Perceptions of Generation Z regarding the implementation of AI virtual assistants in organisations and personal environments determining factors in the adoption of electric vehicles: An analysis of consumer preferences and perceptions

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Abstract: *This paper examines the perceptions and attitudes of Generation Z towards the implementation of AI virtual assistants Currently, electric vehicles are becoming an increasingly prominent topic in public discussions, covering economic, technological, and environmental aspects. The electric vehicle market is in an intense stage of development, characterized by favorable political changes, significant technological advancements, improvements in charging infrastructure, and extensive concerns regarding environmental impact. To expand the adoption of electric vehicles, it is essential to analyze and understand consumer perception and attitude. This refers to the beliefs, thoughts, and opinions of individuals. The objective of this study is to identify and analyze the determinants of electric vehicle adoption by consumers, as well as to evaluate the influences these factors have on the automotive industry in the context of the transition to electric vehicles. The quantitative analysis was conducted through a survey addressed to individuals interested in electric vehicles to understand how they perceive and relate to this transition in the automotive industry. The data obtained was processed using SPSS, providing a clear perspective on the evolution of consumer preferences and perceptions over time. The results indicate that price, maintenance costs, vehicle autonomy, and environmental impact are crucial factors influencing the decision to purchase electric vehicles. These findings can guide marketing strategies and public policies to encourage widespread adoption of electric vehicles.*

Key words: Electric vehicles, vehicle autonomy, customer perception, environment protection.

JEL: Q55, M31, L62, C83.

1. Introduction

Concerns regarding climate change and its impacts have become a major global priority. With a significant share, the transport sector accounts for approximately 24% of direct CO_2 emissions resulting from the combustion of fossil fuels (IEA, 2020). Accordingly, in line with global concerns, the European Commission has set ambitious targets to be achieved by 2030 under the "Energy Strategy," including a reduction of at least 40% in greenhouse gas emissions compared to 1990 levels. Moreover, the 2050 target is to transform the entire European Union into a net-zero greenhouse gas emission economy (European Commission, 2019). Interest in environmental protection and the global recession have been factors that favoured the development of the green economy. Furthermore, investment projects implemented within organisations are increasingly drawing attention to the concept of sustainability (Minciu, et al., 2021). In this context, in Europe, digital transformation has been accelerated both by the pandemic and by new technological advancements such as artificial intelligence, robotics, cloud computing, and blockchain (Veith, et al., 2021). Additionally, depending on the evolution of the sector in which an organisation operates, adaptation and change are key elements ensuring development and survival (Minciu, Dobrea, & Loghin, 2022).

As environmental challenges have increased, the automotive industry has reconsidered the traditional approach to vehicle mobility in response to these changes. Among the emerging trends, the shift from conventional internal combustion engines to electric vehicles has attracted considerable attention among consumers (Degirmenci & Breitner, 2017). The adoption of electric vehicles is perceived as a promising direction to address environmental concerns in the transport sector (Wang, et al., 2017).

In the context of governmental efforts to facilitate the adoption of electric vehicles through programmes and promotional incentives/initiatives, the market penetration of electric vehicles in Romania remains modest but increasing compared to 2022, accounting for 10.6% of all registered cars in 2023 (Acea, 2024). To consolidate the market share of electric vehicles, it is essential to analyse and understand consumer perceptions and attitudes. Therefore, the present study aimed to test the following hypotheses:

Hypothesis 1: Electric vehicles have become part of an emerging global industry, establishing a new trend for the automotive sector.

Hypothesis 2: The existence of extended driving range for electric vehicles, along with improved infrastructure, can suggest a higher likelihood of adopting such a vehicle.

Hypothesis 3: The positive environmental impact and the reduction of noise pollution influence consumers' decisions to purchase electric vehicles.

Hypothesis 4: The purchase price and maintenance costs of electric vehicles are determining factors in consumers' purchasing decisions.

