

Factors Affecting Consumers' Intention to Purchase Domestic and Electric Automobiles (TOGG): A Research in the Eastern Black Sea Region

Tüketicilerin Yerli ve Elektrikli Otomobil (TOGG) Satın Alma Niyetini Etkileyen Faktörler: Doğu Karadeniz Bölgesinde Bir Araştırma

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Abstract

Many countries in the world produce their domestic cars and take part in the automotive market. Turkey was also included in these countries, with the TOGG electric car brand introduced in 2019. The TOGG electric car brand, was mass-produced and sold in 2022, has begun to be purchased and used by consumers. Therefore, the factors that affect consumers' purchasing intentions for TOGG brand domestic and electric cars are a matter of curiosity. Therefore, the research aims to determine the effects of consumer innovativeness, consumer ethnocentrism, performance expectation, social impact, environmental benefit and price insensitivity on the purchase intention of TOGG brand domestic and electric cars, and also to reveal the moderating role of the subsidies offered for purchase in these effects. The survey form prepared for this purpose was applied face to face to consumers in seven Eastern Black Sea Region provinces. As a result of the analysis, while positive effects of consumer innovativeness, consumer ethnocentrism, performance expectation, social impact and environmental benefit on the intention to purchase the TOGG brand automobile were determined, no significant effect was determined regarding price insensitivity. These findings have substantial implications for both theory and practice.

Keywords: TOGG, Consumer Innovativeness, Consumer Ethnocentrism, Performance Expectation, Social Impact, Price Incentiveness, Environmental Benefit, Incentive/Subsidy.

Öz

Dünyada birçok ülke kendi yerli otomobilini üreterek otomotiv pazarında yer almaktadır. Bu ülkelere 2019 yılında tanıtılan TOGG elektrikli otomobil markası ile Türkiye de dahil oldu. Seri üretimine geçilen ve 2022 yılında satışa sunulan TOGG elektrikli otomobil markası, tüketiciler tarafından satın alınmaya ve kullanılmaya başlandı. Dolayısıyla tüketicilerin TOGG marka yerli ve elektrikli otomobillere yönelik satın alma niyetlerini etkileyen faktörler merak konusudur. Bu nedenle araştırma, tüketici yenilikçiliği, tüketici etnosentrizmi, performans beklentisi, sosyal etki, çevresel fayda ve fiyat duyarsızlığının TOGG marka yerli ve elektrikli otomobil satın alma niyeti üzerindeki etkilerini belirlemeyi ve ayrıca satın alma için sunulan sübvansiyonların bu etkilerdeki moderatör rolünü ortaya koymayı amaçlamaktadır. Bu amaçla hazırlanan anket formu Doğu Karadeniz Bölgesi'ndeki yedi ilde tüketicilere yüz yüze uygulanmıştır. Elde edilen verilerin analiz sonucunda, tüketici yenilikçiliği, tüketici etnosentrizmi, performans beklentisi, sosyal etki ve çevresel faydanın TOGG marka otomobil satın alma niyeti üzerinde pozitif etkileri tespit edilirken, fiyat duyarsızlığı ile ilgili anlamlı bir etki tespit edilememiştir. Bu bulgular hem teori hem de uygulama için önemli çıkarımlara sahiptir.

Anahtar Kelimeler: TOGG, Tüketici Yenilikçiliği, Tüketici Etnosentrizmi, Performans Beklentisi, Sosyal Etki, Fiyat Duyarsızlığı, Çevresel Fayda, Teşvik/Sübvansiyon

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Factors Affecting Consumers' Intention to Purchase Domestic and Electric Automobiles (TOGG): A Research in the Eastern Black Sea Region

Many sectors are effective in the social and economic development of a country, and perhaps the most important of these sectors is the industrial sector. The locomotive of the industrial sector is the manufacturing industry, and considering today's production and consumption conditions, the automotive sector ranks first in manufacturing. Within the automotive sector, there are automobile brands belonging to that country, as well as automobile brands belonging to different countries. When looking at the automobile market in Turkey, according to the February 2024 report of TUIK (Turkish Statistical Institute), the 10 best-selling automobile brands in Turkey are Renault (12,9%), Fiat (10,3%), Chery (7,5%), Toyota (7,2%), Volkswagen (5,7%), Hyundai (5,7%), Peugeot (5,0%), Dacia (4,9%) and Skoda (4,9%) (TUIK, 2024). When the data is reviewed, it becomes clear that all of the brands purchased in Turkey are of foreign origin. A country needs to produce its own automobile for both its economic and social development. Throughout history, domestic automobile production attempts have been made in Turkey but have not been successful. However, in 2019, prototypes of the TOGG brand domestic and electric car were produced by a five-partner company called Turkey's Automobile Enterprise Group (TOGG), and the first model, the T10X, went on sale in 2022. This vehicle, which has a fully electric fuel system, constitutes one-third of the electric vehicles in the Turkish market, according to TUIK data (TEHAD, 2024). Therefore, there is interest in electric cars in the automotive sector. When we look at the sales figures of hybrid and electric cars in the automobile market in Turkey, hybrid vehicles, which had a sales rate of 0.9% in 2022, increased to 1.5% (235,182 units) in January 2024, while electric vehicles, which had a sales rate of 0.1%, increased to 0.6% (87,941 units) in January 2024 (TUIK, 2024). Considering the increasing interest in electric vehicles and Turkey's first domestic and electric automobile TOGG brand, it is important to investigate the purchasing behavior of consumers towards the TOGG brand.

When the literature on automobile purchasing behavior is examined, many factors affect the automobile purchasing behavior of consumers. Especially when domestic automobiles are considered, the first concept that comes to mind is ethnocentrism. In short, it means that consumers act domestically and nationally in their purchasing behavior and purchase products and brands belonging to their own country instead of foreign products and brands. Similar behavior also occurs in automobile purchasing behavior, and consumers with high ethnocentric tendencies turn to domestic automobiles (Avcı, 2020). Consumers with these tendencies are also willing to pay more for domestic products (Drozdenko and Jensen, 2009). In other words, these consumers do not care that the price of a domestic car is higher than other cars and may be insensitive to price. Of course, when purchasing a car, it is not enough for that car to be domestically produced. The car to be purchased must also meet the expected performance. The performance of the car is determined by factors such as fuel consumption, comfort, maintenance costs and technological equipment. Apart from the expected performance, new-generation consumers now give importance to innovations and turn to innovative products in their consumption behavior. The production of electric cars instead of traditional fuel systems and the fact that these cars include the latest technological equipment attract consumers to these cars. In addition, the fact that the domestically produced car is electric and that electric cars cause less damage to the environment than cars with traditional fuel systems makes these cars preferred. Consumers who act with sustainable consumption awareness are likely to purchase electric cars considering environmental benefits and are also willing to pay more for electric cars due to environmental benefits (Mohd Suki, 2016). Another factor that affects purchasing behavior is the social environment in which the person lives. Humans are social beings, and the opinions and experiences of others in one's social environment shape one's purchasing behavior. Therefore, before adopting new technologies, people evaluate the opinions of their social

environment, and if these opinions are negative, they are less likely to adopt the new technology (He et al., 2022). Apart from these factors, another factor that affects consumers' intention to purchase a car is incentive. To increase the prevalence and use of electric cars, governments in many countries provide incentives such as tax reductions and financing opportunities to their citizens (Chaveesuk et al., 2023). In Turkey, public banks provide consumers with appropriate financing support to purchase TOGG brand cars (<https://www.togg.com.tr/campaigns-and-offers>). Considering these factors related to automobile purchasing, the research aims to determine the effects of consumer innovativeness, consumer ethnocentrism, performance expectation, social impact, environmental benefit and price insensitivity on the intention to purchase TOGG brand domestic and electric automobiles, and also to reveal the moderating role of the incentives offered for purchasing in these effects. In the current research, since the automobile produced by the TOGG brand is both domestic and electric, the research variables were gathered around a single model. Another important point of the research is to examine the moderating role of the incentives that the state will offer to consumers to purchase domestic and electric cars.

