http://dx.doi.org/10.18623/rvd.v23.5352

INDIVIDUAL PURCHASING ATTITUDES AND MARKETING DYNAMICS IN THE TRANSITION TO ELECTRIC CARS: THE CASE OF SAMSUN PROVINCE

ATITUDES INDIVIDUAIS DE COMPRA E DINÂMICAS DE MARKETING NA TRANSIÇÃO PARA OS CARROS ELÉTRICOS: O CASO DA PROVÍNCIA DE SAMSUN

Article received on: 11/20/2025
Article accepted on: 2/19/2026

Hulya Cagiran Kendirli*
*Hitit University, Corum, Turkiye
Orcid: https://orcid.org/0000-0002-1526-0337
hulyacagirankendirli@hitit.edu.tr

Sadi Arli*
*Hitit University, Corum, Turkiye
Orcid: https://orcid.org/0000-0001-8738-282X
sadiar55@hotmail.com

The authors declare that there is no conflict of interest

Abstract
This study examines how the transition from a fossil fuel-based product architecture to an electric vehicle ecosystem in the automotive industry is reflected in consumer attitudes and purchase intentions through production and marketing strategies. The research is conducted using a survey model based on a quantitative research approach, and the survey technique is used in the data collection process. The sample consists of 388 participants living in Samsun province. The scale includes dimensions of subjective environmental norms, purchase intention, individual purchasing behavior, and attitudes towards environmentally friendly vehicles. Reliability, normality, independent samples t-test, and one-way analysis of variance are used in the analyses. The findings show that the scale reliability levels are high and that participants generally have a high tendency to purchase environmentally friendly vehicles. Significant differences are found according to age, education, and income groups in terms of demographic variables, and significant differences are observed in some sub-dimensions in the gender variable. The results indicate that in the electric vehicle transformation, marketing communication should be designed on a segment basis and the production-supply infrastructure should be structured in a way that is compatible with consumer expectations.

Resumo
Este estudo examina como a transição de uma arquitetura de produtos baseada em combustíveis fósseis para um ecossistema de veículos elétricos na indústria automotiva se reflete nas atitudes dos consumidores e nas intenções de compra por meio de estratégias de produção e marketing. A pesquisa é conduzida utilizando um modelo de pesquisa baseado em uma abordagem quantitativa, e a técnica de pesquisa por questionário é empregada no processo de coleta de dados. A amostra é composta por 388 participantes residentes na província de Samsun. A escala inclui dimensões de normas ambientais subjetivas, intenção de compra, comportamento de compra individual e atitudes em relação a veículos ecológicos. Confiabilidade, normalidade, teste t para amostras independentes e análise de variância unidirecional são utilizados nas análises. Os resultados mostram que os níveis de confiabilidade da escala são elevados e que os participantes apresentam, em geral, uma alta tendência à compra de veículos ecológicos. Foram encontradas diferenças significativas de acordo com a idade, escolaridade e faixas de renda em termos de variáveis demográficas, e diferenças significativas foram observadas em algumas subdimensões na variável gênero. Os resultados indicam que, na transição para veículos elétricos, a comunicação de marketing deve ser projetada com base em segmentos e a infraestrutura de produção e fornecimento deve

Keywords: Electric Vehicles. Purchasing Attitudes. Marketing Dynamics. Attitude Research.

ser estruturada de forma compatível com as expectativas dos consumidores.

Palavras-chave: *Veículos Elétricos. Atitudes de Compra. Dinâmica de Marketing. Pesquisa de Atitudes.*

1 INTRODUCTION

The competitive dynamics in the automotive industry are being reshaped by the combined effects of climate change, energy supply security, regulatory pressures, and technological advancements. In this transformation, electric vehicles represent not just a product category, but a holistic change encompassing everything from production technologies and supply chain architecture to marketing strategies and customer experience design. The transition to an electric vehicle ecosystem creates new decision problems for businesses in areas such as cost, economies of scale, battery technology, charging infrastructure, and service models, while highlighting criteria such as perceived value, environmental benefits, ease of use, and total cost of ownership for consumers (Egbue and Long, 2012). Within this framework, this study examines the relationship between this transformation and consumer purchasing attitudes and intentions, along with dimensions such as subjective environmental norms and individual purchasing behavior.

2 ENVIRONMENTAL REASONS WHY ELECTRIC VEHICLES ARE PREFERRED

One of the main drivers of the shift towards electric vehicles is the need to combat climate change and improve urban air quality. The impact of fossil fuel consumption on greenhouse gas emissions necessitates the development of lower-emission alternative solutions in the transportation sector (Galip, 2006). In this context, the widespread adoption of electric vehicles allows consumers to consider environmental benefits as a value component and makes environmental awareness more visible in purchasing decision-making processes (Bamberg and Möser, 2007). For the perception of environmental benefits to influence attitudes and intentions, it is not enough to simply

position the technology as "clean"; the promise of sustainability must also be consistently experienced in usage practices (Klockner and Matthes, 2013)..

