIF) below 3.3 (Diamantopoulos & Siguaw, 2006). All construct VIFs remained below 5 during structural model evaluation (Hair et al., 2014).

Subsequently, the structural equation model is shown (Diagram 2).

Diagram 2
Structural equation model with values



In the structural model, the relationships between Innovation (INN), Legitimacy (LEG), Economic Policy Uncertainty (EPU), and Purchase Intention (PI) are examined. Results show that innovation positively correlates with both legitimacy (path coefficient = 0.569) and purchase intention (path coefficient = 0.467), indicating that higher innovation enhances legitimacy perceptions and increases purchase intent. This aligns with Agag and El-Masry (2016a), who found similar results in online travel communities.

Legitimacy also significantly impacts purchase intention (path coefficient = 0.931), underscoring the importance of perceived trust and authenticity, as noted in studies on corporate social responsibility (Li et al., 2020; Islam and Hussain, 2023). Conversely, EPU negatively affects purchase intention (path coefficient = -0.480), suggesting that high uncertainty diminishes consumer willingness to buy, as highlighted by Lu and Chen (2021). However, EPU's direct influence on legitimacy is minimal (path coefficient = 0.089), indicating economic and political uncertainty does not significantly affect perceived legitimacy.

These findings are particularly relevant in markets like Germany, Greece, Spain, France, Croatia, Ireland, and Italy, where innovation and legitimacy can help mitigate the negative effects of economic uncertainty on purchase intentions. Fostering innovation and strengthening perceived legitimacy are key strategies for enhancing purchase intent in uncertain economic contexts (Odou et al., 2023; Khan, Hameed, and Akram, 2023).

Comparative analysis of structural models with and without EPU reveals critical differences. Without considering EPU, the innovation-purchase intention relationship is negative (path coefficient = -0.325), suggesting innovation may introduce perceived risks in volatile economic environments. This is consistent with Lu and Chen (2021), who noted that economic uncertainty can undermine consumer trust.

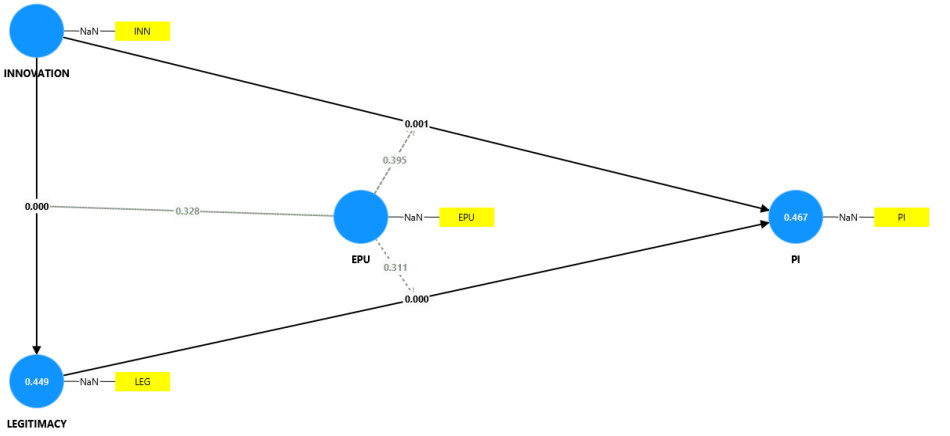
In both models, legitimacy remains a strong predictor of purchase intention, with path coefficients of 0.660 (without EPU) and 0.931 (with EPU), highlighting its importance, particularly in markets like Germany and France. Studies by Odou et al. (2023) and Khan, Hameed, and Akram (2023) support this, emphasizing legitimacy's role in enhancing purchase intentions, especially in green marketing contexts.

The analysis indicates that innovation consistently boosts perceived legitimacy, with path coefficients from 0.569 to 0.587, suggesting that innovative products strengthen brand legitimacy, especially in culturally aligned markets like Italy and Spain. This is supported by Agag and El-Masry (2016b) and Chen et al. (2021), who found higher consumer acceptance of innovation that resonates with cultural expectations. Overall, the analysis suggests that while innovation enhances legitimacy, its direct impact on purchase intention varies by economic context. In stable environments, innovation positively affects purchase intentions. Businesses should manage perceived innovation risks, offering reassurances such as guarantees and comprehensive information to build consumer trust and increase purchase intentions, even in uncertain economic times.