2. Literature review

The review of the specialised literature aims to provide a detailed analysis of the concept of the electric vehicle, as well as the challenges associated with it. To date, humanity has experienced three industrial revolutions, the first occurring at the beginning of the 17th century, triggered by the invention of the steam engine (Veith, 2018). Thus, the transport sector has represented and continues to represent an essential element of contemporary social structure, acting as a key factor in driving economic progress and creating employment opportunities (Krishna, 2021). Consequently, electric vehicles have emerged as an essential support for society, offering a viable alternative to conventional internal combustion engine vehicles. Due to market conditions, companies from various sectors are seeking to consolidate their market position (Matei & Veith, 2023). At present, the electric vehicle market offers a diverse range, including hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), as well as fully battery electric vehicles (BEVs).

Hybrid electric vehicles (HEVs) are powered by both a conventional internal combustion engine and an electric propulsion system. The battery is considerably smaller and is used exclusively to power the electric motor. Battery charging does not rely on an external electricity source but rather on capturing energy through regenerative braking, which would otherwise be lost in vehicles with solely thermal propulsion.

Plug-in hybrid electric vehicles (PHEVs) are similar to the hybrids mentioned above, featuring a propulsion system that includes both an internal combustion engine and an electric motor. The main difference lies in the extended battery capacity, which can also be charged from external electricity sources (Samaras & Meisterling, 2008). Although PHEVs have a larger battery and a more powerful motor, these types of vehicles allow for driving solely on the electric motor at high speeds, but only for short distances (Clement-Nyns, et al., 2010).

Battery electric vehicles (BEVs) operate entirely using a propulsion unit consisting of one or more electric motors, powered by the energy stored in their batteries. These vehicles do not rely on a conventional internal combustion engine and require an external electricity source to recharge the battery. Similar to other types of vehicles, BEVs can also recharge their batteries through a process known as "regenerative braking," in which the residual energy released during braking is converted into electricity and then returned to the battery for later use (Zhang, et al., 2012).

Due to their simplified construction, electric vehicles provide increased user comfort. During operation, they do not generate greenhouse gas emissions and are characterised by a high level of quietness, which benefits the environment. Moreover, thanks to electric propulsion, electric vehicles deliver instant torque, offering immediate acceleration.

The initial purchase cost is a major obstacle for consumers, being one of the primary reasons for hesitating to adopt an electric vehicle. The continuous development of new technologies in the manufacturing of electric vehicles, alongside ongoing efforts to increase driving range, contributes to the higher final selling price of such vehicles (Noel, et al., 2020).

Concerns related to the driving range of electric vehicles represent a major issue for consumers. This barrier is defined as the psychological fear or anxiety caused by the limited range of

an electric vehicle (Noel, et al., 2019). Limited driving range, combined with an underdeveloped charging network, increases consumer apprehension regarding the availability and usefulness of such vehicles, particularly for long-distance travel, especially outside urban areas (Huang, et al., 2016). Another aspect to consider is the time required to charge these vehicles. Although considered a less severe issue, this factor represents another barrier to the adoption of electric vehicles. Consumers perceive charging time as inconvenient compared to the refuelling process of conventional vehicles, due to the difficulty of quickly recharging the battery (Brückmann, et al., 2021).

The transition to electric vehicles and technological advancements are reshaping the automotive industry. They mark a fundamental change in the perception of mobility, bringing unprecedented efficiency and connectivity to the automotive sector (Athanasopoulou, et al., 2019). Each technological breakthrough opens a new stage in automotive history, resulting in cleaner and more efficient mobility.

Renault

With a vast global presence, Renault Group continues to strengthen its position in the automotive industry, focusing on innovation and sustainability. The Group, operating in over 130 countries, with over 106,000 employees and 2.235 million vehicles sold in 2023, aims to develop mobility that brings people closer together. In the electrified vehicle segment, Renault ranked third in Europe, mainly due to the success of the Renault Megane E-Tech Electric model, holding a market share of 2.2%. Furthermore, sales increased significantly by 19.7% compared to 2022 (Renault Group, 2024). The Group has remarkable expertise in electrification, forming partnerships with Mitsubishi Motors and Nissan. It is engaged in an extensive transformation process that includes technology and service development, as well as the launch of a new range of competitive and well-balanced electrified vehicles (Sandu, 2022).

