

CONSUMER DYNAMICS ON GREEN HOMES: AWARENESS, ATTITUDES AND
PURCHASE INTENTION



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PURCHASE INTENTION

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PLAGIARISM

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

Residential buildings account for a considerable portion of energy consumption and carbon emissions. Given the rate of urban sprawl in Turkey, designing and marketing of new development projects without prioritizing ecological impact, causes further distress on climate and natural resources. The aim of this study is to investigate the effects of environmental concern, environmental awareness and subjective norms of people who plan to purchase a home in the short or long term on their attitudes towards green home and purchase intentions. In the study, the mediating effect of attitude towards green home between independent variables and purchase intention was also tested. In addition, it was analyzed whether price sensitivity has a moderating effect between attitude towards green home and purchase intention. A total of 332 people responded to the survey, and 240 people who were suitable for the study sample were included in the analysis. SPSS 26 program was used for factor, reliability, and regression analyses in testing the hypotheses, the Process Plugin of SPSS was used for evaluating mediator and moderator variables. The results of the analyses showed that environmental awareness and subjective norms have a significant relationship on attitude towards green home, and social norms on purchase intention. In addition, while it is supported that the attitude towards green home has a partial mediating effect between subjective norm and purchase intention, the moderating effect of price sensitivity could not be supported. The study aims shed light to future academic studies on consumer housing preferences and practically guide the marketing strategies of the developers and real estate agencies as well as non-governmental organizations in the sector in promoting environmentally friendly residential buildings.

Key words: Green home, green marketing, environmental awareness, environmental concern, subjective norm, attitudes towards green home, purchase intention.

ÖZET

Enerji tüketiminin ve karbon emisyonlarının önemli bir bölümü konutlarda oluşmaktadır. Türkiye'deki kentsel yayılma hızı göz önüne alındığında, ekolojik etkiyi önceliklendirmeden tasarlanan ve pazarlanan yeni konut projeleri, iklim ve doğal kaynaklar üzerinde artan oranda olumsuz etkiye yol açmaktadır. Bu çalışmanın amacı, kısa veya uzun vadede ev almayı planlayan kişilerin çevresel kaygı , çevresel farkındalık ve öznel normlarının yeşil eve karşı tutum ve satın alma niyetleri üzerindeki etkisinin incelenmesidir. Çalışmada, ayrıca yeşil eve karşı tutumun bağımsız değişkenlerle satın alma niyeti arasındaki aracılık etkisi test edilmiştir. Ek olarak, fiyat hassasiyetinin yeşil eve karşı tutum ile satın alma niyeti arasındaki düzenleyici (ılımlaştırıcı) etkisinin olup olmadığı analiz edilmiştir. Ankete toplamda 332 kişi cevap vermiş olup, çalışmanın örneklemine uygun olan 240 kişi analize dahil edilmiştir. Hipotezlerin analizinde faktör analizi, güvenirlik analizi ve regresyon analizi için SPSS 26 programı kullanılırken, aracı ve düzenleyici değişkenler için SPSS'nin Process eklentisi kullanılmıştır. Analiz sonuçları tüketicilerin çevresel farkındalık ve sosyal normlarının yeşil eve karşı tutum üzerinde, sosyal normlarının satın alma niyeti üzerinde anlamlı ilişkinin olduğunu göstermiştir. Ayrıca yeşil eve karşı tutumun sosyal norm ile satın alma niyeti arasında kısmi aracılık etkisi olduğu doğrulanırken, fiyat hassasiyetinin düzenleyici etkisi doğrulanamamıştır. Çalışma sonuçlarının gelecekte, konut tercihleri ile ilgili tüketici davranışı alanındaki akademik araştırmalara ve inşaat-emlak sektöründeki firmalar ile sivil toplum kuruluşlarının pazarlama/tanıtım stratejilerine rehberlik edeceği umulmaktadır.

Anahtar kelimeler: Yeşil ev, yeşil pazarlama, çevresel farkındalık, çevresel kaygı, öznel norm (sübjektif norm), yeşil eve karşı tutum, satın alma niyeti

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1. INTRODUCTION

The effect of the climate change is becoming gradually noticeable day by day. High carbon emissions lead to global climate warming. Most of carbon emission is caused by the extreme usage of fossil resources. As energy consumption is increasing, carbon emission is gradually increasing, too. The 2019 Global Status Report for Buildings and Construction has recently been published by the Global Alliance for Buildings and Construction and it shows that building and construction are responsible for 39 % of all carbon emissions in the world (Global Alliance for Buildings and Construction, 2019). Thus, society's anxiety towards environmental problems also increases green consumption (Wijayaningtyas, Handoko, & Hidayat, 2019). Green consumption is related to environmentally responsible consumption. In other words, consumers consider whether the products are environmentally friendly or not in their purchasing choices. (Ozaki & Sevastyanova, 2011).

However, not all consumers are willing to buy environmentally friendly products. Some consumers perceive the environmentally friendly products less effectively (Luchs, Naylor, Irwin, & Raghunathan, 2010). Cost may also be a critical dissuasive; green homes are more expensive than conventional homes, and not all consumers are willing to pay price premiums for green home. Frankly, while some consumers are willing to purchase green home others are not, which suggest that there are individual differences among consumers about factors affecting decision making. (Haws, Winterich, & Naylor, 2014) Thus, the primary aim of this study to understand which factors make consumers willing to purchase a green home.

Recently, green marketing is getting crucial for business. Because consumers now have worries about the future of the world and try to use environment friendly products as much as possible. In return to these attitudes of the consumers, companies have start to change marketing

strategies so as to increase awareness of this environment friendliness. (Boztepe, 2012) With this strategy made by businesses on green marketing, awareness of green purchasing has begun to boost among the consumers. With this increased awareness, the need for a green home has become a necessity. The green buildings are intended to decrease, or even, eliminate unfavorable impacts of other constructions on environment and make these buildings more sustainable by using energy efficiently. It can be accomplished through green technology applications like photovoltaic system, rain water collection, recycled materials. (Elias & Lin, 2014).