3 THE INCREASE IN THE USE OF ELECTRIC VEHICLES IN THE AUTOMOTIVE SECTOR

The increase in electric vehicle production is driven by technological maturity, relatively low battery costs, transformations in global manufacturer strategies, and the impact of regulations (Ari, 2020). As production volume grows in the global market, issues such as redesigning production lines, securing battery supply, and expanding charging infrastructure become structural factors that accelerate production growth (Cooper and Schefter, 2018). It is evident that the increase in production is not only a supply-side expansion but also necessitates a restructuring of the marketing mix in line with the development of consumer demand (Global EV Outlook, 2013).

4 ECONOMIC AND POLITICAL REASONS FOR TRANSFORMATION

4.1 Economic and political reasons

The transition to electric vehicles is considered in conjunction with energy policies, external dependency reduction goals, and national/international regulatory pressures. Fluctuations in energy markets and the geopolitical risks of fossil fuels are strengthening the shift towards alternative energy technologies (Yergin, 2021). In this process, incentives and tax policies are positioned as policy tools that influence both producer and consumer decisions and can lower barriers to market entry (Aslan, 2022). The economic and political framework also determines the scale and speed of infrastructure investments, and the widespread availability of charging networks becomes a factor that increases consumer confidence (Sierzchula *et al*., 2014).

4.2 The Impact of transformation on production processes

The transition to electric vehicles necessitates a structural change in production processes in terms of component architecture, assembly steps, quality control parameters, and supply chain relationships. The shift from an internal combustion engine architecture to an electric motor and battery-based architecture increases modularity and redefines external supply dependency in some sub-components (Tie and Tan, 2013). Battery technology is a critical determinant in production processes due to safety and performance criteria, and battery management and risk factors are directly reflected in production planning (Kumar and Revankar, 2017: 1269). The production transformation is also seen to reshape the value chain through after-sales services and the maintenance-ecosystem structure (Leitman and Brant, 2008: 45). In this restructuring, battery lifespan and disposal/recycling dimensions also become an integral part of sustainability performance (Güven and Gedik, 2019).

5 COMPETITIVE ADVANTAGES AND DISADVANTAGES OF ELECTRIC VEHICLE MANUFACTURING

Electric vehicles can create a competitive advantage thanks to their low operating costs, ease of use, perception of innovative technology, and environmentally friendly positioning. For consumers, the perception of innovation stands out as a component that can strengthen brand attitude and purchase intention (Egbue and Long, 2012). Social influences and norms can facilitate differentiation in the market by supporting "eco-friendly product preference" behavior (Bamberg and Möser, 2007). However, the sustainability of competitive advantage depends not only on product features but also on the integrity of charging infrastructure and after-sales experience (Sierzchula *et al*., 2014).

Competitive disadvantages in the electric vehicle market are concentrated in areas such as range anxiety, charging times, insufficient infrastructure, battery cost, and battery safety. In particular, battery safety and performance risks can increase the overall risk perceived by the consumer and may postpone the purchase decision (Kumar and Revankar, 2017: 1269). Regional variations in charging infrastructure can heterogeneize the product experience and weaken the consistency of marketing promises (Cooper and

Schefter, 2018). The lifespan and management of batteries can also generate uncertainty in consumer perception, making it essential to support sustainability claims with operational capacity (Güven and Gedik, 2019).

6 CONSUMER DEMAND AND EXPECTATIONS REGARDING ELECTRIC VEHICLES

The demand for electric vehicles is not explained solely by price and performance components, but is also shaped by environmental awareness, social norms, and personal values (Ščasný *et al*., 2015). Consumer expectations are shaped around range, ease of charging, total cost of ownership, service infrastructure, and the verifiability of environmental benefits (Hidrue *et al*., 2011). In this context, consumers do not consider environmental friendliness alone sufficient; they also demand practical benefits in daily use scenarios (Hacbarth and Madlener, 2013). It is observed that attitudes and subjective norms are decisive in strengthening demand, and consumer decisions can be reinforced by the influence of the social environment (Jansson *et al*., 2017).

7 CHANGES AND EFFECTS IN MARKETING STRATEGIES

Electric vehicle marketing is moving beyond the classic product launch approach and adopting an ecosystem marketing logic. Product value is packaged together with charging infrastructure, digital services, software updates, and after-sales experience, and the brand promise is presented through this holistic approach (Kempf *et al*., 2020). The impact of social media campaigns on new product launches, especially for innovative products, increases awareness and can trigger consumer information-seeking behavior (Baum *et al*., 2018). In this context, marketing strategies are being restructured around targeting, positioning, content creation, and consumer interaction design, and the emphasis on environmental benefits needs to be presented together with performance and practical benefits (Uslu and Demirel, 2022).