Unveiled in January 2021, "Renaulution" is a strategic plan designed to change Renault Group's direction, shifting from a volume-oriented strategy to one focused on sustainability, quality, and innovation (Renault Group, n.d.). A key element is the valorisation of the group's industrial assets alongside strengthening its leadership in the European electric vehicle segment (Renault Group, n.d.). The company aims to enhance efficiency, speed, and performance in engineering and production processes, benefiting from the technological expertise of the Renault-Nissan-Mitsubishi alliance to respond to market demands more quickly and effectively. Special attention is also given to improving efficiency in design and production to reduce fixed costs and optimise variable costs globally (Renault Group, 2021).

Within the "Renaulution" plan, Renault aims to transform into a "next-gen" automotive company by creating five independent entities, each with a clearly defined identity and mission, essential for adapting to the future challenges of the automotive industry. These entities include: Horse / Power, Ampere, Alpine, Mobilize, and THE FUTURE IS NEUTRAL (Renault Group, 2022b).

Ampere, the first European "pure player" specialising in electric vehicle and software development, is an autonomous entity within Renault Group responsible for the transition to electric mobility in Europe. It plays a crucial role in the group's transformation, focusing on the development, manufacturing, and marketing of electric vehicles. Based in France, Ampere has 11,000

employees, 35% of whom are engineers. Its goal is to democratise electric vehicles in Europe, offering cars accessible to the general public.

While the electric vehicle market is experiencing significant growth, the company aims to become the European leader in this automotive segment. Through innovation and the commitment of a dedicated team, Ampere seeks to significantly expand its electric vehicle portfolio, providing competitive options for a wide range of customers. By 2030, Ampere will offer both advanced technology and the necessary infrastructure to transform Renault into a fully electric brand in Europe. In addition, Ampere will support Renault Group's objective of achieving carbon neutrality in Europe by 2040 and globally by 2050. The company is committed to ambitious goals for electric vehicle production and sustainability. Its primary target is to produce 1 million units by 2031, alongside a secondary goal of building 480,000 electric vehicles annually starting in 2025. Ampere demonstrates a strong commitment to the future of electromobility.

ElectriCity, with its multiple locations in Douai, Maubeuge, and Ruitz, along with the Cléon plant, represents one of the largest and most competitive electric vehicle hubs in Europe (Renault Group, 2022a). In the near future, the plant aims to produce vehicles at the highest standards, in a reduced timeframe of up to 10 hours per unit. ElectriCity provides a unique local ecosystem, concentrating approximately 75% of suppliers within a 300 km radius, contributing to cost optimisation and carbon footprint reduction. Another key element is the European electric vehicle value chain. Ampere engages in strategic collaborations with prominent partners such as Vulcan, Valeo, Whylot, and Vitesco Technologies, among others. This partnership aims to leverage top industry know-how, ensure sustainable supply, and maintain clarity and control over costs and performance (Renault Group, 2022b).

Lastly, another essential aspect is the revolutionary SDV (Software-Defined Vehicle) technology, in partnership with Qualcomm Technologies and Google, which enables continuous vehicle updates throughout its lifecycle. These partnerships will allow Renault Group to reduce costs, enhance efficiency, flexibility, and development speed, while providing users with timely experiences thanks to ongoing software innovations and updates.

BMW AG

BMW Group is one of the most prominent automotive companies in Germany, recognised as a globally successful car manufacturer. Its portfolio includes three prestigious brands: BMW, Mini, and Rolls-Royce, each designed to address a distinct market segment, thus contributing to the group's market expansion. With over 30 production plants worldwide, the group benefits from an extensive production network, complemented by a global sales network spanning over 140 countries. Long-term strategic thinking and social responsibility define BMW Group's upward trajectory. From the outset, the company has followed a clear path, focusing on sustainability and efficient resource management, from the supply chain and production to the end use of its products.