1.1 Purpose of the Study

The purpose of the study is to analyze which factors affects a consumer's purchase intention when buying a green home. In addition, this study examines whether environmental concern, environmental awareness, subjective norm and price sensitivity affect consumers' attitude and their purchase intention. Subjective norm refers to perceived social pressure to perform or not to perform the behavior (Ajzen, The Theory of Planned Behavior, 1991).

1.2 Importance of the Study

Investment on Green home is increasing day by day because of some reasons such as environmental pollution, global warming and energy efficiency. Thus, understanding customers' purchase intention has become highly important.

While many previous studies have focused on willingness to pay more for green home, consumers' purchase intention, consumers' awareness. There are few studies which have

analyzed the factors that affect consumer attitude. This study is expected to expand understanding on consumer attitude and purchase intention for green home by using factors that affect the consumer attitude.

The findings of this study are beneficial for construction companies, especially their marketing departments. Because understanding customer purchase intention is a crucial issue for professionals of marketing in companies.

1.3 Research Questions

This study tries to find out answers to the following three questions

1. What are the most influencing factors that affect the green home purchase intention of consumer?
2. What are the most influencing factors that affect attitude of customer in buying a green home?
3. Is there a relationship between consumer attitude and purchase intention?

2. LITERATURE REVIEW

2.1 Green Home

In the 1970s, there was an energy crisis that Earth's resource supplies an environmental health became an increasingly serious issue. All events that happened at that time were beginning of thinking about the importance of efficient resource using and green consumption (Zhang, Kang, & Jin, 2018).

Rachel Carson's book *Silent Spring*, the efforts of early environmentalists such as Barry Commoner, Lester Brown laid the Foundation for these events. Result of the oil Shocks of the early 1970's, marked the first serious concern about resources. The result was a solar technology, explosion of interest in energy efficiency, retrofitting homes and commercial buildings with insulation, and energy recovery systems. (Kibert, 2004). Subsequently, The British green building system, BREEAM (the Building Research Establishment Environmental Assessment Method) was Developed in 1992. In 1993, inside the boardroom of the AIA (American Institute of Architect), with representatives from over 60 firms and nonprofits the USGBC (U.S. Green Building Council) was founded. Then, USGBC had developed LEED (Leadership in Energy and Environmental Design) to measure the sustainability and performance of a building (<https://www.usgbc.org>, 2020).

Green buildings are considered a solution to overcome environmental problems such as extreme energy consumption and air pollution (Retzlaff, 2009). Main goals of the green home are enhancing energy efficiency, utilizing durable and non-toxic materials, reducing water consumption with high- recycled content materials. (Ali & Nsairat , 2009). (Kubba, 2010) state that, green building about enhance the efficiency in building by using energy, water and materials to protect naturel resources and improve built environment. Hereby, foremost benefits of the green building include that three items;

- Protection of ecosystem
- Reducing energy consumption
- Improved occupant health

2.1.1. Major Categories

The focus of the Green building is a type of development that increase sustainability and efficiency of building. In addition, green building also aims decrease the negative impacts of development on human health (Retzlaff, 2009). Most green buildings focus on several issues, sustainable sites, energy consumption, water efficiency material selection (Chen & Nguyen, 2017).

2.1.1.1. Project Location and Transportation

Green building starts with land selection. Project location has an important impact on reducing CO₂ emission and maintaining people's health. The fact that the buildings are close to services such as hospitals, banks, parks, hospitals schools and restaurant could decrease vehicle usage and increase the chance of physical activities. With easy access to public transportation, both reducing carbon emissions and reducing traffic and noise pollution.

2.1.1.2. Energy Consumption

Global energy consumption and need for energy is increasing day by day. The building and construction sector responsible for 36% of final energy use and 39% of energy and process related CO₂ emissions in 2018. From 2010 to 2017, global final energy consumption in buildings rose about 7%. Therefore, urban planning policies must be used to increase renewable energy capacity and decrease energy demand. World population will be considered to increase by 2,5 billion by 2050. For this reason, new building will play significant role on future buildings related energy use and emissions. (Global Alliance for Buildings and Construction, 2019)

Although the share of fossil fuels in electricity production is decreasing worldwide, most of the electricity production is met from these sources. For instance, in Turkey, production of electricity is met from natural gas (% 25,4), oil (% 11,5), coal (%10) and fuel oil (% 0,3). Thus, 47.2 percent of electricity production is obtained from fossil fuels according to data of 2018. (Sektörel Bakış -Enerji; KPGM)

Space heating, space cooling, water heating, lighting electronics and appliances make up a large part household's electrical consumption. (Zhao, McCoy, & Du, 2016). Green home has some features according to use energy efficiency as follows (Vyas, Ahmed, & Parashar, 2014);

- The architectural design that optimized as per climate and sun path analysis
- The building that has an energy-efficient artificial lighting design and daylight integration.
- The building that has energy-efficient air conditioning design with controls integrated to decrease energy consumption

It is very important to usage of the sunlight to reduce energy consumption. For this purpose, may use motion detectors and daylight sensors to avoid occurrence of energy wastage (Azizi, Fassman, Wilkinson, & Ani, 2013).We can give the following examples to reduce energy consumption in the green building ; providing renewable energy from photovoltaic panels integrated with heat pump, using efficient lamps and daylight or user sensitive control systems (Vyas, Ahmed, & Parashar, 2014)

2.1.1.3. Water Efficiency

Water is a crucial and essential resources all human activity (Nelson, 2007). Fresh water scarcity and pollution are becoming one of the most critical global issues. Fresh water inefficient and unsustainable use of potable water threatens to exacerbate freshwater famine in the world.

According to UNESCO (United Nations Educational, Scientific and Cultural Organization) World Water Development Report 2020 Global water use has increased six times over the past 100 years and continues to grow at a rate of approximately 1% per year because of increasing population, economic development and changing consumption patterns (UNESCO, 2020). For this reason, the importance of x” water-use efficiency is increasing day by day.