The structural model analysis, enhanced with bootstrapping (diagram 3), reveals key relationships among innovation, economic policy uncertainty

(EPU), legitimacy, and purchase intention (PI). Results show that innovation significantly enhances perceived legitimacy (path coefficient = 0.449), consistent with Agag and El-Masry (2016a), who emphasize technological advancements in building trust. Notably, EPU mediates the relationship between innovation, PI, and legitimacy. Innovation affects EPU (path coefficient = 0.328), which slightly influences PI (0.001) and legitimacy (0.311).

Diagram 3
Boostrapping analysis



This suggests that while innovation may not directly drive purchase intention, it shapes perceptions of economic stability that influence consumer behavior and brand trust.

Legitimacy's direct effect on purchase intention is significant (path coefficient = 0.467), underscoring consumer trust's importance in markets like Germany and France. Modest coefficients from EPU to PI and LEG imply that transparent communication about economic uncertainties can reassure consumers, boosting trust and purchase intentions—particularly relevant in volatile regions like Greece and Spain.

Overall, findings highlight that innovation must be paired with strategies to manage economic perceptions and reinforce legitimacy. Businesses in Europe can use these insights to enhance consumer trust and drive purchase intentions, even amid economic uncertainty, as noted by Odou et al. (2023) and Khan, Hameed, and Akram (2023) (table 1).

Table 1
Results of hypothesis testing

	Path coefficients	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Hypothesis value
EPU -> LEGITIMACY	-0,321	0,093	3,473	0,001	Validated
EPU -> PI	0,451	0,123	3,667	0,000	Validated
INNOVATION -> LEGITIMACY	0,569	0,101	5,654	0,000	Validated
INNOVATION -> PI	-0,480	0,148	3,252	0,001	Validated
LEGITIMACY -> PI	0,931	0,132	7,078	0,000	Validated
EPU x LEGITIMACY -> PI	0,171	0,168	1,013	0,311	Rejected
EPU x INNOVATION -> LEGITIMACY	0,089	0,091	0,978	0,328	Rejected
EPU x INNOVATION -> PI	-0,157	0,185	0,851	0,395	Rejected

The structural equation modeling results, supported by bootstrapping analysis, reveal significant relationships among economic policy uncertainty (EPU), innovation, legitimacy, and purchase intention (PI). EPU negatively impacts legitimacy (path coefficient = -0.321, p = 0.001), aligning with Odou et al. (2023), who noted that economic instability erodes consumer trust. Conversely, EPU positively affects purchase intention (path coefficient = 0.451, p < 0.000), suggesting that consumers may feel an urgency to buy during uncertain times, as noted by Al-Adwan et al. (2022).

Innovation strongly enhances legitimacy (path coefficient = 0.569, p < 0.000), supporting Agag and El-Masry's (2016b) assertion that innovative practices build credibility. However, innovation's direct effect on purchase intention is negative (path coefficient = -0.480, p = 0.001), indicating that perceived risks associated with new technologies may hinder consumer purchases, consistent with Chen et al. (2022), who emphasize the need for effective communication.

The legitimacy-purchase intention relationship is the strongest in the model (path coefficient = 0.931, p < 0.000), highlighting the importance of trust and authenticity, as discussed by Bunduchi et al. (2022). Interaction effects of EPU with legitimacy and innovation did not significantly impact purchase intention, suggesting their combined effects are minimal due to complex economic factors, aligning with findings from Chen et al. (2021) and Islam and Hussain (2023).

In conclusion, while innovation and legitimacy drive consumer behavior, their effectiveness varies by economic context. Businesses should enhance legitimacy through transparent communication and risk mitigation strategies, particularly in volatile environments, to strengthen consumer trust and purchase intentions.

6. Intention to purchase electric vehicles: Discussion

This study provides insights into the interactions between innovation,

economic policy uncertainty (EPU), legitimacy, and purchase intention (PI) for electric vehicles (EVs) in Germany, Greece, Spain, France, Croatia, Ireland, and Italy. Structural equation modeling and bootstrapping analyses revealed key relationships that extend existing literature.

The findings show that legitimacy has a strong positive impact on purchase intention (path coefficient = 0.931), highlighting the importance of consumer trust, especially regarding sustainable technologies like EVs. This aligns with Bunduchi et al. (2022) and Agag and El-Masry (2016a), who noted that transparency and corporate social responsibility enhance consumer confidence.

Innovation positively affects legitimacy (path coefficient = 0.569) but has a negative direct effect on purchase intention (path coefficient = -0.480). This suggests that while innovation boosts perceived legitimacy, it may not directly increase purchase intentions due to consumer apprehension about new technologies. Chen et al. (2022) emphasize that effective communication and risk mitigation are vital for converting innovative features into consumer buy-in.