8 CONSUMER PREFERENCES RESEARCH ON ELECTRIC VEHICLE CHOICES

8.1 Method

The research is conducted on the basis of a quantitative approach and uses a survey model (Karasar, 2013). The population consists of individuals living in Samsun province, and the sample comprises 388 participants. A questionnaire is used as the data collection tool, and the scale includes dimensions of subjective environmental norms, purchase intention, individual purchasing behavior, and attitudes towards environmentally friendly automobiles. The measurement tool is structured in accordance with relevant scale studies, and reliability (Cronbach Alpha), normality (skewness-kurtosis), independent samples t-test, and one-way analysis of variance are used in the analysis process (George and Mallery, 2010). The general framework of the sample and data collection process is addressed in line with the principles of quantitative research design (Baştürk and Taştepe, 2013).

8.2 Research model and hypotheses

The research is conducted using a descriptive survey model and tests whether attitudes towards purchasing environmentally friendly cars differ according to demographic variables. It is stated that the hypotheses are based on gender, age, education level, and monthly income variables.

8.3 Population and sample

The study population consists of individuals living in Samsun province, and the sample comprises 388 participants. It is stated that a convenience sampling approach was used in sample selection.

8.4 Data collection tool and reliability

It is stated that the data was collected through an attitude scale towards purchasing environmentally friendly cars, and that the scale uses a Likert-type structure. The internal consistency coefficient of the scale is reported to be 0.960, indicating a highly reliable level.

Table 1

Results of the scale's reliability analysis

Cronbach Alpha	Number of items
0,960	20

8.5 Data analysis

It is stated that the data were analyzed using the SPSS program, the condition of normal distribution was met, and therefore parametric tests were used. It is indicated that independent samples t-test was used for gender, and ANOVA tests were used for age/education/income.

8.5.1 Demographic findings

Table 2

Demographic characteristics of the participants

Variable	Category	Frequency	%
Gender	Male	215	55,4
	Female	173	44,6
Age	18-30	137	35,3
	31-40	110	28,4
	41-50	80	20,6
	51+	61	15,7
Education level	Primary School	3	0,8
	High School	34	8,8
	Associate Degree	79	20,4
	Bachelor's Degree	214	55,2
	Master's Degree/Doctorate	58	14,9
Monthly income	Minimum wage or less.	23	5,9

Variable	Category	Frequency	%
	11.500-20.000 TL	152	39,2
	20.000-30.000 TL	112	28,9
	30.000-40.000 TL	84	21,6
	Over 41.000 TL	17	4,4

Table 2 shows that in terms of gender distribution, male participants constitute the majority with 215 individuals (55.4%), while female participants number 173 (44.6%). In terms of age groups, the highest participation is in the 18-30 age range with 137 individuals (35.3%). This is followed by the 31-40 age range with 110 individuals (28.4%). The 41-50 age group includes 80 individuals (20.6%), and the 51 years and older group includes 61 individuals (15.7%). Regarding education level, bachelor's degree graduates are significantly more numerous with 214 individuals (55.2%). Associate degree graduates account for 79 individuals (20.4%), and master's/doctoral degree graduates for 58 individuals (14.9%). High school graduates comprise 34 individuals (8.8%), while primary school graduates constitute the smallest group with only 3 individuals (0.8%). When examining the monthly income distribution, it is observed that participants in the 11,500–20,000 TL range have the highest share with 152 people (39.2%). This group is followed by the 20,000–30,000 TL range with 112 people (28.9%). There are 84 people (21.6%) in the 30,000–40,000 TL range; 23 people (5.9%) are in the minimum wage and below income group, and the lowest rate is seen in the 41,000 TL and above income group with 17 people (4.4%).

8.5.2 Descriptive statistics

Table 3

Sub dimensions and overall average scores

Size	N	Average	Std. Dev.
Environmental subjective norms	388	3,9989	0,59356
Purchase intention	388	3,9085	0,65340
Individual purchasing behavior	388	4,0612	0,55826
Attitudes towards environmentally friendly cars	388	3,8462	0,65678
Overall scale	388	3,9613	0,55438

When the table is examined, it is seen that the participants' averages for the scale dimensions are generally at a high level. The average for the subjective environmental norms dimension is 3.9989 (SD=0.59356), indicating that participants strongly perceive the expectations of their social environment regarding environmental issues. The average for the purchase intention dimension is 3.9085 (SD=0.65340), indicating a high level of intention to purchase environmentally friendly/electric cars. The individual purchasing behavior dimension stands out as the highest value in the table with an average of 4.0612 (SD=0.55826), suggesting that environmentally friendly preferences are strongly supported at the behavioral level as well. The average for the attitude towards environmentally friendly cars dimension is determined as 3.8462 (SD=0.65678), showing that while positive attitudes are generally high, they remain relatively lower compared to other dimensions. The mean score of 3.9613 (SD=0.55438) across the entire scale indicates a high level of clustering among participants regarding their overall tendency to purchase environmentally friendly cars.