The article begins with the concept of the domestic automobile and its development in the historical process and continues with the conceptual framework and literature review supporting the proposed hypotheses. In the method section, participants, procedure, measurement tools and data analysis processes are explained. While the research findings and discussion are included in the analysis and conclusion sections, both theoretical and practical contributions are included in the last section. Finally, the article ends with the limitations of the research and suggestions for future research.

Theoretical Framework and Hypothesis Development

Several theories were employed to determine the factors relevant to the research. These ideas include Bibb Latané's social effect theory, Abraham Maslow's hierarchy of needs, Skinner's reinforcement theory, and Pavlov's conditioned learning theory. In the following section of the study, the factors influencing the intention to acquire a domestic car are explained using these ideas.

Performance Expectation

There are many factors that affect consumers' car preferences. Therefore, when launching a domestic car, it is necessary to know these factors and make a plan accordingly. Performance expectation is one of these factors. However, each consumer's expectations may not be the same. For example, while one consumer is interested in how many kilometres per second a car can go, some may be interested in its comfort, some in its safety, and some in its fuel consumption. Therefore, a car launched on the market must meet all of these expectations to a certain extent. Studies conducted on the subject also show that these performance-related factors have an impact on vehicle choice. In the studies conducted by researchers such as Güngör and İşler (2005), Erdoğan (2006), Güven and Davudov (2012), it was determined that fuel consumption has a negative effect on automobile choice. As the fuel consumption of the car increases, the probability of it being preferred decreases. Yavuz (2012) also argued that the most decisive criterion for vehicle choice is fuel performance. Similarly, the 0-100 km acceleration time of the car also has a negative effect on car choice. As the 0-100 km acceleration time of the car increases, the probability of the car being preferred decreases. The safety performance of the car, which includes factors such as the parts of the car, ABS (Anti-lock Braking System) brake system, fuel tank, airbags, seat belts, etc., has a positive effect on the choice of car. Likewise, the comfort of the car also has a positive effect on car choice. As the safety performance and comfort of the car increase, the possibility of it being preferred also increases. Maintenance cost performance, which includes factors such as annual service cost and parts costs, also has a negative effect on automobile preference. As the annual maintenance cost of an automobile increases, the probability of its preference decreases (Güngör and İşler, 2005; Yavuz, 2012). The interior volume and trunk volume of the car are also among the factors

that affect car choice (Yavuz, 2012). The engine power feature of the car also affects the choice. Consumers prefer cars with powerful engines (Erdoğan, 2006; Güven and Davudov, 2012). Skippon (2014) investigated the factors influencing electric vehicle selection and concluded that dynamic performance (traction, acceleration, power, and responsiveness during overtaking and hill climbing) and cruising performance (smoothness and low noise during high-speed highway cruising) had a significant impact. Gasoline vehicle users place a higher value on dynamic performance than diesel vehicle users, but diesel vehicle users prioritize cruising performance. Topolšek (2020) claims that there is a favorable association between performance expectations and the intention to buy an autonomous car. Based on the findings of this study in the literature, the following hypothesis was developed:

H1: The performance of the domestic automobile positively affects the purchase intention towards the domestic automobile.

Social Influence

One of the factors that affects consumers' purchase intentions is social influence. When purchasing a product, consumers also consider the opinions and guidance of other elements such as family, relatives and friends. When consumers make a purchase, they also take into account the reaction of these elements to the purchase. Studies on social impact have generally examined the effects of social impact on green purchasing behavior, participation intention, and purchase intention (Joshi and Rahman, 2016; Lee, 2014; Wahid et al., 2011; Wang, 2014; Zhou, 2011). In his study, Topolšek (2020) states that there is a positive relationship between social influence and the intention to purchase an autonomous car. As consumers' perceived social impact increases, their intention to purchase autonomous cars also increases. There are also studies in the literature showing that social influence positively affects the intention to purchase a green car (Lim et al., 2019). Since the domestic car is produced to run on electricity and electric vehicles are environmentally friendly vehicles compared to vehicles that use fossil fuels, it is thought that the purchase intention towards the domestic car will show a similar result to the purchase intention towards green vehicles. In addition, Leicht et al. (2018) concluded that social influence is an effective factor in motivating consumers to use autonomous vehicles. Based on the results of these studies in the literature, the following hypothesis was developed;

H2: Social influence positively affects the purchase intention for domestic automobiles.

Price Insensitivity

Another factor that affects purchase intention is price insensitivity. Price is considered as the primary factor in consumers' evaluation of purchasing decisions and is referred to as the total amount of money that the firm collects from its customers by adding the profitability margin in producing certain goods or services (Wang et al., 2020). In most cases, price represents the amount of money consumers must give up to purchase a product. As a result, consumers are sensitive to the amount of money they must give up compared to what they have (Goldsmith et al., 2010). However, price alone does not affect the purchasing decision. In other words, consumers can become insensitive to price in some cases. Price insensitivity generally leads to an emphasis on non-price factors in terms of how they can contribute to the general interest of society (Lee, 2021). When this situation is considered in terms of domestic automobiles, it can be thought that consumers will be insensitive to price, thinking that by supporting domestic production over foreign brands, they prevent foreign exchange loss and thus contribute to the country's economy. When the literature is reviewed, it is clear that the effect of price sensitivity on purchase intention is frequently investigated. According to studies, consumers who care about environmental issues are less price sensitive (Mohd Suki, 2016). Price sensitivity is also a factor that influences purchase intention for speciality products. Wang et al. (2019) discovered that price sensitivity

had negative effects on luxury brand purchasing intentions. Based on the findings of these research in the literature, the following hypothesis was created:

H3: Price insensitivity positively affects purchase intention for domestic automobiles.