Water efficiency refers to utilizing improved technologies and practices that provide equal or better service with less water. (Vatalis, Manoliadis, Charalampides, Platias, & Savvidisa, 2013). There are many methods that allow us to reduce the wastewater in the green home. One of the primary uses of water in a building is toilets, sinks, showers and similar uses. Therefore, that decrease the amount of wastewater that ultimately flows in sewer system is significant. Water consumption can be reduced by using low-flow fixtures on faucets and showerheads. (Howe, 2011). Another purpose of the green building is to reduce the utilize of treated water for landscaping. An effective approach to reduce treated water use is the integration of a rain barrel in a house. Rainwater is collected by using barrel or cistern in rainy day. (Guo, ASCE, & Baetz, 2007) In this way, the rainwater can be used with car washing, filling the swimming pool, or ornamental pool, with additional piping garden irrigation. In addition, the rain water that collect in cistern easily can be used with washing machine and toilet reservoir by using filter and pump system (Şahin & Manioğlu, 2011).

2.1.1.4. Materials Selection

Green materials are becoming increasingly popular for in home uses and often not only to minimize chemical emissions but also to be recyclable and less toxic (Spiegel & Meadows, 1999). Unlike Green building materials, conventional building products consist of a heterogeneous mixture of materials with the inclusion of adhesives and resins. (Hoang, Kinney, Corsi, & Szaniszlo, 2010)

Green materials that there is no impact on humans and the environment can reduce CO₂ emission, indoor air pollution and recyclability (Thormark, 2006). People spend most of time in the their home, and hazardous materials directly affect indoor air quality. Because of low air quality, building occupant's health are affected negatively. (Khoshnava, Rostami, Valipour, Ismail, & Rahmat, 2016)

2.1.1.5. Indoor Air Quality

One of the most significant functions of buildings is ensure a place where people can live and work. Besides, green building should improve the comfort, health of the occupants compared to conventional buildings. Some serious health issues like Legionnaires' disease, lung cancer, carbon monoxide poisoning result of poor indoor air quality. (Persily & Emmerich, 2012)

According to (Steinemann, Wargocki, & Rismanchi, 2017), indoor air quality is related to pollutants within indoor environments. Indoor air quality is significant elements in green

building certification schemes. Certifications of each country also name air quality differently. For instance, in BREEM, Indoor air quality is analyzed in the category for health and well-being, in LEED and Green Star in the category named indoor environmental quality.

2.2 Green Marketing

Serious changes are taking place in the business world about responsibility towards society and environment. Companies began to focus on strategies aimed at long-term profitability and environmentally friendly sustainability. It is obvious that companies are established for profit. However, today's companies should be aware that they are responsible for the environment and society (Boztepe, 2012). International studies show that consumers are more concerned about the environment and are gradually changing their behavior (Arbuthnot, 1977). Thus, a new market is emerging for sustainable products as there is a way for consumers to contribute to environmental protection (Cornwell & Schwegler, 1995).

Concern about non-renewable energy resources first arose with the oil crisis of the 1970s. Afterwards, the necessity of environmentally friendly product production began to be questioned. The concept of green marketing was first widely discussed in 1975 at a seminar organized by the American Marketing Association (AMA). The results of this workshop resulted in one of the first books on green marketing entitled "Ecological Marketing" (Henion & Kinnear, 1976). According to this definition, ecological marketing is the study of positive or negative effects of marketing activities on environmental pollution, energy consumption and consumption of other resources. According to the American Marketing Association, green marketing is the marketing of products that are deemed environmentally safe. Green marketing is an integrated marketing concept in which products that are less harmful to the environment are produced by using renewable energy sources with the increase of awareness of

environmental problems. While the transition to "green" may seem expensive in the short term, it will prove advantageous in the long run (Mishra & Sharma, 2010).

According to (Polonsky, 1995), green marketing is all activities designed to create and facilitate any exchange aimed at meeting human needs or desires with the least harmful impact on the natural environment. Green marketing includes establishing a connection between the company and customers; and this process requires a holistic approach, because businesses will naturally have to integrate all their activities in line with environmental concerns. At this point, Green marketing includes strategic options such as Green packaging, Green communication, Green prices and Green products.

2.2.1. Strategies of Green Marketing

As in all disciplines, marketing is also subject to change over time. Together with the fact that consumers are more concern to the environment, companies have changed their strategies in this direction. Hence, Companies are beginning to take care to develop a product that will satisfactorily meet the needs of consumers with minimal negative impact on the environment (Menon & Menon, 1997). While meeting consumer needs using a green marketing strategy, the functional and emotional benefits of a product will need to be highlighted, as most environmental concerns include the spiritual needs of people. In terms of some values, green marketing strategy shows different features than conventional marketing. We can list them like this; long-term focused, integrated approach and more importantly human life and health centered.

The business world is increasingly focusing on developing green internal and external strategies. Recycling of pollution, developing substitutes for non-renewable inputs, and redesigning products to reduce material content and energy consumption are gaining in importance (Kleindorfer, Singhal, & Wassenhove, 2005). Another important aspect of green

marketing strategy is how the supply chain and the process of converting inputs into outputs are handled. Businesses are starting to understand the importance of recycling waste to offset damage to the environment (Arseculeratne & Yazdanifard, 2014).

Another important strategy in green marketing is pricing. Many consumers find green products often priced higher than traditional ones. (Peattie, 1999) argued that although their assumptions are correct, these products are not unusually expensive and remain cheap as they do not consider the socio-economic harms of traditional products. He argues that one way to deal with the high price debate is to ask the consumer if they "want to continue to buy cheap environmentally harmful products." Here we conclude that consumers need more information about the benefits of green products to judge the value of green products objectively.

Green promotion, another strategy, is an activity to promote products that do not damage the natural environment. Green promotion helps consumers overcome the lack of information that causes them to make environmentally wrong decisions (Polonsky & Mintu-Wimsatt, 1997).