8.5.3 Difference tests gender-related findings

Table 4

Gender difference test results

Size	**Gender**	**N**	**Average**	**Std. Dev.**	**t**	**p**
Environmental subjective norms	Male	215	4,0455	0,57291	1,384	0,167
	Female	173	3,9412	0,61633		
Purchase intention	Male	215	3,9256	0,63215	0,598	0,550
	Female	173	3,8868	0,68143		
Individual purchasing behavior	Male	215	3,9814	0,52153	-2,997	0,003
	Female	173	4,1607	0,58810		
Attitudes towards environmentally friendly cars	Male	215	3,7594	0,68178	-2,997	0,003
	Female	173	3,9526	0,61448		
Overall scale	Male	215	3,9280	0,52164	-1,425	0,155
	Female	173	4,0035	0,59093		

When the table is examined and the averages of the dimensions are compared according to gender, it is seen that in the dimension of environmental subjective norms, the average for men is 4.0455 (SD=0.57291) and the average for women is 3.9412 (SD=0.61633). However, this difference is not statistically significant (t=1.384; p=0.167). In the dimension of purchase intention, the average for men is 3.9256 (SD=0.63215) and

the average for women is 3.8868 (SD=0.68143); however, the difference between the two groups is not statistically significant (t=0.598; p=0.550). In the dimension of individual purchasing behavior, the average score for women was 4.1607 (SD=0.58810), which is higher than the average score for men of 3.9814 (SD=0.52153), and this difference was found to be statistically significant (t=-2.997; p=0.003). Similarly, in the dimension of attitudes towards environmentally friendly cars, the average score for women was 3.9526 (SD=0.61448), while the average score for men was 3.7594 (SD=0.68178), and the difference was also statistically significant (t=-2.997; p=0.003). Overall, the average score for women was 4.0035 (SD=0.59093), while the average score for men was 3.9280 (SD=0.52164), but this difference was not found to be statistically significant (t=-1.425; p=0.155). Accordingly, the gender variable creates a significant difference, particularly in the dimensions of individual purchasing behavior and attitudes towards environmentally friendly automobiles; however, it does not create a significant difference in other dimensions.

8.5.4 Age-related findings

Table 5

Age-based difference test results

Size	**Age**	**N**	**Average**	**Std. Dev.**	**df**	**F**	**p**
Environmental subjective norms	18-30	137	4,1533	0,58457	3	7,006	0,000
	31-40	110	3,8558	0,45444			
	41-50	80	3,8750	0,62472			
	51+	61	4,0726	0,70064			
Purchase intention	18-30	137	3,9818	0,62807	3	9,043	0,000
	31-40	110	3,6924	0,60206			
	41-50	80	3,8646	0,58587			
	51+	61	4,1913	0,75329			
Individual purchasing behavior	18-30	137	4,1241	0,52521	3	6,242	0,000
	31-40	110	4,0318	0,49320			
	41-50	80	3,8625	0,60965			
	51+	61	4,2336	0,60012			
Attitudes towards environmentally friendly cars	18-30	137	4,0414	0,54600	3	17,979	0,000
	31-40	110	3,5152	0,62014			
	41-50	80	3,7958	0,59414			
	51+	61	4,0710	0,77487			

Size	Age	N	Average	Std. Dev.	df	F	p
Overall scale	18-30	137	4,0792	0,52020	3	9,121	0,000
	31-40	110	3,7909	0,47377			
	41-50	80	3,8575	0,54116			
	51+	61	4,1402	0,66613			

When Table X is examined, it is seen that there are significant differences in all dimensions according to age groups (p=0.000). In the dimension of subjective environmental norms, the average of the 18-30 age group is 4.1533 (SD=0.58457), which constitutes one of the highest values; this is followed by the 51 years and older group with an average of 4.0726 (SD=0.70064). In contrast, the average of the 31-40 age group is 3.8558 (SD=0.45444) and the average of the 41-50 age group is 3.8750 (SD=0.62472), and these two groups are seen to be at lower levels. This difference is understood to be statistically significant (F=7.006; p=0.000).

In the dimension of purchase intention, the highest average is determined in the 51 years and older group with 4.1913 (SD=0.75329). The average for the 18-30 age group is high at 3.9818 (SD=0.62807), while the average for the 41-50 age group is 3.8646 (SD=0.58587). The lowest average is found in the 31-40 age group at 3.6924 (SD=0.60206). The difference between the groups is statistically significant (F=9.043; p=0.000).