Consumer Innovativeness

Innovation is described as an individual's adoption of new ideas before the average person in the social system (Rogers and Shoemaker, 1971). Consumer innovativeness, which is an essential personality attribute, refers to the proclivity to purchase and utilize new items more quickly and frequently than others (Li et al., 2021). Foxall et al. (1998) describe consumer innovativeness as an individual's proclivity to buy new products in a product category shortly after they debut on the market, ahead of the majority of other customers in that market segment. When research on the correlations between consumer innovativeness and purchase intention is investigated, it is discovered that they are primarily conducted for technological innovations. In other words, the majority of the studies in the literature investigate the impact of consumer innovativeness on the intention to purchase new technology products. Furthermore, there has been research looking into the impact of consumer innovation on the intention to buy organic food. Mangafić et al. (2017) discovered a favorable association between customer innovativeness and intention to purchase organic goods. The study also claims that consumer innovativeness moderates the association between sentiments about organic food and intention to buy organic food. According to Persaud and Schillo (2017), consumer innovativeness has a moderating role in the relationship between social identity and social impact on organic product purchase intention. Li et al. (2021) discovered that social and hedonistic innovation increases the intention to buy sustainable consumer products like electric vehicles. According to Avcı (2020), customer innovation positively influences the inclination to purchase domestic brand autos. According to research on both recently released and sustainable products, customer innovativeness has a positive effect on purchase intention. This study also looks at the intention to buy a newly announced domestic automobile. In addition, the vehicle in issue runs on electricity, a novel fuel technology. Based on this data, the following hypothesis was developed:

H4: Consumer innovation positively affects the intention to purchase a domestic automobiles.

Environmental Benefit

The increase in environmental pollution in recent years has created public awareness among people regarding the protection of the environment. Environmental concern relates to awareness, attitudes and responses to environmental problems. Individuals who are concerned about the environment tend to purchase environmentally friendly products (Minton and Rose, 1997). These individuals are highly likely to buy green products and participate in environmental protection initiatives (Greaves et al., 2013). According to Grimmer and Wolley (2014), the impact of environmental benefits on purchase intention is determined by an individual's environmental feelings. The study discovered that when people with high environmental sensitivity are exposed to environmental marketing, their purchasing intentions rise. Grimmer and Bingham (2013) studied the effect of companies' perceived environmental performance on consumers' purchase intentions and concluded that consumers' purchase intentions for products from companies with high environmental performance perceptions are higher than for products from companies with lower environmental performance perceptions. Hartmann and Apaolaza-Ibáñez's (2012) study demonstrated a favorable correlation between environmental concern and intention to purchase green energy brands. Bozpolat (2021) also found that environmental concerns had a beneficial impact on the intention to buy green products. Efendioğlu (2024) researched the factors that influence the intention to purchase an electric car and discovered that environmental concern has a positive effect

on the intention to buy an electric vehicle. Based on these findings, the following hypothesis was developed:

H5: Environmental benefit positively affects the intention to purchase a domestic automobiles.

Consumer Ethnocentrism

When the literature is analyzed, it is clear that the idea of consumer ethnocentrism is described as a tool for understanding the moral concerns raised by the consumption of both foreign and home items. Consumer ethnocentrism was first established in sociology as a subset of the broader idea of ethnocentrism (Siamagka and Balabanis, 2015). Sumner (1906) originally characterized ethnocentrism as "a view in which one's own group is the centre of all things, and all others are scaled and ranked concerning it." According to Sumner, the fundamental elements of ethnocentrism are pride in one's own group and the perception that other groups are inferior. Sharma et al. (1995) later emphasized the enduring nature of ethnocentrism by defining consumer ethnocentrism as "an enduring trait that is tied to the personality of individuals." Yılmaz et al. (2022) state that nationalist and patriotic feelings of consumers are effective on their domestic automobile preferences and that they are willing to replace their current automobiles with the domestic and national automobile brand TOGG. Sürer (2017) found in his research that consumer ethnocentrism has a positive effect on the intention to purchase a domestic car. Avcı (2020), in his research focusing on the TOGG brand, concluded that consumer ethnocentrism has a positive effect on the intention to purchase a domestic brand car. In their research conducted on Turkish and Polish students, Avcı and Yıldız (2021) found that consumer ethnocentrism had a positive effect on the intention to purchase domestic products in both samples. In addition, Turkish students have more ethnocentric tendencies compared to Polish students. Zengin et al. (2024) concluded in their study that consumer ethnocentrism positively affects the intention to purchase a domestic brand automobile (TOGG). Wang et al. (2022) also determined in their study that consumer ethnocentrism has a positive effect on the intention to choose a domestic electric vehicle. Based on these studies, the following hypothesis was developed;

H6: Consumer ethnocentrism positively affects the intention to purchase a domestic automobile.

Subsidy/Incentive

When a product is first produced by a brand, it has to compete with other brands in the market and struggle to get a share of the existing market. For this reason, entering the market later is a difficult and disadvantageous situation for the entrepreneurial brand. However, consumers' motivations for purchasing a brand that is a first for a country, such as a domestic and national automobile, are not the same as their motivations for purchasing other products. In this case, concepts such as nationalism and ethnocentrism become more prevalent and consumers can make purchases guided by these emotions. However, when purchasing products such as automobiles, where price is at the forefront, that is, products with a very high cost, the purchasing power of consumers is also important. Especially considering that cars are a necessity for families, families will want to buy this product to meet their needs and may want to choose a domestic brand car with national feelings. However, if the price of the domestic car is high, they may turn to different alternatives to meet their needs. For this reason, to appeal to all consumers at a certain income level in domestic automobile sales and to get a share of the market where there are stronger actors, it may be useful to apply some subsidies/incentives in domestic automobile sales.

When the conditions in Turkey are examined, it is seen that the domestic automobile offers some advantages to consumers. Domestic cars are produced to run on electricity, and a 25% motor vehicle tax is collected on electric vehicles in Turkey. This rate appears to be an advantage when compared to

internal combustion engine vehicles (T.C. Ministry of Treasury and Finance, 2003). In addition, certain rates of SCT (Special Consumption Tax) discounts are provided for electric vehicles depending on the vehicle's engine power and tax base (Official Gazette of the Republic of Turkey, 2023). However, these discounts are provided not only to domestic vehicles but also to other electric vehicles. Therefore, different supports need to be developed to encourage domestic automobiles. When the literature is examined, studies conclude that the support provided for domestic products affects the intention to purchase domestic products. A study conducted in South Korea found that tax reductions had a direct impact on the intention to purchase electric vehicles (Kim et al., 2022). Another study conducted in Malaysia concluded that monetary incentives directly affect the intention to purchase an electric car (Huang and Ge, 2019). Lim et al. (2019) also found in their study that financial incentives positively affect the intention to purchase an electric car. Zhu et al. (2022) determined in their research that there is a negative relationship between fuel prices and the adoption of electric vehicles, and the incentives to be offered (price discounts, etc.) will moderate this relationship and encourage the adoption of electric vehicles. Similarly, Jain et al. (2022) found that perceived risks related to electric vehicles negatively affect the willingness to adopt electric vehicles, but government support moderates the relationship between perceived risk and willingness to adopt. Hong et al. (2019) determined that government incentives have a moderating role in the effect of environmental responsibility on energy saving behavior. As can be understood from the studies in the literature, incentives have an impact on the intention to purchase a car. When it comes to domestic cars, it can be said that consumers who want to buy a domestic car due to other factors but cannot because they do not have sufficient financial means will prefer domestic cars thanks to incentives.