EPU negatively influences legitimacy (-0.321) but positively impacts purchase intention (0.451). This reflects a complex consumer response to uncertainty, where decreased trust in economic stability may drive urgency to purchase due to fears of rising prices, as discussed by Al-Adwan et al. (2022).

The moderation effects of EPU on innovation and purchase intention, and on innovation and legitimacy, were not significant. This indicates that while each factor influences behavior, their combined effects may vary due to different economic contexts. This supports insights from Chen et al. (2021) and Islam and Hussain (2023) on the role of economic and cultural contexts in shaping these dynamics.

7. Conclusions

The study examines the dynamics between state legitimacy, innovation, economic policy uncertainty (EPU), and electric vehicle (EV) purchase intention in Germany, Greece, Spain, France, Croatia, Ireland, and Italy. Using partial least squares structural equation modeling (PLS-SEM), it explores how these variables influence consumer behavior in the EV market. The findings shed light on the roles of legitimacy and innovation in market acceptance and highlight EPU's complex effects.

This research enhances understanding of the interplay between legitimacy, innovation, and EPU in EV adoption, clarifying innovation's indirect role through legitimacy and EPU's dual impact on market dynamics.

The insights are valuable for EU policymakers and businesses. Governments can boost EV adoption by reinforcing the legitimacy of policies, while businesses should align innovation strategies with efforts to enhance perceived legitimacy, especially in high-EPU regions, to sustain consumer confidence and promote market growth.

However, reliance on specific databases and PLS-SEM may limit the findings' generalizability. Incorporating additional data sources and analytical methods could provide a broader understanding of the relationships studied.

References

Abbasi, K. R., & Adedoyin, F. F. (2021). Do energy use and economic policy

uncertainty affect CO emissions in China? Empirical evidence from the dynamic ARDL simulation approach. *Environmental Science and Pollution Research*, *28*(18), 23323-23335. https://doi.org/10.1007/s11356-020-12217-6

Agag, G., & El-Masry, A. A. (2016a). Factors influencing the adoption of online travel communities: A comparative study of the USA and Egypt. *Journal of Vacation Marketing*, *22*(3), 235-248. https://doi.org/10.1177/1356766716631622

Agag, G., & El-Masry, A. A. (2016b). Understanding consumer intention to participate in online travel community and effects on consumer intention to purchase travel online and WOM: An integration of innovation diffusion theory and TAM with trust. *Computers in Human Behavior*, *60*, 97–111. https://doi.org/10.1016/j.chb.2016.02.038

Agrawal, V., Shankar, R., & Gupta, A. (2023). Process innovation and legitimacy in the electric vehicle industry: Enhancing internal efficiencies and market credibility. *Journal of Business Research*, *140*, 1-11. https://doi.org/10.1016/j.jbusres.2021.12.014

Al-Adwan, A. S., Alrousan, M. K., Yaseen, H., Alkufahy, A. M., & Alsoud, M. (2022). Boosting online purchase intention in high-uncertainty-avoidance societies: A signaling theory approach. *Journal of Open Innovation Technology Market and Complexity*, *8*(3), 136. https://doi.org/10.3390/joitmc8030136

Al-Adwan, A., Hossain, M. S., & Gable, G. G. (2022). Innovation in electric vehicles and its impact on consumer purchase intentions. *Sustainability*, *14*(5), 2723. https://doi.org/10.3390/su14052723

Alanazi, A. (2023). Innovations in battery technology and their impact on the electric vehicle market: A comprehensive review. *Journal of Energy Storage*, *45*, 103885. https://doi.org/10.1016/j.est.2023.103885

Alexiou, K., & Wiggins, J. (2018). Legitimacy and purchase intention: A stakeholder perspective. *Journal of Business Research*, *92*, 102-112. https://doi.org/10.1016/j.jbusres.2018.07.014

Anand, G., Bansal, S., & Agarwal, A. (2013). The role of process innovation in enhancing firm legitimacy in emerging markets: Evidence from the electric vehicle sector. *International Journal of Operations & Production Management*, *33*(10), 1282-1303. https://doi.org/10.1108/IJOPM-12-2012-0449

Angkiriwang, R., Pujawan, I. N., & Santosa, B. (2014). Managing uncertainty through supply chain flexibility: Reactive vs. proactive approaches. *Production & Manufacturing Research*, *2*(1), 50–70. https://doi.org/10.1080/21693277.2014.882804

Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, *131*(4), 1593-1636. https://doi.org/10.1093/qje/qjw024

Bansal, P., & Clelland, I. (2004). Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment. *Academy of Management Journal*, *47*(1), 93-103. https://doi.org/10.2307/20159562

Bell, D. E. (1982). Regret in decision-making under uncertainty. *Operations Research*, *30*(5), 961–981. https://doi.org/10.1287/opre.30.5.961

Bergek, A., Mignon, I., & Hekkert, M.