In terms of individual purchasing behavior, the highest average is observed in the 51 years and older group at 4.2336 (SD=0.60012). The average was determined as 4.1241 (SD=0.52521) in the 18–30 age group and 4.0318 (SD=0.49320) in the 31–40 age group, while the average for the 41–50 age group remained at a lower level with 3.8625 (SD=0.60965). It is understood that the difference between age groups is significant in this dimension as well (F=6.242; p=0.000).

In the dimension of attitudes towards environmentally friendly cars, the differentiation between age groups is more pronounced. The highest average was determined as 4.0710 (SD=0.77487) in the 51 years and older group, while a similarly high level was observed in the 18–30 age group with 4.0414 (SD=0.54600). The average for the 41–50 age group was 3.7958 (SD=0.59414); The lowest average is observed in the 31-40 age group at 3.5152 (SD=0.62014). This difference is statistically significant (F=17.979; p=0.000).

When evaluated in terms of the scale as a whole, the highest average is found in the 51 years and older group at 4.1402 (SD=0.66613); it is also at a high level in the 18-30 age group with an average of 4.0792 (SD=0.52020). While the average of the 41-50 age group is 3.8575 (SD=0.54116), the lowest average is seen in the 31-40 age group at 3.7909 (SD=0.47377). These results show that the age variable creates a significant difference in all dimensions and in the scale as a whole (F=9.121; p=0.000).

8.5.5 Findings regarding education level

Table 6

Difference test results according to education level

Size	Education	N	Average	Std. Dev.	df	F	p
Environmental subjective norms	Primary School	3	4,1429	0,59018	4	3,479	0,008
	High School	34	4,0504	0,66781			
	Associate Degree	79	4,0965	0,60430			
	Bachelor's Degree	214	3,9366	0,55486			
	Master's/Doctorate	58	3,9310	0,63251			
Purchase intention	Primary School	3	4,2222	0,62854	4	2,815	0,025
	High School	34	4,1618	0,78516			
	Associate Degree	79	3,9250	0,68301			
	Bachelor's Degree	214	3,8145	0,62523			
	Master's/Doctorate	58	3,8839	0,62980			
Individual purchasing behavior	Primary School	3	4,2500	0,43301	4	0,132	0,971
	High School	34	4,0993	0,74567			
	Associate Degree	79	4,0595	0,60821			
	Bachelor's Degree	214	4,0630	0,51485			
	Master's/Doctorate	58	4,0414	0,58871			
Attitudes towards environmentally friendly cars	Primary School	3	4,1333	0,11547	4	2,324	0,056
	High School	34	3,9294	0,77189			
	Associate Degree	79	4,1044	0,56369			
	Bachelor's Degree	214	3,7888	0,62689			
	Master's/Doctorate	58	3,7500	0,69704			
Overall scale	Primary School	3	4,1786	0,40540	4	4,102	0,003
	High School	34	4,0613	0,59698			
	Associate Degree	79	4,0463	0,58384			
	Bachelor's Degree	214	3,9194	0,51828			
	Master's/Doctorate	58	3,8966	0,55517			

Table 6 shows that there are significant differences in some dimensions and across the scale overall, according to education level. The difference between groups is

significant in the dimension of subjective environmental norms (F=3.479; p=0.008). Examining the means in this dimension, it is seen that the mean for the primary school group is 4.1429 (SD=0.59018); for the high school group 4.0504 (SD=0.66781); and for the associate degree group 4.0965 (SD=0.60430). The mean for the undergraduate group is 3.9366 (SD=0.55486) and the mean for the master's/doctoral group is 3.9310 (SD=0.63251), indicating that these two groups are at a lower level compared to the other groups. There is also a significant difference in the purchase intention dimension according to education level (F=2.815; p=0.025). In this dimension, the highest average is observed in the primary school group with 4.2222 (SD=0.62854); a similarly high level is observed in the high school group with 4.1618 (SD=0.78516). The average for the associate degree group is 3.9250 (SD=0.68301), the average for the bachelor's degree group is 3.8145 (SD=0.62523), and the average for the master's/doctoral group is 3.8839 (SD=0.62980); it is particularly observed that the average purchase intention of the bachelor's degree group remains at a lower level compared to other groups. There is no significant difference according to education level in the dimension of individual purchasing behavior (F=0.132; p=0.971). In this dimension, the averages are seen to be 4.2500 (SS=0.43301) in the primary school group, 4.0993 (SS=0.74567) in the high school group, 4.0595 (SS=0.60821) in the associate degree group, 4.0630 (SS=0.51485) in the bachelor's degree group, and 4.0414 (SS=0.58871) in the master's/doctoral group; it is understood that the groups clustered at very close values. In the dimension of attitudes towards environmentally friendly cars, the difference according to education level remains borderline and does not reach a statistically significant level (F=2.324; p=0.056). However, when the averages are examined, it is seen that the primary school group is at the level of 4.1333 (SS=0.11547), the associate degree group at the level of 4.1044 (SS=0.56369), and the high school group at the level of 3.9294 (SS=0.77189); It is observed that lower averages are obtained in the undergraduate group with 3.7888 (SS=0.62689) and in the master's/doctoral group with 3.7500 (SS=0.69704). When evaluated in terms of the scale as a whole, a significant difference is seen according to education level (F=4.102; p=0.003). The highest average in the scale as a whole is determined in the primary school group with 4.1786 (SS=0.40540); the high level is maintained in the high school group with 4.0613 (SS=0.59698) and in the associate degree group with 4.0463 (SS=0.58384). The average of the undergraduate group is