2.2.2. Green Consumer

Green consumers are the person who generally adopts environmentally friendly behaviors and tend to purchase green product. The green consumer thinks that protecting the environment should not be left only to the business, the government and environmentalists. According to them, the consumer can also play an important role (Shamdasani, Chon-Lin, & Richmond, 1993). Green consumers are the driving force of the green industry with their tendency towards green products. Green consumers are not just interested in green products, they also want companies to operate in green practices such as recycling and energy efficiency (Montague & Mukherjee, 2010).

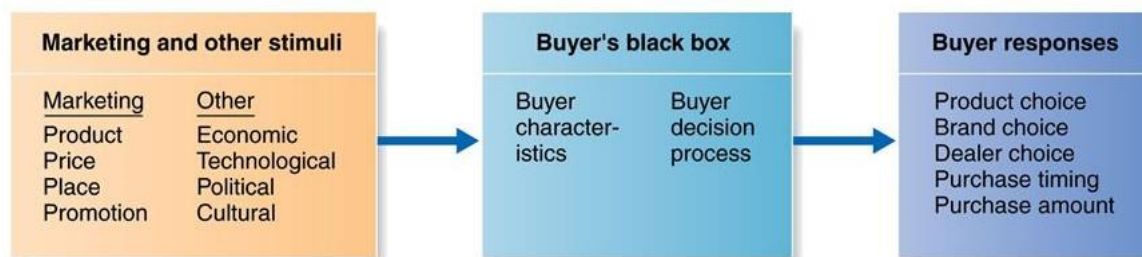
Green consumers would like products that will protect and benefit the environment, provided that they do not compromise on quality (Montague & Mukherjee, 2010). (Vermillion

& Peart, 2010) stated that, consumers are unlikely to buy a product solely because of its environmentally friendly properties. A product should also include additional benefits such as health, safety or cost effectiveness.

2.3 Consumer Buying Behavior

With the growing competition in the world, competition becomes inevitable for companies selling the same product. Therefore, the goal of marketing has always been to understand how consumers think and act. According to (Durmaz, Çelik, & Oruç, 2011) marketers try to understand the needs of different consumers to create their marketing strategies. Marketers are thought to be able to take control of the purchasing behavior of the consumer, but in fact they can only influence. Marketers can examine a consumer's purchases to find out what they bought from where and how much. However, it is not so easy to learn the reasons for consumer buying behavior. The answers are often found deep in the consumer's mind. For this reason, Kotler and Armstrong named this part as the black box of the consumer (Kotler & Armstrong, 2009).

Essential question for marketers; How do consumers react to the various marketing stimuli the company can use? For this reason, companies and academics have comprehensively studied the relationship between marketing stimuli and consumer response. Figure 1 shows that marketing and other stimuli enter the consumer's "black box" and produce certain responses.

Figure 1: Model of Buyer Behavior

Note. Adapted from Kotler P. and Armstrong G., "Principles of Marketing", 15th ed., 2014, Pearson Education, London.

According to (Dawson, Findlay, & Sparks, 2006), purchasing behavior is a series of attitudes that characterize the decision-making process of consumers. (Hawkins & Mothersbaugh, 2010) state that, consumer behavioral information is effective not only in influencing decisions about which product to buy, but also in matters such as which charities to support and which university to attend. This section will first look at buyer characteristics as they affect purchasing behavior.

2.3.1. Characteristics Affecting Consumer Behavior

2.3.1.1. Cultural Factors

(Hawkins & Mothersbaugh, 2010) defined culture that is a complex whole that contains belief, knowledge, law, morality, law, tradition and other abilities and habits acquired by people in the social environment. Consumer buying behavior is strongly affected by cultural, personal, social and psychological characteristics. Especially, cultural factors have a wide profound impact on consumer behavior. (Hawkins & Mothersbaugh, 2010) state that, even though globalization can affect cultural values, it would be a mistake to consider that all cultures become homogeneous. A child growing up in a society learns basic value perceptions and behaviors from family. In addition, every society and group have its own culture and this culture

varies from country to country. Marketing strategies to be made without considering these cultural features will produce ineffective or erroneous results. The cultural factor in the literature has been examined in 3 groups as culture, subculture and social class (Kotler & Armstrong, 2009). According to (Arnould & Thompson , 2005), culture is an effective force in regulating human behavior. It consists of a common set of behavior patterns that are communicated and maintained by members of a particular community in various ways.

2.3.1.2. Social Factors

Consumer behavior is also affected by social factors. For this reason, it has become very important for marketers to understand the social environment that affects consumers' final product or brand preferences. The social factor in the literature has been examined in 3 groups as reference groups, family, roles and status. According to (Yang, He, & Lee, 2007) , the social environment involves the effect of reference groups such as family, friends and coworkers who influence the social decision-making processes of consumers. Reference groups lead the adoption of certain lifestyles, the formation of values and attitudes, and influence purchasing behavior and self-concept (Bearden & Etzel, 1982). Family members also can strongly affect buyer behavior. For this reason, marketers attach great importance to the influence of husband and wife and children in the purchasing process of products and services. In addition, people tend to purchase product suitable to their roles and status. People belong to many organizations and groups throughout their lives. In these groups, everyone has a role and status, and this role consists of all the behaviors expected by the group.

2.3.1.3. Psychological Factors

Like other factors, the psychological factor helps to find answers to "why" and "how" questions in the purchasing behavior. Consumer buying behavior is affected by four main psychological factors; perception, motivation, learning, beliefs and attitudes.

Motivation is about the "cause of the behavior, how the behavior is initiated, energized, sustained or stopped (McClelland, 1985)". According to (Kotler & Armstrong, 2009), consumers generally do not explain the reason for their behavior, because this is due to persons' hidden subconscious. Therefore, motivation researchers use a variety of techniques to reveal the emotions and attitudes that underlie purchasing situations. Kotler and Armstrong added that a motivated person is ready to behavior. How a person behaves depends on her or his own perception of the situation. The next psychological factor, perception, refers to the process in which an individual select, organizes, and interprets their stimuli regarding purchasing decision selection (Kotler & Armstrong, 2009).