Based on these studies in the literature, the following Hypotheses were developed.

H1a: Subsidies/incentives have a negative moderating role in the relationship between performance expectation and domestic automobile purchase intention.

H2a: Subsidies/incentives have a negative moderating role in the relationship between social influence and domestic automobile purchase intention.

H3a: Subsidies/incentives have a negative moderating role in the relationship between price insensitivity and domestic automobile purchase intention.

H4a: Subsidies/incentives have a negative moderating role in the relationship between consumer innovation and domestic automobile purchase intention.

H5a: Subsidies/incentives have a negative moderating role in the relationship between environmental benefits and domestic automobile purchase intention.

H6a: Subsidies/incentives have a negative moderating role in the relationship between consumer ethnocentrism and domestic automobile purchase intention.

Research Methodology

The Main Population and Sample of the Research

The research aims to reveal the factors that affect consumers' purchasing intentions for domestic automobiles (TOGG) and to determine the moderation role of incentives/subsidies in the effect of these factors. Since the research was conducted specifically for the TOGG brand, the universe of the research consists of consumers living in 7 provinces in the Eastern Black Sea region (Ordu, Giresun, Trabzon, Rize, Artvin, Bayburt and Gümüşhane) and who have physically seen and experienced a TOGG brand automobile before. The selection of these provinces was influenced by the fact that the T10X model is an SUV vehicle and SUV vehicles are mostly preferred in rugged areas. Furthermore, the fact that these

cities were the first to introduce TOGG was an effective factor in selecting consumers from these locations as the research universe. However, this is one of the important limitations of the research. In the research where the quantitative research method was used, a face-to-face survey technique was used to reach these consumers. Because the exact number of consumers is not known and the time and labour problems that may be experienced in the process of reaching these consumers, the data was collected by the convenience sampling method. Since a total of 700 questionnaires were planned to be filled out in the study, the 700 questionnaires were distributed according to the population of the 7 provinces where the study was conducted. As can be seen in the table below, out of the 7 provinces where the research will be conducted, the survey was applied to 193 people in Ordu, 114 in Giresun, 206 in Trabzon, 87 in Rize, 42 in Artvin, 21 in Bayburt and 37 in Gümüşhane. As a result of the examination of the obtained surveys, as seen in the table, errors and omissions were detected in the surveys filled out by 1 person in Ordu, 3 in Trabzon, 2 in Rize and 1 in Artvin. Therefore, 693 of the 700 surveys obtained were taken into consideration (see Table 1). The studies of Yazıcıoğlu and Erdoğan (2004) were taken as a basis regarding the adequacy of the number of surveys obtained, and the authors argued in their studies that 384 participants are sufficient in cases where the research universe is more than 1 million. Therefore, it is seen that the number of surveys obtained is appropriate in terms of sampling.

Table 1

Sample Table

Province	2022 population	Total Survey (700) / Total population x Province population	Survey numbers	Number of incorrect surveys
Ordu	763.190	192,5	193	1
Giresun	450.862	113,7	114	-
Trabzon	818.023	206,4	206	3
Rize	344.016	86,8	87	2
Artvin	169.403	42,7	42	1
Bayburt	84.241	21,2	21	-
Gümüşhane	144.544	36,4	37	-
Total	2.774.279		700	7

Data Collection Process

In line with the purpose of the research, a survey form was used to reach consumers living in Ordu, Giresun, Trabzon, Rize, Artvin, Bayburt and Gümüşhane provinces and who have physically seen TOGG brand automobiles in these provinces. The prepared survey form was applied face to face by the interviewers after providing information on the subject in the specified locations (centre, square, shopping mall, etc.) of the relevant provinces. Since only consumers in the relevant provinces who had physically seen and experienced a TOGG brand automobile before were required to participate in the survey, participants were first asked whether they lived in that province, and then the filter question "Have you ever seen and experienced the domestic automobile (TOGG) on sale?" was asked. Participants who answered "Yes" to this question could continue to the next section of the survey, while participants who answered "No" were allowed to end the survey. The first part of the three-part survey includes descriptive questions about the first model (T10X) launched on the market, while the second part includes statements regarding performance expectation, social impact, price insensitivity, consumer innovation, environmental benefit, consumer ethnocentrism, subsidy/incentive and purchase intention scales. The last section of the survey form includes descriptive questions used to determine the demographic characteristics of the participants, such as gender, age and marital status. Before the survey form was applied to consumers, ethics committee approval was obtained from the Gumushane

University Scientific Research and Publication Ethics Committee (meeting dated 25/10/2023 and numbered 2023/5). After the ethics committee, the survey form was examined by two academicians to ensure face validity and then applied to 12 consumers as a pre-test. After the review, a few spelling errors in the statements were corrected and then the data collection process began. The data collection process was carried out face-to-face with consumers in 7 provinces between 01-15 December 2023. The demographic findings regarding the participants as a result of the analysis of the data are given in Table 2.

Table 2

Demographic Findings of Participants

Variable	Category	N	%
Did you like the first model introduced to the market as a domestic car?	Yes	537	77,5
	No	45	6,5
	Undecided	111	16
How would you choose between a domestic car and a similar vehicle when you had the opportunity?	I prefer to buy domestic cars	431	62,2
	I would rather buy another vehicle	176	25,4
	No idea	86	12,4
Gender	Female	271	39,1
	Male	422	60,9
Marital Status	Married	413	59,6
	Single	280	40,4
Age	18-28	235	33,9
	29-39	296	42,7
	40-50	102	14,7
	51 and above	60	8,7
Montly Income	12.000 TL and under	85	12,3
	12.001 TL-18.000 TL	61	8,8
	18.001 TL-24.000 TL	66	9,5
	24.001 TL-30.000 TL	179	25,8
	30.001 TL and above	302	43,6
Graduation	Elementary/Middle School	88	12,7
	High School	116	16,7
	Associate Degree/Bachelor's Degree	375	54,1
	Postgraduate Degree	114	16,5
Profession	Public	413	59,6
	Private Sector	113	16,3
	Freelance	22	3,2
	Retired	18	2,6
	Housewife	20	2,9
	Student	92	13,3
	Unemployed	12	1,7
	Other	3	0,4
Total		693	100

When Table 2 is examined, it is clear that the majority of participants preferred the first model presented to the market as a domestic automobile; additionally, more than half of the participants would prefer a domestic car over a similar vehicle if given the choice. In terms of demographic findings, it was determined that most of the participants were male, married and between the ages of 18-39. In addition, almost half of the participants had an income of 30,000 TL and above, in terms of graduation, there

were associate/bachelor's degree graduates, and in terms of profession, there were more public sector employees.