3.9194 (SS=0.51828) and the average of the master's/doctoral group is 3.8966 (SS=0.55517); it is understood that these two groups have lower averages compared to other groups in the scale as a whole.

8.5.6 Findings regarding monthly income

Table 7. Difference test results based on monthly income

Size	Income	N	Average	Std. Dev.	df	F	p
Environmental subjective norms	Minimum and below	23	3,9379	0,54914	4	4,782	0,001
	11.500-20.000	152	4,0965	0,61222			
	20.000-30.000	112	4,0250	0,53778			
	30.000-40.000	84	3,9024	0,56012			
	41.000+	17	3,5378	0,57289			
Purchase intention	Minimum and below	23	3,7174	0,75732	4	5,331	0,000
	11.500-20.000	152	4,0905	0,65991			
	20.000-30.000	112	3,9256	0,56985			
	30.000-40.000	84	3,8095	0,59315			
	41.000+	17	3,3725	0,67000			
Individual purchasing behavior	Minimum and below	23	3,7717	0,60086	4	3,477	0,008
	11.500-20.000	152	4,1283	0,57348			
	20.000-30.000	112	4,0893	0,54103			
	30.000-40.000	84	4,0417	0,49755			
	41.000+	17	3,7647	0,61992			
Attitudes towards environmentally friendly cars	Minimum and below	23	3,6812	0,77137	4	11,401	0,000
	11.500-20.000	152	4,0614	0,60434			
	20.000-30.000	112	3,8720	0,61848			
	30.000-40.000	84	3,5357	0,61169			
	41.000+	17	3,5098	0,57801			

Size	Income	N	Average	Std. Dev.	df	F	p
General scale	Minimum and below	23	3,6587	0,59292	4	8,045	0,000
	11.500-20.000	152	4,1013	0,56434			
	20.000-30.000	112	3,9978	0,48512			
	30.000-40.000	84	3,8149	0,52135			
	41.000+	17	3,6029	0,57661			

Table 7 shows that statistically significant differences exist across all dimensions and the overall scale according to monthly income groups. The difference between groups is significant in the dimension of subjective environmental norms (F=4.782; p=0.001). The highest mean in this dimension is found in the 11,500–20,000 TL income group with 4.0965 (SD=0.61222). This is followed by the 20,000–30,000 TL income group with 4.0250 (SD=0.53778). While the mean is 3.9379 (SD=0.54914) in the minimum wage and below income group, it is determined to be 3.9024 (SD=0.56012) in the 30,000–40,000 TL income group. The lowest average is 3.5378 (SD=0.57289) in the income group of 41,000 TL and above. There are also significant differences in the purchase intention dimension according to income groups (F=5.331; p=0.000). The highest average in this dimension is 4.0905 (SD=0.65991) in the 11,500–20,000 TL income group. While the average is 3.9256 (SD=0.56985) in the 20,000–30,000 TL income group, it is 3.8095 (SD=0.59315) in the 30,000–40,000 TL income group. In the minimum wage and below income group, the average is 3.7174 (SD=0.75732). The lowest average is 3.3725 (SD=0.67000) in the income group of 41,000 TL and above. The difference in individual purchasing behavior across income groups is significant (F=3.477; p=0.008). The highest average is seen in the 11,500–20,000 TL income group at 4.1283 (SD=0.57348); followed by the 20,000–30,000 TL income group at 4.0893 (SD=0.54103). The average is 4.0417 (SD=0.49755) in the 30,000–40,000 TL income group, while it is determined to be 3.7717 (SD=0.60086) in the minimum wage and below income group. The average score is 3.7647 (SS=0.61992) in the income group of 41,000 TL and above, and the lowest values in this dimension are concentrated in the minimum wage and below, and 41,000 TL and above groups. The difference between income groups is stronger in the dimension of attitudes towards environmentally friendly cars (F=11.401; p=0.000). The highest