(Hawkins & Mothersbaugh , 2010) have defined learning as alteration in long-term memory or behavior. Researchers argue that most human behavior is learned. Learning happens through the interaction of impulses, responses to stimuli, and reinforcement (Kotler & Armstrong, 2009).

(Kotler & Armstrong, 2009) defined belief as a descriptive thought that people have about something. Attitude describes a consumers' consistent evaluations, feelings, and inclinations towards an object or idea. The hierarchy of influence model states that beliefs are the harbingers of attitude and that attitude is the precursor of behavior (Lavidge & Steiner, 1961). The attitude towards action consists of the beliefs that the consumer expects about the consequences of performing the behavior (Verdurme & Viaene, 2003).

2.3.2. Types of Buying Behavior

Buying behavior differs for different product groups, for example buying a car is completely different from buying a bag of salt. Thus, before moving on to the consumer behavior types section, it is necessary to explain the level of product involvement.

Marketers have set a few ground rules for categorizing the level of product involvement level. According to (Rothschild, 1977), price is the most decisive feature in understanding the level of product involvement. When consumers buy high-priced products, they are more concerned because of the risk of losing money due to the wrong purchase choice. Hence, customers would like to learn more about the product and compare between alternative brands when purchasing products with high involvement. In contrast, for high involvement products, consumers make little comparison between product features and do not actively search information (Yousaf & Malik, 2013). Consumers show less interest in a low-involvement product, and their perception of the product may change depending on the nature of the product and the level of involvement (Park & Moon, 2003). For this reason, it is important to know the product category and the level of involvement to understand consumer behavior (Yousaf & Malik, 2013). (Assael, 1987) identified four different consumer buying behavior according to the consumer involvement and the level of differences among brands.

Table 1: *Types of Buying Behaviour*

	High Involvement	Low Involvement
Significant Differences Between Brands	Complex Buying Behavior	Variety Seeking Buying Behavior
Few Differences Between Brands	Dissonance-Reducing Buying Behavior	Habitual Buying Behavior

Note. Adapted from Henry Assael, “Consumer Behavior and Marketing Action” ,1987, p. 87.

2.3.2.1. Complex Buying Behavior

Complex Buying Behavior often occurs when there is high consumer involvement and there are significant differences between brands. Therefore, the buyer will need to go through a process of research and getting information about the product, then develop their beliefs about the product, then develop an attitude and then make a thoughtful purchase choice. Understanding consumers' information collection and evaluation behaviors in high involved products is of great importance for marketers. Marketers need to help consumer learn about product class features and their relative importance (Kotler & Armstrong, 2009).

2.3.2.2. Dissonance-Reducing Buying Behavior

Dissonance-Reducing Buying Behavior includes expensive, infrequent, and risky purchases, as well as Complex Buying Behavior. On the other hand, the difference seen between brands is not as much as Complex Buying Behavior. For example, the consumer may have a high level of involvement decision when purchasing carpets, but the thought that all carpets sold in that price range are the same may reduce the perceived brand differences (Kotler & Armstrong, 2009).

2.3.2.3. Habitual Buying Behavior

Habitual Buying Behavior often occurs when there is low consumer involvement and there are little differences between brands. We can show buying salt as an example. The consumer does not search any information in this purchase and does not evaluate different brand features (Mitchell, 1992).

2.3.2.4. Variety-Seeking Buying Behaviour

Variety-Seeking Buying Behavior often occurs when there is low consumer involvement and there are significant differences between brands. In such cases, consumers often make a lot of brand changes (Kotler & Armstrong, 2009). Typically, consumers change their brand frequently. For example, different biscuits are bought out of boredom or to try something new, but the reason is not dissatisfaction (Mitchell, 1992). The four types of purchase behavior are summarized in Table 2.

Table 2 : Types of Purchase Behaviour

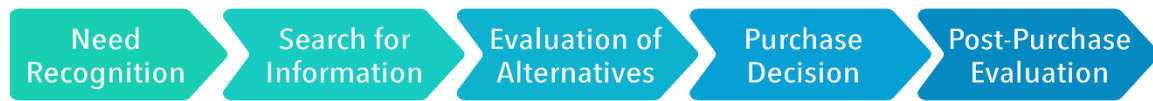
Purchase Behaviour	Characteristics	Examples
Complex buying	High consumer involvement Significant brand differences Expensive Infrequent High risk	Car
Dissonance-reducing	High consumer involvement Few brand differences Expensive Infrequent High risk Price sensitive	Carpet Furniture
Habitual buying	Low customer involvement Little brand difference Frequent or repeat purchases	Household goods Groceries
Variety-seeking buying	Low customer involvement Significant brand differences Brand switching for variety	Cookies Restaurant

Note. Adapted from Kotler P. and Armstrong G., “Principles of Marketing”, 15th ed., 2014, Pearson Education, London.

2.3.3. The Buyer Decision Process

One of the most important issues in the marketing world is how the consumer makes the purchasing decision. Figure 2 shows all the stages the buyer goes through while making a purchasing decision. The buying process begins with the need recognition, at this stage the buyer realizes a problem or need. This need can be triggered by internal reasons such as hunger and thirst or external factors through the advertising we watch or the social environment we interact with. The next step after the need recognition is the information search phase. At this stage, the buyer collects information about the product she/he needs. Consumers can obtain information from many sources. These contain personal sources (friends, family), commercial sources (salespeople, advertising, dealer web sites), public sources (internet searches, mass media), and experiential sources (examining, handling, using the product). After the consumer reaches the necessary information, the consumer starts to evaluate many brand alternatives. In the evaluation phase, the consumer lists the brands and forms their purchase intentions. Generally, the purchasing decision of the consumer will be to purchase the most preferred brand. At this stage, factors affecting purchasing are divided into two as the attitudes of others and the unexpected situational factors (expected income, expected price, expected product benefits). Job of the marketers does not end when the product is purchased. Satisfaction or dissatisfaction of the consumer after purchasing the product will enter the post-purchase behavior that attracts the marketer's interest (Kotler & Armstrong, 2009).