Measurements

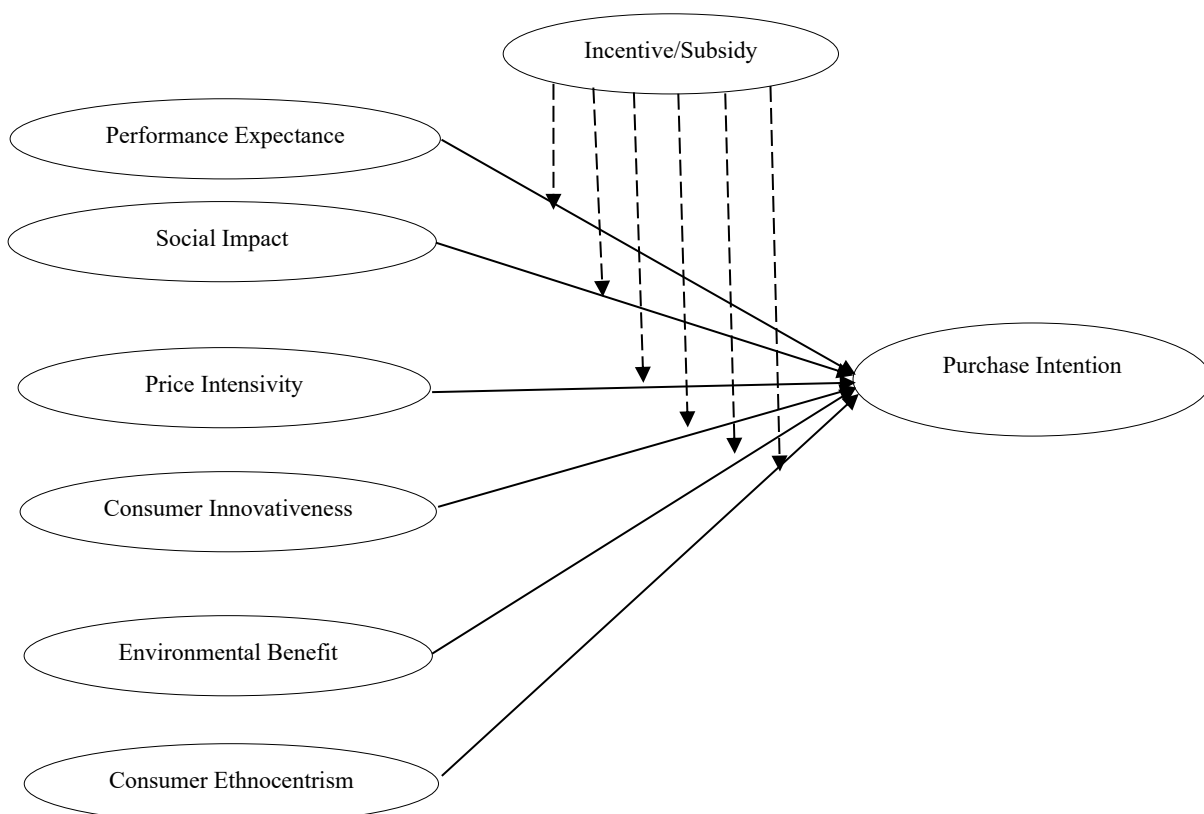
The scales used in the questionnaire form were obtained as a result of a literature review on the subject. Since all of the scales used were in English, they were translated and adapted into Turkish using the translation-back translation method. Of the scales used in the study, consumer innovativeness was measured with 3 items (Vandecasteele and Geuens, 2010), consumer ethnocentrism with 5 items (Klein et al., 1998), performance expectation with 4 items (Lee et al., 2019), social impact with 3 items (Madigan et al., 2017), price sensitivity with 3 items (Kapser and Abdelrahman, 2020), environmental benefit with 3 items, subsidy/incentive with 3 items (Chaveesuk et al., 2023) and purchase intention with 3 items (Lee et al., 2019). Since the scales used in the research were Likert-type scales in the original studies, Likert-type scales were preferred in the current study. In addition, the validity and reliability of all the scales used in the original studies were ensured.

Research Model and Data Analysis

The research model and hypothesis paths developed as a result of examining the literature on the subject are shown in Figure 1. Statistical package programs (SPSS 23 and SPSS PROCESS) were used to analyze the obtained data. First, frequency analysis was performed to obtain descriptive and demographic findings. After frequency analysis, explanatory and confirmatory factor analyses were conducted to determine and verify the factor structures of the scales used in the study, and reliability analysis was conducted to determine the reliability of the measurement tools used. Finally, to test the hypotheses, multiple linear regression and moderator variable analysis were performed using Model 1 of Hayes (2018) in SPSS PROCESS.

Figure 1

Research Model



Results

Descriptive Statistics and Relationships between Variables

A normality test was used to investigate the distribution of the study's data. At the same time, a correlation analysis was run to investigate the correlations between variables. Table 3 presents the results of the normality test and correlation analysis.

Table 3

Normality Test and Correlation Analysis Results

	Mean	S.D	Skewness	Kurtosis	1. CI	2. CE	3. PE	4. SI	5. PI	6. EB	7.I/S	8.PI
1. CI	4,37	0,03	-1,498	2,440	1							
2. CE	3,24	0,04	-0,099	-0,964	0,26**	1						
3. PE	3,43	0,04	-0,297	-0,659	0,26**	0,57**	1					
4. SI	3,41	0,04	-0,342	-0,549	0,25**	0,54**	0,73**	1				
5. PI	2,61	0,05	0,257	-0,987	0,12**	0,55**	0,49**	0,54**	1			
6. EB	3,81	0,04	-0,748	-0,131	0,28**	0,42**	0,56**	0,51**	0,37**	1		
7. I/S	4,23	0,03	-1,515	2,228	0,31**	0,22**	0,37**	0,34**	0,15**	0,48**	1	
8. PI	3,98	0,04	-1,125	0,628	0,29**	0,50**	0,63**	0,63**	0,44**	0,52**	0,57**	1

Note. * $p < 0.05$; (CI: Consumer Innovativeness; CE: Consumer Ethnocentrism, PE: Performance Expectation, SI: Social Impact, PI: Price Insensitivity, EB: Environmental Benefit, I/S: Incentive/Subsidy, PI: Purchase Intention).

The data's normal distribution was determined by examining the skewness and kurtosis values. Skewness and kurtosis values of -2 to +2 imply that the data are regularly distributed (George and Mallery, 2010). When Table 3 is analyzed, the data ranges between -2 and +2. As a result, the data can be characterized as regularly distributed. According to Büyüköztürk (2020), relationships below 0.3 are considered low, those between 0.3 and 0.7 are considered medium, and those beyond 0.7 are deemed high. Table 3 shows low, medium, and high-level connections between variables.

Factor Analysis

The fact that the KMO value is more than 0.60 and the Bartlett Sphericity Test result is significant suggests that the sample is appropriate for factor analysis and sufficient for factor analysis (Gürbüz and Sahin, 2017). After reviewing the KMO and Bartlett Test of Sphericity results, an Exploratory Factor Analysis (EFA) was performed. The EFA results are reported in Table 4.

When Table 4 is examined, it is seen that the KMO value of all factors is above 0.60. At the same time, the Bartlett Test of Sphericity results are also significant ($p < 0.05$). These results show that the sample is suitable for factor analysis. All factors have eigenvalues greater than 1 and are gathered under a single factor. At the same time, the total variance explained in all scales is over 0.60 (Gürbüz and Sahin, 2017). Finally, since the factor loadings of the scale expressions are over 0.5, all expressions were included in the study (Kalaycı, 2018). After examining the EFA results of the scales, CFA was performed. The fit values obtained as a result of CFA are shown in Table 5.