average is 4.0614 (SS=0.60434) in the 11,500–20,000 TL income group. While the average is 3.8720 (SS=0.61848) in the 20,000–30,000 TL income group, it is 3.6812 (SS=0.77137) in the minimum wage and below income group. In the 30,000–40,000 TL income group, the average decreases to 3.5357 (SD=0.61169); while in the 41,000 TL and above income group, one of the lowest averages is observed at 3.5098 (SD=0.57801). When evaluated in terms of the scale as a whole, it is seen that there are significant differences according to income groups (F=8.045; p=0.000). The highest average in the scale as a whole is determined as 4.1013 (SD=0.56434) in the 11,500–20,000 TL income group. While the average of the 20,000–30,000 TL income group is 3.9978 (SD=0.48512), the average of the 30,000–40,000 TL income group is seen as 3.8149 (SD=0.52135). The average is 3.6587 (SD=0.59292) in the minimum wage and below income group, while the lowest average is 3.6029 (SD=0.57661) in the 41,000 TL and above income group. These findings indicate that the monthly income variable creates a significant and meaningful differentiation in all dimensions related to the tendency to purchase electric/environmentally friendly cars.

8.6 Discussion

The findings indicate that the tendency to purchase environmentally friendly cars is generally high in the sample. This suggests that environmental norms and the perception of environmentally friendly products play a significant role in consumer decision-making (Ščasný *et al*., 2015). The significant differences observed across all dimensions among age groups show that the perception of electric cars can differ within the context of the life cycle. The significant differences observed in subjective environmental norms and purchase intention in the education level variable indicate that the level of knowledge and environmental awareness can be a factor strengthening purchase intention (Bamberg and Möser, 2007). The significant differences observed in all dimensions in the income variable show that the perception of price and total cost of ownership can be decisive in attitudes and intentions towards electric cars (Hidrue *et al*., 2011). The significant differences found in some dimensions in the gender variable suggest that the message framework in marketing communication should be differentiated according to the target audience (Kempf *et al*., 2020). The fact that production

transformation can affect consumer risk perception through battery and infrastructure dependencies shows that competitive advantage can be generated not only through product promise but also through consistency of experience (Sierzchula *et al*., 2014).

9 CONCLUSION AND RECOMMENDATIONS

When the results are evaluated together, it is understood that consumer demand cannot be reduced to a single motivational area, and that environmental value proposition and economic benefit must be established simultaneously. In this context, range anxiety, access to charging infrastructure, and perception of battery lifecycle management are seen as critical thresholds in the transformation of intention into behavior. Therefore, marketing communication needs to integrate the narrative of technical performance with infrastructure assurance and risk-mitigating service design. It is stated that product innovation, technology emphasis, and strengthening of digital channels are necessary in marketing strategies, and that the customer experience should be designed in an integrated manner with charging infrastructure and after-sales services. Considering the differentiations that emerge between age and income groups, developing segment-based value propositions and increasing the demonstration of tangible benefits through test drives, total cost calculators, and charging access scenarios in the 31-40 age group is effective. The higher average scores of female participants in attitude and individual behavior dimensions necessitate strengthening experience-oriented communication and community-based digital campaigns in this segment.

It is stated that incentive mechanisms, tax regulations, and infrastructure investments accelerate demand generation at the policy level, and that objectives such as emission targets and energy security fuel electrification policies. Therefore, the expansion of charging infrastructure by public authorities, support for integration with renewable energy, and strengthening the battery recycling ecosystem ensure that the transformation progresses holistically. Maintaining incentive and infrastructure policies in line with local market conditions contributes to reducing attitude differences, especially among income groups.

The fact that this research was conducted using a sample limited to Samsun province and a convenience sampling approach limits the generalizability of the findings.

Collecting data using a self-report scale makes it difficult to directly observe the difference between attitude and actual purchasing behavior. It is recommended that future studies be conducted with comparative designs covering different provinces and include variables such as user experience, vehicle ownership history, access to charging infrastructure, and awareness of incentives in the model.

Overall, the study shows that demographic differences are becoming more pronounced in the adoption of electric vehicles, and that marketing and public policies should be coordinated using a segment-based approach. Presenting an environmental value proposition alongside economic benefits and ease of use plays a critical role in accelerating the transformation of purchase intention into behavior. In this context, it is assessed that competitive advantage is strengthened through an integrated value proposition supported by infrastructure security and battery ecosystem management.

REFERENCES

Ari, Y. O. (2020). Küresel Elektrikli Otomobil Piyasasına Genel Bakış. *Kırklareli Üniversitesi Sosyal Bilimler Dergisi, 4*(2), 193-203.

Aslan, E. (2022). İklim Değişikliğiyle Mücadele Bağlamında Hibrit-Elektrikli Otomobillere Yönelik Teşvik ve Vergi Uygulamaları: Avrupa Birliği (AB)–Türkiye Karşılaştırması. TÜCAUM 2022 Uluslararası Coğrafya Sempozyumu, Ankara.