Figure 2 : The Buyer Decision Process

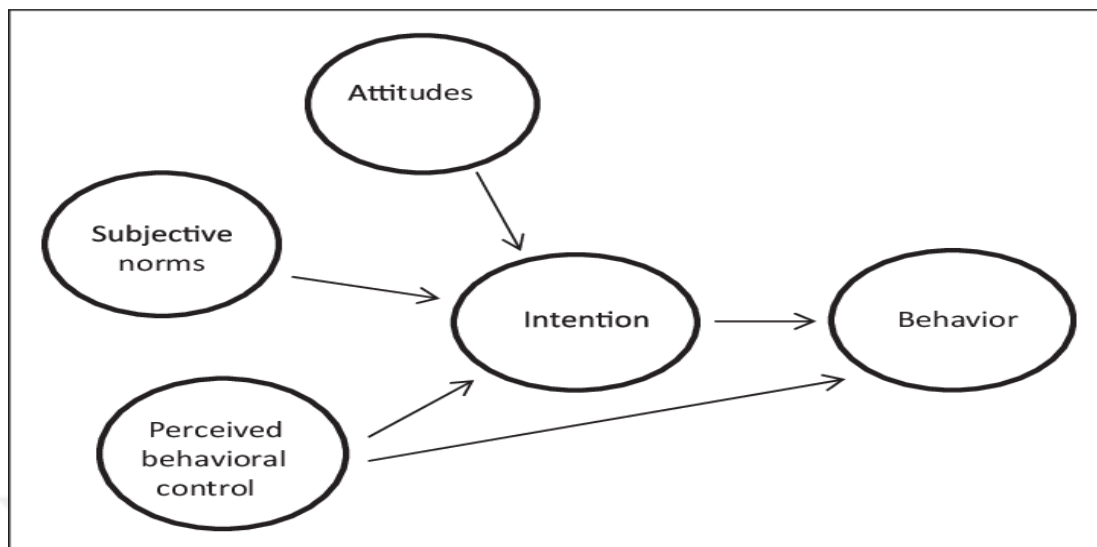


Note. Adapted from Kotler P. and Armstrong G., “Principles of Marketing”, 15th ed., 2014, Pearson Education, London.

2.3.4. Theories of Consumer Behavior

The Theory of Reasoned Action (TRA) developed by (Ajzen & Fishbein, 1975) is one of the most important studies in understanding consumer behavior. TRA is widely used as a model for prediction of behavior. TRA focuses on theoretical constructs related to individual motivational factors as determinants of the probability of performing a particular behavior. TRA suggests that the most important determinant of behavior is behavioral intention. The determinant variables of individuals' behavioral intention are their subjective norms related to the behavior and their attitudes towards performing the behavior. Since TRA does not take into account people's perceptions of the power they have over their behavior, the perceived control variable has been added to the planned behavior theory as the variable that affects the intention to perform the behavior together with the subjective norm and attitude (see Figure 1). The theory assumes that behavioral intention is the determinant of behavior, and that behavioral intention is influenced by attitude, subjective norm, and perceived behavioral control.

Figure 3 : Theory of Planned Behavior

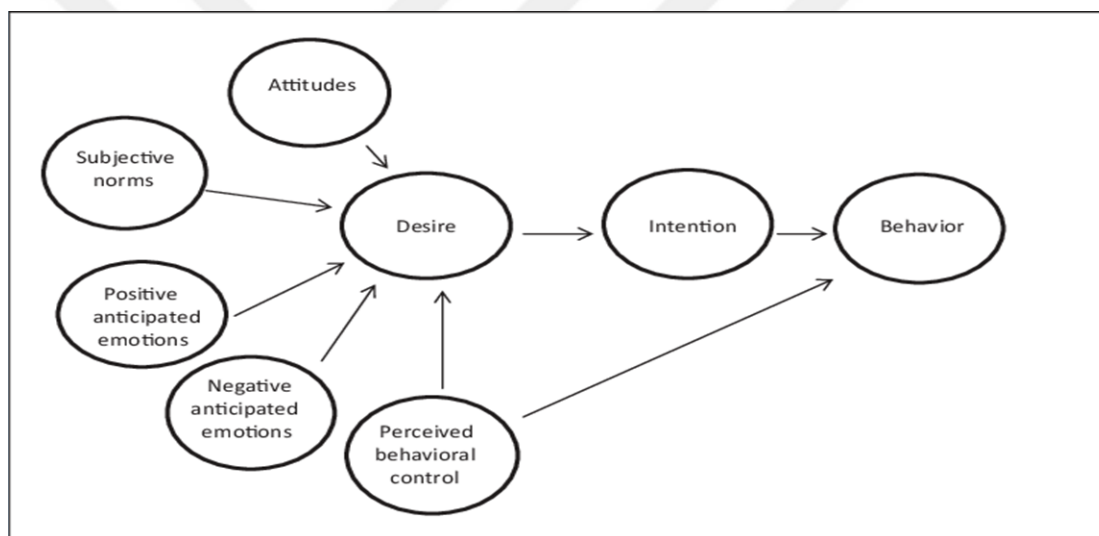


Note. Quoted from Gabriele Esposito, Rene´ van Bavel, Tom Baranowski, Ne´stor Duch-Brown “Applying the Model of Goal-Directed Behavior, Including Descriptive Norms, to Physical Activity Intentions: A Contribution to Improving the Theory of Planned Behavior” ,2016, p. 7.