Table 4*Exploratory Factor Analysis Results*

Factor	Expressions	Factor Loadings	Eigenvalue	Variance Explained (%)
Consumer Innovativeness (KMO= 0,712)	CI1	0,915	2,505	83,493
	CI2	0,946		
	CI3	0,879		
Consumer Ethnocentrism (KMO=0,832)	CE1	0,720	3,222	64,431
	CE2	0,816		
	CE3	0,824		
	CE4	0,817		
	CE5	0,831		
Performance Expectation (KMO= 0,793)	PE1	0,925	3,068	76,707
	PE2	0,958		
	PE3	0,916		
	PE4	0,974		
Social Impact (KMO= 0,701)	SI1	0,922	2,356	78,537
	SI2	0,896		
	SI3	0,838		
Price Insensitivity (KMO= 0,754)	PI1	0,924	2,570	85,663
	PI2	0,938		
	PI3	0,915		
Environmental Benefit (KMO= 0,740)	EB1	0,931	2,555	85,153
	EB2	0,941		
	EB3	0,895		
Incentive/Subsidy (KMO=0,709)	IS1	0,865	2,322	77,407
	IS2	0,913		
	IS3	0,860		
Purchase Intention (KMO= 0,732)	PI1	0,955	2,637	87,906
	PI2	0,956		
	PI3	0,901		

Table 5*Confirmatory Factor Analysis Results*

	χ^2/df	RMSEA	GFI	NFI	CFI	IFI	RFI	TLI
Acceptable Values	≤ 5	$\leq 0,08$	$\geq 0,90$	$\geq 0,90$	$\geq 0,90$	$\geq 0,90$	$\geq 0,90$	$\geq 0,90$
Consumer Innovativeness	4,334	0,039	0,98	0,99	0,99	0,99	0,97	0,97
Consumer Ethnocentrism	1,501	0,027	00,97	00,96	00,99	0,99	0,91	0,97
Performance Expectance	4,216	0,070	0,90	0,93	0,93	0,93	0,91	0,91
Social Impact	2,716	0,024	0,94	0,94	0,95	0,95	0,92	0,92
Price Intensivity	1,226	0,018	0,95	0,97	0,97	0,97	0,90	0,91
Environmental Benefit	3,361	0,028	0,97	0,98	0,98	0,98	0,93	0,93
Incentive/Subsidy	1,832	0,021	0,97	0,96	0,97	0,97	0,90	0,90
Purchase Intention	2,840	0,027	0,91	0,94	0,95	0,95	0,92	0,92

When Table 5 is examined, it is seen that the obtained fit values are within acceptable limits (Şimşek, 2007). In order to obtain a good fit value, one modification was made between the 1st and 4th items in the consumer ethnocentrism scale.

Reliability Analysis

Cronbach Alpha values were examined to test the reliability of the scales. A Cronbach's Alpha value of 0.70 and above means that the scale has high reliability (Gürbüz and Şahin, 2017). The results of the reliability analysis are shown in Table 6.

Table 6

Reliability Analysis Results

Scale/Dimension	Number of Statements	Cronbach Alpha
Consumer Innovativeness	3	0,898
Consumer Ethnocentrism	5	0,862
Performance Expectance	4	0,897
Social Impact	3	0,863
Price Intensity	3	0,916
Environmental Benefit	3	0,912
Incentive/Subsidy	3	0,853
Purchase Intention	3	0,931

When Table 6 is examined, it is seen that the reliability level of all scales is quite high.

Hypothesis Tests

Multiple linear regression analysis was conducted to examine the effects of consumer innovativeness, consumer ethnocentrism, performance expectation, social influence, price insensitivity and environmental benefit on domestic automobile purchase intention. The analysis results are shown in Table 7.

Table 7

Regression Analysis Results

Independent variables	Dependent variable	B	t	S.E.	(β)	p
Consumer Innovativeness	Purchase Intention	0,11	2,915	0,04	0,08	0,00
Consumer Ethnocentrism		0,10	2,860	0,03	0,10	0,00
Performance Expectance		0,23	5,471	0,04	0,24	0,00
Social Impact		0,27	6,408	0,04	0,27	0,00
Price Intensivity		0,04	1,470	0,03	0,05	0,14
Environmental benefit		0,16	4,906	0,03	0,16	0,00
F=117,061; p <0.05; R2=0.50						

When Table 7 is examined, it is seen that consumer innovativeness, consumer ethnocentrism, performance expectation, social impact and environmental benefit have positive effects on domestic automobile purchase intention ($p < 0.05$). While the most effective factor on domestic automobile purchase intention is social impact, other factors are listed as performance expectation, environmental benefit, consumer innovativeness and consumer ethnocentrism according to their effect sizes. Price insensitivity has no significant effect on the intention to purchase a domestic car ($p > 0.05$). 50% of the

change in the intention to purchase a domestic car is explained by these factors (R^2 : 0.50). After examining the direct effects on domestic automobile purchase intention, the moderating effect of incentives/subsidies on the effect of these factors on domestic automobile purchase intention was examined. To detect the moderating effect, Model 1 proposed by Hayes (2018) was used in SPSS PROCESS. The moderating role of incentives/subsidies in the effect of independent variables on the dependent variable was examined one by one. Therefore, six different analyses were conducted in SPSS PROCESS to determine the moderating effect. The analysis results are shown in Table 8.

Table 8

Moderation Analysis Results

Independent Variables	Moderation Variable	Dependent Variable	R ²	F	p
Consumer Innovativeness	Incentive/Subsidy	Purchase Intention	0,0014	1,4813	0,22
Consumer Ethnocentrism			0,0044	5,7792	0,02*
Performance Expectation			0,0132	19,7526	0,00*
Social Impact			0,0103	15,7356	0,00*
Price Incentiveness			0,0010	1,2012	0,27
Environmental Benefit			0,0100	11,7388	0,00*

Note. * $p < 0.05$

When Table 8 is examined, it is seen that incentive/subsidy has a moderating role in the relationship between consumer ethnocentrism, performance expectation, social impact and environmental benefit and domestic car purchase intention ($p < 0.05$). In the next stage, the direction and magnitude of the moderating role were examined. The results are shown in Table 9.