Economically, the year 2023 marked a remarkable success for BMW Group, with significant sales growth. A total of 2,555,341 vehicles were sold worldwide, reflecting a 6.5% increase compared to the previous year and reaching a new internal record. Electric vehicles contributed significantly to this success, representing 15% of total sales. Specifically, 376,183 units were sold

globally, showing an impressive 74.4% increase over the previous year. These figures indicate rising consumer interest in electric vehicles, confirming the upward trend towards sustainable mobility and future technologies (BMW Group, 2024a).

Seventy-five years after the launch of its first internal combustion vehicle, the iconic Munich plant is preparing to end the production of conventional engines, marking the beginning of a new era. In 2026, the plant will start parallel production of the "Neue Klasse" electric sedan, and by the end of 2027, production will be exclusively electric. This milestone will make the Munich plant the first BMW Group production site to fully transition to electric mobility. To achieve this transition, the company will invest approximately €650 million in adapting and modernising the production line (BMW Group, 2024b).

3. Research methodology

Any quantitative empirical analysis involves data collection through observation, questionnaires, experimentation, and/or interviews with the aim of generating insights, a process that requires converting the collected data into numerical values (Weathington, et al., 2012). For the purposes of this empirical quantitative research, a questionnaire was selected as the primary tool, which must be designed in a logical and attractive manner for respondents, enabling them to answer all questions with ease (Chelcea, 2007).

The questionnaire used in this research was created online using the "Google Forms" platform and was distributed between November and December 2023. To conduct this research, the questionnaire was sent to a broad audience via social media networks as well as by email. The only eligibility criterion for participation was that respondents had to be adults, i.e., over 18 years of age. Additionally, participants were required to provide consent by completing the "Informed Consent Form" before taking part in the questionnaire.

Mandatory questions, along with the restriction of one response per variable, ensured the consistency and validity of the collected data, preventing duplication and maintaining the integrity of the dataset. The questionnaire consisted of 20 questions organised into three distinct sections to analyse various aspects related to consumer perception and attitudes towards electric vehicles. Before completing the questionnaire, respondents were informed about the purpose of the research, the guarantee of anonymity for their responses, and were encouraged to answer honestly and thoughtfully. Above all, participation in the survey was voluntary, giving participants the freedom to decide on their involvement in the study.

The first section of the questionnaire aimed to collect information on the respondents' profiles. This included questions about age, gender, area of residence, and occupational status. The second section focused on respondents' personal beliefs about electric vehicles, asking participants to evaluate the importance of various aspects such as driving range, infrastructure and charging process, purchase price, and the current state of electric vehicles. The final section required participants to express their attitude towards electric vehicles. Questions addressed their level of interest in purchasing an electric vehicle, the preferred price range for acquisition, the ideal driving range, as well as the selection of key features considered important.

All questionnaire items were closed-ended, allowing for rapid data processing. This differs from the use of open-ended questions, which require more complex subsequent grouping and standardisation (Krausz Septimiu & Stegar Irinel, 2007). For many questions, a Likert scale was employed, where "one" represented total disagreement, and "five" indicated total agreement. Likert scales are widely used research tools, consisting of statements through which participants respond based on their perceived level of agreement or disagreement. Through these statements, respondents express their perceptions and attitudes regarding the topic under investigation. These values are subsequently analysed to assess both individual perception and that of the entire selected sample (Sreejesh, et al., 2014).

From the total of 412 responses collected, a clear profile of the participants in the study emerges. With an overwhelming majority of 96.84%, young adults aged 18–24 constitute the primary target group of the research. Additionally, the analysis reveals that 61.9% of respondents were female, representing a significant portion of the sample. Moreover, 72.08% came from urban areas, indicating the heightened interest in electric vehicles in densely populated regions. From an occupational perspective, most respondents were university students from the University of Bucharest, accounting for 85.4% of the total sample. Furthermore, participation also included other respondent categories from diverse social and professional backgrounds, including employees from both the private and public sectors, providing a more diversified perspective on the research topic.