TRA has long been the mainstay of social psychology. Subsequently, Bagozzi and Perugini developed a model called Model of Goal-directed Behavior (MGB) for expository purposes. An alternative approach was adopted by Bagozzi, Baumgartner, and Pieters (1998), who argued that when people consider acting or not to act in goal-oriented situations, they take into account the emotional consequences of achieving and not achieving a desired goal (Bagozzi, Baumgartner, & Pieters, 1998). In this theory, anticipated emotions were added to the planned behavior theory and found that attitudes replace or contribute to the effects on intentions (Perugini & Bagozzi, 2001). Because, according to this theory, a decision maker imagines the indirect consequences of goal achievement and goal failure before deciding to perform the behavior. Sum up, a kind of revision of TPB proposed here adds anticipated emotions as parallel predictors as well as traditional independent variables found in TPB. This theory states that the references of expected emotions are personal goals, anticipated emotions

function as independent variables based on a decision process that consider the judged consequences of goal failure and goal achievement. According to Bagazzo, behaviors, subjective norms and perceived behavioral control provide reasons to act but do not provide the obvious motivation needed to evoke the intention to act. Bagozzi suggested that desires provide motivating impulses for intentions, and act, subjective norm, and perceived behavioral control work with desires to instill intentions (Perugini & Bagozzi, 2001).

Figure 4 : *The Model of Goal-Directed Behavior*



Note. Quoted from Gabriele Esposito, Rene´ van Bavel, Tom Baranowski, Ne´stor Duch-Brown “Applying the Model of Goal-Directed Behavior, Including Descriptive Norms, to Physical Activity Intentions: A Contribution to Improving the Theory of Planned Behavior” ,2016, p. 7.

2.3.4.1. Subjective Norm

Subjective norm is the social pressure an individual takes while undertaking a specific behavior (Ajzen, 1991). Social pressure comes mostly from the attitudes or views of others or groups that are important to a person as to whether the person should perform a certain behavior (Park, 2000). (Dean, Raats, & Shepherd, 2012) argued that, positive perception of important

others like family, relatives and friend have impact on green purchase intention of an individual. (Teng, Wu, & Liu, 2013) showed that, the subjective norm is an important determinant of revisiting the hotel.

According to (Zukin & Maguire, 2004), subjective norm has a major influence on green consumption. Other study from (Paul, Modi, & Patel, 2016) show that, the subjective norm is an important determinant in purchasing green product. (Chang, 1998) explored the correlation between attitudes towards behavior and subjective norms. Subjective norm positively influences attitudes towards purchase organic food, thus positive attitude lead to increase intention to buy organic food. (Tarkiainen & Sundqvist, 2005) reached conclusion that, subjective norms have impact on intentions of purchasing organic food through attitudes. (Kaiser & Gutscher, 2003) argued that, subjective norms are the main determinants of purchase intention. The previous study about electric car usage found established an important relationship between electric car usage and subjective norms (Moons & Pelsmacker, 2012).

When it comes to green products where people are unsure whether it will benefit the environment in the long term, subjective norms can play an important role in determining green purchase intentions (Bratt, 1999). A study conducted in developing country showed that subjective norm significantly affects the purchase intention toward green product (Yadav & Pathak, 2016). Another research conducted in institute of higher education in India defined that, there is a direct association between subjective norm and purchase intention (Chaudhary & Bisai, 2018).

In the past, there have been studies examining the effects of subjective norm according to gender. (Noble, Griffith, & Adjei, 2006) stated that, women are more motivated and influenced by social interactions than men to perform purchasing behaviors. (Lee & Green, 1991) found that the subjective norm is an important determinant for behavioral intention in

Korea. On the contrary, in the United States, attitude has been shown to overshadow the influence of the subjective norm. These results showed that the strength of social influences is different in different cultural settings. (Ko & Jin, 2013) conducted a research to investigate predictors of purchase intention toward green products in the USA and China. The findings showed that the subjective norm has the highest direct impact on purchase intention in both countries.

2.4 Consumer Dynamics- Green Home

2.4.1. Environmental Attitudes

Attitude is admitted one of the most significant impacts on behavior. (Spruyt, Hermans, Houwer, Vandekerckhove, & Eelen, 2007) stated that attitude is a significant factor in understanding behavior and is related to their knowledge and personal experiences.

According to (Ajzen & Fishbein , 1977) behavior and attitudes should be measured at the same level of compliance. There are several theories put forward to explain the process of attitudes predicting behavior. One most important of these is theory of reasoned action developed by Martin Fishbein and Icek Ajzen in 1967. The theory is mainly used to predict how individuals will behave according to their pre-existing attitudes and behavioral intentions. Hence according to the that theory, people's attitudes play an important role when it comes to establishing the intention to engage in a certain behavior (Cherian & Jacob, 2012).

(Kotchen & Reiling, 2000) defined environmental attitudes as predictors of environmentally based action. In terms of the firms, environmental attitude towards purchasing

green product plays a significant role in the organization to identify the scope of green products as well as green initiatives (Rajkumar, Kannan, & Jayabalan, 2008). (Yadav & Pathak, 2016) declared that environmental attitude directly effects green purchase intention with a total of 600 questionnaires were distributed among the young consumers mostly university and college going students. (Kassarjian, 1971) studied consumers' reaction in the direction a gas that decreased air pollution and found that attitude toward air pollution was most significant variable to understand the consumer's behavior toward the product. (Balderjahn, 1988) determinate that a positive attitude toward ecologically conscious life resulted in ecologically responsible for purchasing and usage of products with the inclusion of using automobiles.

(Mostafa, 2007) studied relationship between attitude and purchase intention towards green purchase among Egyptian consumers and result shows that consumers' attitude towards green product directly affect green purchase intention and green purchase behavior.

In the past, studies have been conducted to show that environmental attitudes may differ by gender. (Tikka, Kuitunen, & Tynys, 2000) exposed that woman are more concerned about environmental problems. (Gilligan, 1982) stated that women may care more about environment because of caretaker role society.

Several studies have been conducted dealing with the issue of perceiving the seriousness of environmental problems. (Dunlap, 1994) conducted a survey about environmental problems facing many communities. The survey questioned the perception of the seriousness of the environmental problem (poor water, poor air, contaminated soil, inadequate sewage, too many people, too much noise) with people in many countries. In total, water quality, sewage treatment, and water quality are most likely to be viewed as very serious local community problems. People living in Asian countries has been found that they are more concerned with such problems than their counterparts in other western countries.