(2013). Innovation systems and sustainability transitions: A multi-level perspective. *Research Policy*, *42*(7), 1083-1098. https://doi.org/10.1016/j.respol.2012.11.006

Bian, X., & Forsythe, S. (2012). Purchase intention for luxury brands: A cross cultural comparison. *Journal of Business Research*, *65*(10), 1443-1451. https://doi.org/10.1016/j.jbusres.2011.10.015

Blanco-González, A., Gómez-Urquiza, J. L., & Velázquez-González, M. (2023). The role of reputation and legitimacy in consumer decisions: Evidence from the automotive industry. *Journal of Consumer Research*, *50*(3), 576-591. https://doi.org/10.1086/709346

Block, F., & Keller, D. (2015). The state and the market: The impact of government policies on the legitimacy of electric vehicles. *Environmental Politics*, *24*(6), 896-916. https://doi.org/10.1080/09644016.2015.1090521

Bohnsack, R., Pinkse, J., & Rehfeldt, M. (2020). Innovation for legitimacy: Electric vehicle adoption and the role of innovation in the mobility revolution. *Journal of Business Venturing*, *35*(2), 105984. https://doi.org/10.1016/j.jbusvent.2019.105984

Buhmann, A., & Criado, A. (2023). Manufacturer reputation and consumer opinion: Key drivers of legitimacy in the electric vehicle market. *Journal of Business Ethics*, *170*, 253-267. https://doi.org/10.1007/s10551-023-05189-6

Bunduchi, R., Dube, M., & Young, M. (2022). The interplay of innovation and legitimacy in the electric vehicle sector. *Technovation*, *102*, 102217. https://doi.org/10.1016/j.technovation.2021.102217

Bunduchi, R., Smart, A. U., Crisan-Mitra, C., & Cooper, S. (2022). Legitimacy and innovation in social enterprises. *International Small Business Journal*, *41*(4), 371–400. https://doi.org/10.1177/02662426221102860

Carriero, A., Clark, T. E., & Marcellino, M. (2018). *Endogenous uncertainty* (FRB of Cleveland Working Paper No. 18-05). SSRN. https://doi.org/10.2139/ssrn.3152579

Chen, H., Chen, H. T., & Tian, X. X. (2022). The dual-process model of product information and habit in influencing consumers' purchase intention: The role of live streaming features. *Electronic Commerce Research And Applications*, *53*. https://doi.org/10.1016/j.elerap.2022.101150

Chen, L. H., Qie, K. X., Memon, H., & Yesuf, H. M. (2021). The empirical analysis of green innovation for fashion brands, perceived value and green purchase intention-mediating and moderating effects. *Sustainability*, *13*(8). https://doi.org/10.3390/su13084238

Chin, W. W., Marcolin, B. L., & Newsted, P. R. (2003). A partial least squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and an electronic-mail emotion/adoption study. *Information Systems Research*, *14*(2), 189–217. https://doi.org/10.1287/isre.14.2.189.16018

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, *35*(1), 128-152. https://doi.org/10.2307/2393553

Corradi, C., Sica, E., & Morone, P. (2023). *What drives electric vehicle adoption*? Insights from a systematic review.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects

of determinants and moderators. *Academy of Management Journal*, *34*(3), 555-590. https://doi.org/10.5465/256406

Dantzig, G. B. (1955). Linear programming under uncertainty. *Management Science*, *1*(3–4), 197–206. https://doi.org/10.1287/mnsc.1.3-4.197

Deegan, C. (2002). The legitimizing effect of social and environmental disclosures: A theoretical foundation. *Accounting, Auditing & Accountability Journal*, *15*(3), 282-311. https://doi.org/10.1108/09513570210435852

Del-Castillo-Feito, C., Sánchez, J. L., & Martínez-Ruiz, M. P. (2020). Legitimacy and reputation in consumer purchase decisions: Insights from electric vehicle adoption. *Sustainability*, *12*(12), 4963. https://doi.org/10.3390/su12124963

Diamantopoulos, A., & Siguaw, J. A. (2006). Formative indicators in organizational research: A critical review. *Journal of Business Research*, *59*(2), 166-173. https://doi.org/10.1016/j.jbusres.2005.10.007

Díez-Martín, F., Blanco-González, A., & Miotto, G. (2022). The impact of state legitimacy on entrepreneurial activity. *International Entrepreneurship and Management Journal*, *18*(2), 935–955. https://doi.org/10.1007/s11365-020-00724-4

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48*(2), 147-160. https://doi.org/10.2307/2095101