In terms of analysing consumer perception and attitudes towards electric vehicles, the chosen research method was a mixed approach, combining primary empirical research with secondary research, offering a comprehensive perspective on the challenges and opportunities associated with electric vehicle adoption.

4. Results and discussions

The diversity of opinions among Generation Z has a significant impact on the future development of the automotive industry and the adoption of electric vehicles. Generation Z is characterised by openness towards innovation and sustainable technologies, which can make electric vehicles an attractive option for this age group. In the purchasing process, young people are influenced by multiple economic, technical, and environmental aspects, considering these to be important criteria in making such a decision (Wulandari, 2023). According to the specialised literature, consumers are more likely to buy from a brand that reflects their personal values and beliefs (Mitchell & Olson, 1981).

The first notable aspect is the purchase price, highlighted by 63.85% of respondents. This underscores the importance consumers attach to the initial cost of electric vehicles and the need for them to remain competitive compared to conventional fossil-fuel alternatives. Furthermore, 51.7% of respondents emphasised low maintenance costs as an essential factor in their decision to purchase an electric vehicle. By reducing the number of mechanical components involved in the functioning of a conventional vehicle, electric vehicles benefit from a simplified structure, with a lower tendency to wear. This results in reduced maintenance costs compared to traditional

internal combustion vehicles (Faria, et al., 2013). Lastly, over 45% of respondents highlighted the importance of monetary incentives (reduced taxes) as well as non-monetary incentives (such as free parking in cities) in the purchase decision process.

Continuing the analysis, aspects such as performance, design, and range are key factors in the purchasing decision for consumers. These characteristics are vital for electric vehicles due to their direct impact on the user experience regarding efficiency and effectiveness. Performance, noted by 50% of respondents, is influenced by the technological progress of these vehicles. This progress is driven by the immediate and precise torque delivered by electric motors, which contributes to good acceleration and provides a dynamic driving experience (Hori, 2009).

With a proportion of 46.11%, design represents another essential aspect for consumers when considering the purchase of electric vehicles. Design provides not only an aesthetic appeal but also has a significant impact on functionality. A crucial element of design is aerodynamics, which directly influences the vehicle's driving range. A lower drag coefficient helps reduce air resistance, thereby increasing the distance travelled per single battery charge (Li & Zhu, 2019).

A significant 44.66% of respondents consider driving range an important aspect in the decision to purchase an electric vehicle. Consumers are willing to pay more for features such as extended range, shorter charging time, high performance, and reduced emissions (Hidrue, et al., 2011).

Price, maintenance cost, incentives, performance, design, and driving range are not the only aspects consumers consider when intending to purchase an electric vehicle. The transition to electrification is perceived as a promising strategy to address environmental challenges, particularly in urban contexts. Compared to conventional alternatives, electric vehicles have the potential to significantly reduce both pollution and noise levels. In this research, 38.35% of respondents highlighted the environmental impact as an important factor in their decision to purchase an electric vehicle.

The factor analysis included 20 variables, based on the responses of all 412 participants. If any variable had shown inadequate or statistically irrelevant results, the applicability of the factor analysis would have been questioned. Therefore, the careful selection and inclusion of variables were essential steps in ensuring the validity and reliability of the results.

After verifying the correlations between variables, the first stage consisted of performing the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test. According to KMO, a value of 0.5 is considered the minimum threshold for continuing with factor analysis (Kaiser, 1974). The obtained value of 0.802 indicates an exceptionally reliable dataset. The method used for extracting communalities was Principal Component Analysis (PCA), a multivariate technique used for analysing data tables in which observations are characterised by multiple intercorrelated quantitative dependent variables (Abdi & Williams, 2010).