Bamberg, S., & Möser, G. (2007). Twenty Years After Hines, Hungerford, And Tomera: A New Meta-Analysis Of Psycho-Social Determinants Of Pro-Environmental Behaviour. *Journal of Environmental Psychology, 27*(1), 14-25.

Baum, D., Spann, M., Füller, J., & Thürridl, C. (2018). The Impact of Social Media Campaigns on The Success of New Product İntroductions. *Journal of Retailing and Consumer Services*, 1-9.

Baştürk, S., & Taştepe, M. (2013). *Evren ve örneklem*. Bilimsel Araştırma Yöntemleri, Ankara: Vize Yayıncılık, 129, 159.

Cooper, A. ve Schefter, K. (2018). *Electric vehicle sales forecast and the charging infrastructure required through 2030*. U.S.: Edison Electric Institute.

Egbue, O., & Long, S. (2012). Barriers To Widespread Adoption Of Electric Vehicles: An Analysis Of Consumer Attitudes And Perceptions. *Energy Policy, 48*, 717-729.

Galip A. (2006). Küresel Isınma, Nedenleri ve Sonuçları. *Ankara Üniversitesi Dil ve Tarih-Coğrafya Fakültesi Dergisi, 46*, 2, 29-43.

Global EV Outlook. (2013*). Electric Vehicles Initiative, Understanding the Electric Vehicle Landscape to 2020*. International Energy Agency.

Güven, E. C., & Gedik, K. (2019). Ömrünü Tamamlamış Elektrikli Araç Bataryalarının Çevresel Yönetimi. *Journal of the Institute of Science and Technology, 9*(2), 726-737.

Hackbarth, A., & Madlener, R. (2013). Consumer Preferences For Alternative Fuel Vehicles: A Discrete Choice Analysis. *Transportation Research Part D: Transport and Environment, 25*, 5-17.

Hidrue, M. K., Parsons, G. R., Kempton, W., & Gardner, M. P. (2011). Willingness To Pay For Electric Vehicles And Their Attributes. *Resource and Energy Economics*, *33*(3), 686-705.

Jansson, J., Nordlund, A., & Westin, K. (2017). Examining Drivers Of Sustainable Consumption: The İnfluence Of Norms And Opinion Leadership On Electric Vehicle Adoption İn Sweden. *Journal of Cleaner Production, 154*, 176-187.

Karasar, N. (2013). *Bilimsel araştırma yöntemi*, 26. Basım. Ankara: Nobel.

Kempf, S., Lühr, P., Schaufuss, P., Strigel, A & Tschiesner, A. (2020). Leaving the niche: Seven steps for a successful go-to-market model for electric vehicles. https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/leaving-the-niche-seven-steps-for-a-successful-go-to-market-model-for-electric-vehicles. Erişim tarihi: 24.01.2026.

Klockner, C. A., & Matthes, J. (2013). Attitudes Toward Electric Vehicles: A Meta-Analysis Of The İnfluences Of Drivers' Personal Characteristics And EV Design Features. *Transportation Research Part A: Policy and Practice, 69*, 71-86.

Kumar, M.S. & Revankar, S.T. (2017). Development scheme and key technology of an electric vehicle: An overview. *Renewable and Sustainable Energy Reviews, 70*, 1266-1285.

Leitman , S., & Brant, B. (2008). *Build Your Own Electric Vehicle*. The McGraw-Hill Companies.

Ščasný, M., Zvěřinová, I. ve Czajkowski, M. (2015). Individual preference for the alternative fuel vehicles and their attributes in Poland. EcoMod2015 Conference, Boston College, July 15-17 2015, USA.

Sierzchula, W., Bakker, S., Maat, K., & van Wee, B. (2014). The İnfluence Of Financial İncentives And Other Socio-Economic Factors On Electric Vehicle Adoption. *Energy Policy, 68*, 183-194.

Tie, S. F. & Tan, C. W. (2013). A Review Of Energy Sources And Energy Management System İn Electric Vehicles. *Renewable and Sustainable Energy Reviews, 20*, 82-102.

Uslu, H. & Demirel, O. (2022). Elektrikli Otomobil Satın Alma İstekliliğini Etkileyen Faktörler: Konya İli Örneği. *Süleyman Demirel Üniversitesi Vizyoner Dergisi, 13*(35), 961-975.

Yergin, D. (2021). *The Major Problems Blocking America's Electric Car Future*. The Major Problems Blocking America's Electric Car Future - POLITICO. Erişim tarihi: 31.08.2023.

Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

How to cite this article (APA)

Kendirli, H. C., & Arli, S. INDIVIDUAL PURCHASING ATTITUDES AND MARKETING DYNAMICS IN THE TRANSITION TO ELECTRIC CARS: THE CASE OF SAMSUN PROVINCE. Veredas Do Direito, e235352. https://doi.org/10.18623/rvd.v23.5352