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific Sociological Review*, *18*(1), 122-136. https://doi.org/10.2307/1388226

Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, *17*(3), 313–327. https://doi.org/10.2307/2392145

Economic Policy Uncertainty (EPU). (s.f.). https://www.policyuncertainty.com/index.html

Eurostat. (2023). *Eurostat_PI*. https://ec.europa.eu/eurostat/cache/metadata/en/ei_bcs_esms.htm

Farida, D., & Setiawan, M. (2022b). Innovation and firm performance: The role of organizational learning in Indonesian SMEs. *Journal of Asian Finance, Economics, and Business*, *9*(12), 1185-1193. https://doi.org/10.13106/jafeb.2022.vol9.no12.1185

Farida, I., & Setiawan, M. (2022a). Technological innovation and market legitimacy: The case of electric vehicle adoption in Southeast Asia. *Sustainability*, *14*(11), 6780. https://doi.org/10.3390/su14116780

Featherman, M., Jia, S. J., Califf, C. B., & Hajli, N. (2021). The impact of new technologies on consumers beliefs: Reducing the perceived risks of electric vehicle adoption. *Technological Forecasting and Social Change*, *169*, 120847. https://doi.org/10.1016/j.techfore.2021.120847

Fernández-Portillo, A., Almodóvar-González, M., & Hernández-Mogollón, R. (2020). Impact of ICT development on economic growth. A study of OECD European union countries. *Technology in Society*, *63*, 101420. https://doi.org/10.1016/j.techsoc.2020.101420

Freeman, R. E. (2010). *Strategic management: A stakeholder approach*. Cambridge University Press.

Geissdoerfer, M., Savaget, P., Bocken, N. M. P., & Hultink, E. J. (2018). The circular economy – A new sustainability paradigm? *Journal of Cleaner Production*, *143*, 757-768. https://doi.org/10.1016/j.jclepro.2016.12.048

Gray, R. (1996). Social and environmental disclosure and corporate social performance: A review of the literature. *Accounting, Auditing & Accountability Journal*, *9*(1), 47-77. https://doi.org/10.1108/09513579610109931

Griffin, M. A., & Grote, G. (2020). When is more uncertainty better? A model of uncertainty regulation and effectiveness. *Academy of Management Review*, *45*(4), 745–765. https://doi.org/10.5465/amr.2018.0271

Guo, H., Zhang, S., & Xue, S. (2019). Innovation and legitimacy: A comparative study in the electric vehicle market. *Technological Forecasting and Social Change*, *146*, 123-132. https://doi.org/10.1016/j.techfore.2019.05.010

Guo, J., Li, Y., Xu, Y. J., & Zeng, K. (2021). How live streaming features impact consumers' purchase intention in the context of cross-border e-commerce? A research based on SOR theory. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.767876

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, *19*(2), 139-152. https://doi.org/10.2753/MTP1069-6679190202

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2014). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, *47*(6), 203-210. https://doi.org/10.1016/j.lrp.2014.01.002

Han, J., Zhang, L., & Li, L. (2022). Innovation and market legitimacy: The role of electric vehicles in sustainable mobility. *Technological Forecasting and Social Change*, *172*, 121030. https://doi.org/10.1016/j.techfore.2021.121030

Hermundsdottir, F., & Aspelund, A. (2021). Sustainability innovations and firm competitiveness: A review. *Journal of Cleaner Production*, *280*, 124715. https://doi.org/10.1016/j.jclepro.2020.124715

Higueras-Castillo, E., García-Sánchez, I. M., & Rodríguez-Ariza, L. (2021a). Innovation and sustainability: A systematic review. *Sustainability*, *13*(15), 8196. https://doi.org/10.3390/su13158196

Higueras-Castillo, E., Guillén, A., Herrera, L.-J., & Liébana-Cabanillas, F. (2021b). Adoption of electric vehicles: Which factors are really important? *International Journal of Sustainable Transportation*, *15*(10), 799–813. https://doi.org/10.1080/15568318.2020.1818330

Höflinger, F., Ketterer, L., & Scholz, M. (2018). Innovation and legitimacy in the automotive industry: Exploring the relationship between technological advancements and social acceptance. *Technological Forecasting and Social Change*, *130*, 76-87. https://doi.org/10.1016/j.techfore.2017.08.020

Hofman, P. S., Blome, C., Schleper, M. C., & Subramanian, N. (2020). Supply chain collaboration and eco-innovations: An institutional perspective from China. *Business Strategy and the Environment*, *29*(6), 2734–2754. https://doi.org/10.1002/bse.2532