Table 9

Direction of the Moderation Effect of Incentive/Subsidy

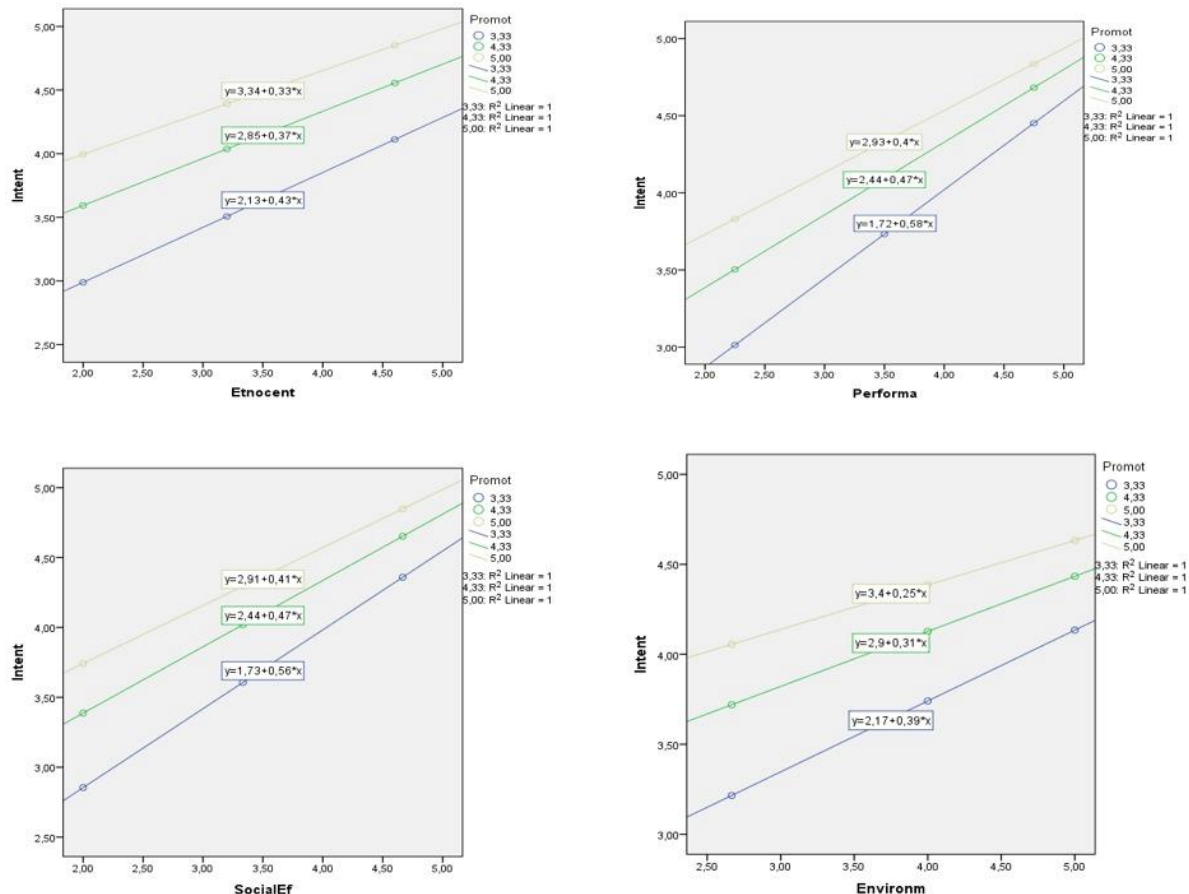
Consumer Ethnocentrism – Incentive/Subsidy – Purchase Intention					
Incentive/Subsidy	Impact	S.E.	p	Lower limit	Upper Limit
3	0,43	0,03	0,00*	0,3637	0,4999
4	0,37	0,03	0,00*	0,3171	0,4231
5	0,33	0,03	0,00*	0,2626	0,3953
Performance Expectation – Incentive/Subsidy – Purchase Intention					
Incentive/Subsidy	Impact	S.E.	p	Lower limit	Upper Limit
3	0,57	0,03	0,00*	0,5080	0,6430
4	0,47	0,03	0,00*	0,4172	0,5255
5	0,40	0,03	0,00*	0,3372	0,4667
Social Impact – Incentive/Subsidy – Purchase Intention					
Incentive/Subsidy	Impact	S.E.	p	Lower limit	Upper Limit
3	0,56	0,03	0,00*	0,4992	0,6294
4	0,47	0,03	0,00*	0,4217	0,5272
5	0,42	0,03	0,00*	0,3513	0,4779
Environmental Benefit – Incentive/Subsidy – Purchase Intention					
Incentive/Subsidy	Impact	S.E.	p	Lower Limit	Upper Limit
3	0,39	0,04	0,00*	0,3170	0,4707
4	0,30	0,03	0,00*	0,2415	0,3703
5	0,25	0,04	0,00*	0,1711	0,3235

Note. * $p < 0.05$

When the table is examined, as the incentive/subsidy increases, the positive effect of consumer ethnocentrism, performance expectation, social impact and environmental benefit on the intention to purchase a domestic car decreases. The moderating effect of incentive/subsidy is also shown in Figure 2.

Figure 2

Moderation Effect of Incentive/Subsidy



As seen in Figure 2, when the incentive increases, the effect of consumer ethnocentrism, performance expectation, social impact and environmental benefit on domestic car purchase intention decreases.

General Discussions and Implications

Conclusions

This study aims to reveal the effects of consumer innovativeness, consumer ethnocentrism, performance expectation, social impact, environmental benefit and price insensitivity on the purchase intention towards the TOGG brand, Turkey's first domestic automobile launched on the market, and the moderation role of government incentives in these effects. According to the findings, while positive and significant effects of consumer innovativeness, consumer ethnocentrism, performance expectation, social impact, and environmental benefit on domestic automobile purchase intention were determined, no significant effect was determined regarding price insensitivity.

It was concluded that the performance expectation regarding the domestic automobile has a positive effect on purchase intention. In consumer behavior, the performance expectation regarding a product positively affects the purchase intention of that product. When considered from an automobile

perspective, factors such as comfort, fuel consumption, acceleration time and safety are effective in the expected performance of a car. Therefore, since each consumer's expectations will be different, the car purchased must meet the expectations of the consumers. Many previous studies (San Martín and Herrero, 2012; Ratten, 2015) have shown a positive relationship between performance expectation and purchase intention. In the literature, some studies conclude that the performance expectation for a car to be purchased positively affects the purchase intention, especially in the case of automobiles (Topolšek, 2020; Foroughi et al., 2023). Considering the features of the TOGG brand car such as being electric, having high technological equipment and offering comfortable driving pleasure, it can be said that it will meet the performance expectations of consumers and positively affect their purchase intention. Another result obtained in the research is that social influence has a positive effect on the intention to purchase a domestic car. Since humans are social beings, they are affected by their social environment, and the social environment also shapes the purchasing behavior of the individual. Considering that electric cars are being used extensively today and that the TOGG brand car is also an electric car, there is an interest in electric cars in the social environment. In addition, the fact that the TOGG brand is domestic directs consumers with high nationalist feelings to these cars (Yılmaz et al., 2022), and these consumers can also suggest to other consumers around them to buy domestic cars. Therefore, when the literature on social influence is examined, some studies conclude that social influence has a positive effect on both different product groups (Wang, 2014; Joshi and Rahman, 2016) and automobile purchase intention (Lim et al., 2019; Topolšek, 2020).