The initial values illustrate the variance estimates for all factors, which are always 1.000 for principal component extraction. The extraction value represents the estimated proportion of variance explained by all factors for each variable. As the communality value approaches 1.000, the more variance of that variable is explained by the components (Tavakol & Wetzel, 2020). Most extracted communality values exceeded the 0.5 threshold, indicating that each variable explains

a relatively high amount of variance, with few exceptions. Variables "Acord_afirmatie_VE" and "Statut ocupațional" recorded the lowest values, suggesting a weaker correlation with the other variables. The low value for "Acord_afirmatie_VE" implies a significant diversity of opinions regarding the current stage of development and the appropriate timing for purchasing electric vehicles. Similarly, the low score for "Statut ocupațional" indicates that socio-demographic aspects have minimal influence on electric vehicle perceptions among the sample group.

The highest communality values were observed for "Vârstă" (0.744), "Mediul de proveniență" (0.854), and "Compatibilitate_VE_nevoi_zilnice" (0.696). The variable "Vârstă" highlights its significant influence on how people perceive and relate to electric vehicles.

Out of the 399 respondents, 255 (63.9%) expressed a desire to purchase such a vehicle, indicating a notable shift in consumer preferences among young people aged 18–24. The advanced technology integrated into these vehicles particularly attracts younger populations, being well-aligned with a digital lifestyle. Incentives provided before and after purchase are important factors influencing their decision to adopt electric vehicles, offering accessible financial resources and long-term benefits. Additionally, this increased interest is associated with growing environmental awareness and the need for sustainable transportation alternatives.

The "Mediul de proveniență" (area of residence) variable highlights how geographical context influences the perception and adoption of electric vehicles.

According to the results regarding the relationship between "Mediul de proveniență" and "Preferință deținere vehicul electric", over 45% of respondents (187) expressed a desire to own an electric vehicle in urban areas. When used in cities, electric vehicles contribute to cleaner air and lower pollution levels, particularly in densely populated urban zones (Canals Casals, et al., 2016).

Furthermore, even among rural respondents, there is a noticeable tendency towards interest in electric vehicles. Seventy-six respondents expressed a desire to purchase an electric vehicle, exceeding the number of rural respondents who did not wish to own one.

The "Compatibilitate_VE_nevoi_zilnice" variable indicates the importance of compatibility between electric vehicles and consumers' daily needs. Factors such as driving range, charging infrastructure, and maintenance costs significantly influence how well EVs fit daily routines.

The next variables, in descending order of communality values, refer to aspects such as interest and openness towards EV ownership ("Preferinta_Detinere_VE" – 0.602), the ideal driving range for daily needs ("Autonomie_ideala_VE" – 0.592), and perception of cost differences between electric and conventional vehicles ("Diferenta_cost_cumparare_VE" – 0.568).

The first component, named "Perspectives on Electric Vehicles," included six key variables crucial for understanding consumer perception. The second component, "Utility of Electric Vehicles," included four variables exploring attitudes such as satisfaction with driving range, preferences for ownership, daily-use compatibility, and the evolution of general perception. The third component consisted of three variables related to gender, perceived ideal range, and annual mileage, named "Electric Vehicle User Profile."

The fourth component contained a single variable, "Vârstă" (Age). The next component included two variables related to occupational status and purchase priorities, with lower relevance among consumers, named "Purchase Priorities by Status." The final component also consisted of

a single variable, "Mediul de proveniență" (Area of Residence), considered one of the defining components of the dataset due to its influence.

Within the component matrix, the three highlighted components represent the main directions of consumer interest in electric vehicles, successfully explaining over 54% of the variability in the analysed dataset.

In light of the secondary research conducted and the reports issued by companies such as BMW and Renault, Hypothesis 1, which states that electric vehicles have become part of an emerging global industry, establishing a new trend for the automotive sector, has been confirmed. These reports provide a detailed perspective on the strategies and plans of these companies regarding the transition to electric mobility, offering a clear direction for the automotive industry. The approaches presented by Renault and BMW are strongly anchored in a sustainable vision of mobility. The shift towards electric vehicles is perceived as an essential step in providing a viable transport solution.