Hund, A., Hanel, P., & Biedenkapp, M. (2021). The role of ICT adoption in fostering innovation in small

and medium-sized enterprises. *Technological Forecasting and Social Change*, *167*, 120732. https://doi.org/10.1016/j.techfore.2021.120732

Hwang, J. (2019). Managing the innovation legitimacy of the sharing economy. *International Journal of Quality Innovation*, *5*(1), 1–21. https://doi.org/10.1186/s40887-018-0026-0

Innovation Scoreboard. (s.f.). https://projects.research-and-innovation.ec.europa.eu/en/statistics/performance-indicators/european-innovation-scoreboard/eis

Islam, T., & Hussain, M. (2023). How consumer uncertainty intervene country of origin image and consumer purchase intention? The moderating role of brand image. *International Journal of Emerging Markets*, *18*(11), 5049–5067. https://doi.org/10.1108/IJOEM-08-2021-1194

Juntunen, J., Kallio, J., & Tuominen, P. (2019). The role of innovation and state policies in enhancing legitimacy: A case study of electric vehicle adoption. *Energy Policy*, *132*, 550-559. https://doi.org/10.1016/j.enpol.2019.06.024

Khan, Y., Hameed, I., & Akram, U. (2023). What drives attitude, purchase intention and consumer buying behavior toward organic food? A self-determination theory and theory of planned behavior perspective. *British Food Journal*, *125*(7), 2572–2587. https://doi.org/10.1108/BFJ-07-2022-0564

Kim, S., Lee, H., & Lee, W. (2008). State legitimacy and purchase intentions: The role of perceived legality and consumer trust.

Kivimaa, P., Boon, W. P., & Stegmaier, P. (2021). Innovation in the energy sector: Business model innovation for sustainability. *Environmental Innovation and Societal Transitions*, *37*, 255-269. https://doi.org/10.1016/j.eist.2020.09.002

Krishnan, V. V., & Koshy, B. I. (2021). Evaluating the factors influencing purchase intention of electric vehicles in households owning conventional vehicles. *Case Studies on Transport Policy*, *9*(3), 1122–1129. https://doi.org/10.1016/j.cstp.2021.05.013

LaMonaca, S., & Ryan, L. (2022). The state of play in electric vehicle charging services – A review of infrastructure provision, players, and policies. *Renewable and Sustainable Energy Reviews*, *154*, 111733. https://doi.org/10.1016/j.rser.2021.111733

Lashari, Z. A., Ko, J., & Jang, J. (2021). Consumers' intention to purchase electric vehicles: Influences of user attitude and perception. *Sustainability*, *13*(12). https://doi.org/10.3390/su13126778

Li, J., Guo, F., Xu, J., & Yu, Z. (2022). What influences consumers' intention to purchase innovative products: Evidence from China. *Frontiers in Psychology*, *13*, 838244. https://doi.org/10.3389/fpsyg.2022.838244

Li, L. X., Wang, Z. Q., & Wang, Q. (2020). Do policy mix characteristics matter for electric vehicle adoption? A survey-based exploration. *Transportation Research Part D: Transport and Environment*, *87*. https://doi.org/10.1016/j.trd.2020.102488

Li, L. X., Wang, Z. Q., Li, Y. N., & Liao, A. N. (2021b). Impacts of consumer innovativeness on the intention to purchase sustainable products. *Sustainable Production and Consumption*, *27*, 774–786. https://doi.org/10.1016/j.spc.2021.02.002

Li, X., Li, J., & Yu, C. (2021a). The impact of innovation on purchase intentions: Evidence from the

automotive industry. *Technological Forecasting and Social Change*, *167*, 120721. https://doi.org/10.1016/j.techfore.2021.120721

Liu, Y., Li, Y., & Wang, X. (2022). Battery efficiency and sustainability in electric vehicles: Technological advancements and future perspectives. *Renewable and Sustainable Energy Reviews*, *162*, 112446. https://doi.org/10.1016/j.rser.2022.112446

Lu, B. J., & Chen, Z. J. (2021). Live streaming commerce and consumers' purchase intention: An uncertainty reduction perspective. *Information & Management*, *58*(7). https://doi.org/10.1016/j.im.2021.103509

Lu, Y. (2015). Legitimacy and its role in organizational survival: A systematic review. *International Journal of Management Reviews*, *17*(2), 131-150. https://doi.org/10.1111/ijmr.12058

Lusch, R. F. (2015). The evolving role of innovation in consumer behavior: Insights from service-dominant logic. *Journal of the Academy of Marketing Science*, *43*(1), 13-20. https://doi.org/10.1007/s11747-014-0397-7