Another important finding in the research is that consumer innovation has a positive effect on domestic automobile purchase intention. The TOGG brand domestic automobile, which is produced by taking into account current innovations, is an innovative brand, as it is an electric vehicle and has new generation technological equipment. Therefore, in this direction, it has been determined that consumers with innovative features have the intention to purchase the domestic automobile TOGG. There are studies in the literature that conclude that consumer innovation has an impact on the intention to purchase domestic products and domestic automobiles (Avcı, 2020; Li et al., 2021). In addition to their innovative characteristics, consumers may also have ethnocentric tendencies. The concept of ethnocentrism, which expresses nationalist and patriotic feelings, encourages consumers to act locally and nationally in their purchasing behavior. When Turkey's domestic automobile is considered and the failed domestic automobile attempts throughout history are taken into account, domestic consumers have expectations of domestic automobiles. The presence of the TOGG brand in the market in line with this expectation, makes it more likely that consumers with high ethnocentric tendencies will purchase domestic cars. In the research, it was determined that consumer ethnocentrism has a positive effect on the intention to purchase a domestic automobile, and this result supports the results of many previous studies on the subject (Avcı, 2020; Zengin et al., 2024). Another important finding of the research is that environmental benefits have a positive effect on the intention to purchase a domestic car. The increase in environmental problems in recent years has brought environmental sensitivity to the fore in production and consumption, and the demand for products that do not harm the environment or cause less harm has increased (Aracıoğlu and Tatlıdil, 2009). Considering the cars that run on polluting fuels such as gasoline and diesel, electric cars have significant advantages in terms of the environment (Wei et al., 2023). In this context, it was determined as a result of the research that consumers who care about environmental benefits have the intention to purchase domestic cars. With these results, the first five hypotheses of the research were supported and the results reached within the scope of these hypotheses are parallel to the results of similar studies in the literature. According to the unsupported hypothesis of the research, no effect of price insensitivity of consumers on their intention to purchase domestic automobiles could be determined. This situation can be explained by the fact that the TOGG brand is new, and consumers' relationships with it have yet to achieve a degree of love. Because prior research

(Aro et al., 2018) found that brand love induces price insensitivity. The fact that consumers' loyalty to the TOGG brand has not yet reached a suitable level does not imply that they are price insensitive.

When the findings regarding the moderating role of incentives, which is the moderating variable in the research, were examined, it was determined that incentives had a moderating role in the effects of consumer ethnocentrism, performance expectation, social impact and environmental benefit on domestic automobile purchase intention. According to the findings, as incentives increase, the positive effects of consumer ethnocentrism, performance expectation, social impact and environmental benefit on domestic automobile purchase intention decrease. This finding means that the priority of the participants is not environmental benefit, performance, other people's opinions or the domestic nature of the product in question, but the affordability of the price. Scale also confirms this situation. When the means of the participants' responses to the statements in the scales are examined, it is seen that while there are very high means in all dimensions, the mean of the price insensitivity dimension is quite low (2.61) compared to the other dimensions. Therefore, although the participants welcome the production of domestic cars and state that the performance of the domestic car, its environmental friendliness, and the opinions of the people around them about the domestic car are important, they do not have the idea of buying a domestic car regardless of its price. At the same time, the importance they give to incentives is also quite high (4.23). Therefore, when it comes to price, the performance or environmental friendliness of the car is secondary. For example, according to these findings, no matter how environmentally friendly a car is, consumers will not buy that car if its price is not affordable. To put it more clearly, when there are two cars, one environmentally friendly and the other more harmful to the environment, consumers will prefer the car with the more harmful effect if higher incentives are given to that car. The reason why incentives are so important for consumers may also be related to their income status. It is normal for a person who has to work at least three years to buy a car to have their first priority be factors such as price or incentives rather than the environment or performance. Uslu and Demirel (2022) concluded in their research that consumers' incomes and incentives should be increased to increase electric car sales, supporting this situation.

Theoretical and Practical Contributions

Considering the research findings, it is seen that the research makes important theoretical contributions to the literature. First of all, in previous studies, domestic automobile and electric car purchasing behavior were examined separately. Since the TOGG brand, which is the subject of the current research, is both an electric and domestic car, the fact that the intention to purchase a domestic car is examined within the framework of an electric car reveals the importance of the research. For this reason, in addition to the consumer ethnocentrism variable towards the domestic automobile, variables such as environmental benefit and innovation regarding the electric car were added to the model. By verifying the effects of innovation, ethnocentrism, performance expectation, social impact and environmental benefit on domestic automobile purchase intention, the importance of these variables for automobile purchase intention was re-established. In addition, the inclusion of incentives as a moderator variable in the study is another theoretical contribution to the literature. In the literature, incentives are generally offered by governments for purchasing electric vehicles. In this study, the importance and moderator role of incentives in terms of factors affecting the intention to purchase a domestic car are revealed.

In addition to its theoretical contributions, the research also has practical contributions. When the research results are examined, the positive effects of innovation, ethnocentrism, performance expectation, social impact and environmental benefit on domestic automobile purchase intention guide domestic automobile manufacturers and marketers. Considering the models that the TOGG brand plans to launch soon, the results achieved are important in terms of application. Automobile manufacturers must give importance to innovation in the cars they offer to the market and adapt current technological

developments to their cars. In addition, considering the positive relationship between ethnocentrism and purchase intention, domestic automobile brands should prioritize domestic elements in their production and employment. Of course, it is not enough to include domestic elements; in addition, to ensure customer satisfaction, the performance that customers expect from the car must be at a high level. For this purpose, importance should be given to performance enhancing elements throughout the process, from fuel consumption to safety equipment, from pre-sales support to after-sales support. Since electric cars in particular cause less damage to the environment and thus drive consumers towards electric cars, all business management processes should be guided by environmentally friendly policies. Finally, considering the importance of government incentives for purchasing domestic cars, governments should focus on incentives that will attract consumers, such as tax reductions and affordable credit opportunities.

Research Limitations and Recommendations

The study has important findings but also several limitations. Firstly, since the data for the study were obtained by a convenience sampling method, the results of the study cannot be generalized and the results include the consumers who participated in the study. Similarly, due to time and opportunity constraints, the fact that the data collection was conducted on consumers living in the seven provinces in the Eastern Black Sea Region specified in the method section is another limitation. It may be recommended that researchers who will conduct studies on this subject in the future conduct a study that includes consumers in other regions of Turkey and makes comparisons between regions. In addition, in the face-to-face surveys conducted in the relevant provinces, it was assumed that the participants lived in those provinces by taking into account their statements. Finally, considering that the domestic automobile has just entered the market, satisfaction and complaint-focused research can be conducted to determine whether it will provide the expected performance or to reveal the satisfaction level of consumers. Finally, since only incentives were considered as a moderating variable in the research, future research can also examine the moderating roles of demographic variables such as gender, income, and age.

Compliance with Ethical Standards

Ethical Approval

Ethics Committee Approval was obtained from the Gümüşhane University Scientific Research and Publication Ethics Committee (meeting dated 25/10/2023 and numbered 2023/5).

Author Contributions

All authors contributed jointly to the design, data collection and analysis, interpretation of data and findings, drafting, critical review, final approval and accountability, and supervision processes. Concept and idea development studies were carried out by İ.A. and S.Y., literature review and conceptual design were carried out by A.K. Data analysis was carried out by S.Y., while review, verification and finalization processes were carried out by İ.A. and A.K.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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