Both companies focus their plans on innovation and cutting-edge technology. The development of electric vehicles involves not only creating more efficient motors and batteries but also integrating connected features and services that meet the needs and preferences of consumers in the digital era. Offering attractive and accessible electric mobility options can strengthen these companies' market position and provide them with a competitive advantage over rivals. Moreover, in a context of increasing environmental concerns, governments worldwide are adopting policies and regulations that promote electric vehicles. Thus, BMW and Renault's strategies also represent a response to legislative changes and increasingly stringent requirements regarding carbon emissions and urban pollution. The directions outlined in BMW and Renault's plans regarding the transition to electric vehicles not only validate the hypothesis but also mark a significant paradigm shift in the automotive industry, steering it towards a sustainable, innovative, and competitive future.

Hypothesis 2: The existence of extended electric vehicle range and improved infrastructure suggests a higher likelihood of adoption.

This hypothesis is validated by the research. 44.66% of respondents considered driving range an important factor in the decision to purchase an electric vehicle. The results indicate that extended range provides consumers with freedom and flexibility, which are essential for adoption. Furthermore, the improvement of charging infrastructure is indirectly highlighted through the importance respondents place on technical and economic aspects, which are closely linked to the availability of adequate infrastructure.

Hypothesis 3: The positive environmental impact and noise pollution reduction influence consumers' decision to purchase electric vehicles.

This hypothesis is confirmed by the research results. Specifically, 38.35% of respondents highlighted environmental impact as an important factor in their purchasing decision. The reduction of pollution and noise is noted as beneficial for both general health and quality of life, underlining the growing environmental awareness among consumers. Consequently, ecological concerns and the desire to contribute to a cleaner and quieter environment are factors that positively influence the decision to purchase electric vehicles.

Hypothesis 4: The purchase price and maintenance costs of electric vehicles are determining factors in consumers' purchasing decision.

This hypothesis is validated by the findings. According to the collected data, 63.85% of respondents identified purchase price as an essential factor in their decision to buy an electric vehicle. In addition, 51.7% emphasised low maintenance costs as another key factor. These results underline that economic considerations play a crucial role in consumer decisions, confirming the hypothesis that price and maintenance costs are decisive in the adoption of electric vehicles.

In contemporary society, electric vehicles are gaining increasing importance, resonating with the growing concerns about environmental protection. Their position in the automotive landscape is expanding rapidly, directly influencing consumer perception and attitudes towards electric vehicles.

Electrification of transport, particularly in urban contexts, has the potential to significantly reduce CO_2 emissions as well as dependency on fossil fuels, highlighting the greater efficiency of electric motors compared to internal combustion engines.

This study analyses the factors influencing young people's perceptions and attitudes towards electric vehicles. The results indicate that economic, technical, and environmental aspects play a crucial role in the adoption process. Additionally, a well-developed charging infrastructure also represents an important factor in the transition to electric vehicles.

Understanding these factors is essential for promoting the widespread adoption of electric vehicles among young people and other consumer groups. Overall, the research results reflect a positive attitude towards electric mobility, with many respondents expressing the intention to purchase an electric vehicle in the near future.

The future prospects of electric vehicles appear promising due to advancements in battery technology, charging infrastructure, and supportive policies. Battery prices are expected to decline in the near future, making electric vehicles more accessible and attractive to consumers. The transition to electric vehicles offers the possibility to enhance the efficiency of cities worldwide while simultaneously promoting their sustainable development.

All four hypotheses formulated for this research are validated by the results. Economic, technical, and environmental factors play a fundamental role in consumers' decision to purchase electric vehicles. These results indicate that, to encourage EV adoption, manufacturers and policymakers must focus on price, maintenance costs, driving range, charging infrastructure, and environmental benefits of these vehicles.

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