Mascarenhas, B. (1982). Coping with uncertainty in international business. *Journal of International Business Studies*, *13*(2), 87–98. https://doi.org/10.1057/palgrave.jibs.8490552

McCraw, T. K. (2007). *Prophet of innovation: Joseph Schumpeter and creative destruction*. Harvard University Press.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, *83*(2), 340-363. https://doi.org/10.1086/226550

Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *The Academy of Management Review*, *12*(1), 133–143. https://doi.org/10.2307/257999

Nilsson, M., & Nykvist, B. (2016). The role of government policy in promoting electric vehicle adoption: A global review. *Environmental Science & Policy*, *65*, 123-133. https://doi.org/10.1016/j.envsci.2016.07.008

Nuttavuthisit, K., & Thøgersen, J. (2017). The role of ethical justifications in consumer purchase decisions. *Journal of Business Ethics*, *141*(4), 773-786. https://doi.org/10.1007/s10551-015-2730-x

Nylén, D., & Holmström, J. (2015). Digital innovation strategy: A framework for aligning innovation strategy and digital transformation. *Research-Technology Management*, *58*(5), 29-37. https://doi.org/10.1080/08956308.2015.1070086

Odou, P., Schill, M., Chaney, D., & Roznowicz, C. (2023). Store support for local producers as a driver of legitimacy and purchase intentions: A moderated mediation model. *Journal of Cleaner Production*, *394*. https://doi.org/10.1016/j.jclepro.2023.136361

Omri, A. (2020). Innovation and sustainable technologies: Drivers of adoption and diffusion. *Technological Forecasting and Social Change*, *161*, 120281. https://doi.org/10.1016/j.techfore.2020.120281

Parray, M. A., Jabeen, S., & Iqbal, N. (2023). The role of reputation and legitimacy in shaping consumer perceptions and purchasing decisions. *Journal of Business Research*, *143*, 317-326. https://doi.org/10.1016/j.jbusres.2022.11.016

Pavlou, P. A., Liang, H., & Xue, Y. (2007). Understanding and mitigating uncertainty in online exchange relationships: A principal-agent perspective. *MIS Quarterly*, *31*(1), 105–136. https://doi.org/10.2307/25148783

Peña-García, N., Gil-Saura, I., Rodríguez-Orejuela, A., & Siqueira-Junior, J. R. (2020). Purchase intention and purchase behavior online: A cross-cultural approach. *Heliyon*, *6*(6), e04284. https://doi.org/10.1016/j.heliyon.2020.e04284

Peters, A., McEwen, B. S., & Friston, K. (2017). Uncertainty and stress: Why it causes diseases and how it is mastered by the brain. *Progress in Neurobiology*, *156*, 164–188. https://doi.org/10.1016/j.pneurobio.2017.05.004

Qu, T., & Mardani, A. (2023). Consumer adoption of electric vehicles: The role of innovation in meeting consumer needs in European countries. *Journal of Cleaner Production*, *295*, 126340. https://doi.org/10.1016/j.jclepro.2021.126340

Rezvani, Z., Jansson, J., & Knez, M. (2015). Consumer adoption of electric vehicles: The role of innovation and market dynamics. *Environmental Innovation and Societal Transitions*, *17*, 82-95. https://doi.org/10.1016/j.eist.2015.05.001

Rogers, E. M., Singhal, A., & Quinlan, M. M. (2014). *Diffusion of innovations* (5th ed.). Free Press.

Salari, S. (2022). Consumer perceptions and the impact of manufacturer reputation on the legitimacy of electric vehicles. *Environmental Economics and Policy Studies*, *24*(2), 397-412. https://doi.org/10.1007/s10018-021-00352-0

Sanguesa, S., Gallego, D., & Navarro, J. (2021). Legitimacy and sustainability: Key factors for the adoption of electric vehicles. *Journal of Cleaner Production*, *315*, 128-138. https://doi.org/10.1016/j.jclepro.2021.128138

Saputra, M. C., & Andajani, E. (2023). Analysis of factors influencing intention to adopt battery electric vehicle in Indonesia. https://adi-journal.org/index.php/ajri/issue/view/34

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. En Handbook of market research (pp. 587–632). Springer. https://doi.org/10.1007/978-3-319-57413-4_15

Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credits, interest, and the business cycle*. Transaction Publishers.

Soewarno, N., Kim, H., & Lee, H. (2019). The role of innovation in enhancing legitimacy: Evidence from the electric vehicle market. *Innovation*, *21*(3), 312-330. https://doi.org/10.1080/14479338.2019.1571960

Stanaland, A. J. S., Lwin, M., & Murillo, J. (2011). The influence of corporate social responsibility on consumer perceptions: The role of reputation and legitimacy. *Journal of Business Ethics*, *104*(1), 1-18. https://doi.org/10.1007/s10551-011-0871-4

State legitimacy. (s/f). Fragilestatesindex.org. https://fragilestatesindex.org/indicators/p1/

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, *20*(3), 571-610. https://doi.org/10.5465/amr.1995.9508080331

Sunshine, J., & Tyler, T. R. (2003). The Role of Procedural Justice

and Legitimacy in Shaping Public Support for Policing. *Law & Society Review, 37*(3), 513–548. https://doi.org/10.1111/1540-5893.3703002

Taeuscher, K., Bouncken, R. B., & Pesch, R. (2021). Innovation and legitimacy in digital platforms: The role of resource mobilization. *Journal of Business Research*, *128*, 427-436. https://doi.org/10.1016/j.jbusres.2021.02.053

Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing, and public policy. *Research Policy*, *15*(6), 285-305. https://doi.org/10.1016/0048-7333(86)90027-2

Teng, C. C., & Lu, C. H. (2016). Organic food consumption in Taiwan: Motives, involvement, and purchase intention under the moderating role of uncertainty. *Appetite*, *105*, 95–105. https://doi.org/10.1016/j.appet.2016.05.006

Tu, J. C., & Yang, C. (2019). Key factors influencing consumers' purchase of electric vehicles. *Sustainability*, *11*(14), 3863. https://doi.org/10.3390/SU11143863

Unterluggauer, T., Rich, J., Andersen, P. B., & Hashemi, S. (2022). Electric vehicle charging infrastructure planning for integrated transportation and power distribution networks: A review. *ETransportation*, *12*, 100163. https://doi.org/10.1016/j.etran.2022.100163

Van de Ven, A. H. (2008). Ethical justifications in business decision-making: A conceptual framework. *Business Ethics Quarterly*, *18*(2), 167-196. https://doi.org/10.5840/beq200818213

Whitecross, W. M., & Smithson, M. (2023). Open or opposed to unknowns: How do curious people think and feel about uncertainty? *Personality and Individual Differences*, *209*, 112210.

Williams, L. J., Vandenberg, R. J., & Edwards, J. R. (2009). 12 structural equation modeling in management research: A guide for improved analysis. *Academy of Management Annals*, *3*(1), 543–604. https://doi.org/10.1080/19416520903065683

Wilson, E. (2012). Ethical marketing and consumer behavior. *Journal of Consumer Marketing*, *29*(7), 553-564. https://doi.org/10.1108/07363761211281331

Wolf, C. (2022). Diffusion of innovations in digital transformation: Challenges and opportunities. *Technological Forecasting and Social Change*, *174*, 121192. https://doi.org/10.1016/j.techfore.2021.121192

Wu, Y., & Huang, H. (2023). Influence of perceived value on consumers' continuous purchase intention in live-streaming e-commerce—Mediated by consumer trust. *Sustainability*, *15*(5), 4432. https://doi.org/10.3390/su15054432

Ye, F., Kang, W., Li, L., & Wang, Z. (2021). Why do consumers choose to buy electric vehicles? A paired data analysis of purchase intention configurations. *Transportation Research Part A: Policy and Practice*, *147*, 14–27. https://doi.org/10.1016/j.tra.2021.02.014

Yoon, S., McClean, S. T., Chawla, N., Kim, J. K., Koopman, J., Rosen, C. C., Trougakos, J. P., & McCarthy, J. M. (2021). Working through an 'infodemic': The impact of COVID-19 news consumption on employee uncertainty and work behaviors. *Journal of Applied Psychology*, *106*(4), 501–517. https://doi.org/10.1037/apl0000913

Zameer, H., & Yasmeen, H. (2022).

Green innovation and environmental awareness driven green purchase intentions. *Marketing Intelligence & Planning*, *40*(5), 624–638. https://doi.org/10.1108/MIP-12-2021-0457

Zhao, Y., Liao, Q., & Zhang, H. (2016). Business model innovation and legitimacy in emerging industries: The case of electric vehicles. *Technovation*, *50-51*, 4-14. https://doi.org/10.1016/j.technovation.2016.03.001

Zhou, M., Govindan, K., Xie, X., & Yan, L. (2021). How to drive green innovation in China's mining enterprises? Under the perspective of environmental legitimacy and green absorptive capacity. *Resources Policy*, *72*, 102038. https://doi.org/10.1016/j.resourpol.2021.102038

Zimmerman, M. A., & Zeitz, G. J. (2002). Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, *27*(3), 414-431. https://doi.org/10.5465/amr.2002.7389934