2.4.1.1. Environmental Concern

Environmental concern is considered as an assessment or an attitude towards facts that have environmental consequences for one's own behavior or the behavior of others. (Takala, 1991). According to Yeung, environmental concern is an emotional trait that expresses an individual's worries, thoughts, likes and dislikes about what affects the environment (Yeung, 2004). (Stern, 1992) stated that there are different value orientations in expressing environmental concern. In the first of these, environmental concern depends on anthropocentric altruism; people care about environmental quality because they consider that harming the environment will negatively affect human health in the future. Therefore, the primary concern is the threat to the well-being of people, not the threat to the environment (Hopper & Nielsen, 1991). According to another value orientation, environmental concern refers to personal interest. (Baldassare & Katz, 1992) stated that perceived personal threats because of environmental degradation are an important factor fundamental environmentally responsible behavior. Finally, (Stern, 1992) established a view that environmental concern is a function of a deeper cause such as basic religious beliefs or post-materialistic values. (Dunlap & Van Liere, 1978) developed the New Ecological Paradigm (NEP) scale, which is admitted as the oldest quantitative definition of environmental concerns.

Previous studies stated that green consumption intention is positively affected by environmental concern directly. Environmental concern has a significant impact on consumers' green purchasing behavior (Suki, 2013). In addition, people with high levels of environmental concern tends to respond to environmental problems and can take action faster to protect the environment (McDonald, et al., 2015). (Xu, Hua, Wang, & Xu, 2020) reached the result based on survey data of 451 consumers; the people with higher level of environmental concern are more willing to pay for environmentally friendly products. In a study on hotel choice

preferences of tourists showed that tourist with high environmental concern tend to select green hotels even if there is a possibility of over payment (Han, Hsu, & Sheu, 2010).

Environmental concern has been evaluated as predictive in understanding environmental behavior (Ajzen & Fishbein, 1977). (Schultz, 2000) determined that environmental concerns have three interrelated factors: ego (egoistic), biosphere (biosphere) and other people (altruistic). (SGuin, Pelletier, & Hunsley, 1998) have stated that environmental concern can have a significant effect on motivation level of the individual's attempts towards environmental problems. According to (Zimmer, Stafford, & Stafford, 1994), dimensions of the environmental concern consist of sensitivity to climate change issues, energy conservation, awareness of alternative energy sources and clean energy. Which study also showed that green energy consumers are more environmentally concern than other general consumers.

2.4.1.2. Environmental Awareness

Environmental awareness plays a significant role in pursuing green activism. Environmental awareness has been defined by the researchers by means of different words that will have the same meaning. Generally, environmental awareness is defined as knowledge about the general concept and fact related to the ecosystems and environment (Mostafa, 2007). This awareness is harmonious with the view that the world's natural resources are limited, and the ecological balance may be at a level of significant deterioration that requires urgent action (Hayes, 1990). According to (Ham, Horvat, & Mrčela, 2015) environmental awareness might be defined as the attitude towards the effect of human behavior towards the environment. Environmental awareness is also defined as being aware of environmental problems and active participation in environmental organizations (Altin, Tecer, Tecer, Altin, & Kahraman, 2014). According to (Karatekin, 2014) environmental awareness is the trigger of positive attitudes towards environmental behavior.

(Carlson, 2004) stated that environmental awareness is the first stage of becoming a green consumer. According to Carlson even if people are environmentally awareness, they don't necessarily have to behave in an environmentally friendly way. Environmental awareness consists of a positive attitude and behavior towards the environment. Environmental awareness may use the term environmental responsibility if it is supported by genuine pro-environmental behavior (Ham, Horvat, & Mrčela, 2015). According to (Axelrod, 1994), environmental awareness is the most crucial part of behavioral science because it includes environmental attitude, beliefs and values.

Environmental awareness can be developed with systematic training activities. For individuals to live in a healthier and safer environment, it is important to develop environmental awareness and sensitivity, and this will only be possible by training qualified individuals who have received environmental education (Cetin & Nisanci, 2010). The development of individuals environmental awareness is often considered the most significant precondition to motivate participation and alter their behavior towards recycling activities. For this reason, the European Union has encouraged environmental education by including environmental issues in the school curriculum to increase environmental awareness (Miranda & Blanco, 2010).

2.4.2. Price Sensitivity

Researchers are often interested in evaluating the price sensitivities of consumers to make strategic and tactical decisions about market segmentation, marketing activities, pricing and competitive marketing strategies (Kaul & Wittink, 1995). According to (Goldsmith, Kim, Flynn, & Kim, 2005), price sensitivity relates to how consumers react to price levels and price changes. Price-sensitive consumers seek low prices, and when prices rise, they are less likely to buy. Price-sensitive consumers will be willing to pay higher prices for the same goods compared to price-sensitive consumers (Foxall & James, 2003).

(Anderson, 1996) defined that, price sensitivity is related to the extent to which the consumer accepts a price increase for a certain product due to economic and psychological gains. Price is often an important component of a company's product positioning. Consumers often consider that the higher price represents high product quality. On the contrary, poor quality is associated with a low price (Han, Gupta , & Lehmann, 2001).

Price plays an important role in the purchasing decision of consumers. Perceptions about quality and purchase intention may differ between consumers who are price sensitive and insensitive. Price sensitive consumers may take price as the most important consideration in purchasing decisions. Some studies on the purchase intention of organic foods have shown that, when the price is not expensive, they tend to buy more and believe that they benefit more from their purchase (Rana & Paul , 2017). In contrast, price-insensitive consumers may not care much about the price of organic food. These consumer focuses on the features such as freshness and health rather than the price of the product. According to the literature, it is possible for price sensitivity to vary depending on the situation. If price sensitivity differs between contexts, ignoring this variation can lead to largely inefficient pricing policies. If price is less important for products and services consumed in hedonic situations, companies can simultaneously gain competitive advantage and promote profitability by emphasizing the brand's relative advantage. Social and hedonic situations (for example, visiting an amusement park with friends) can cause individuals to be less price-sensitive than non-social and functional situations (for example, a lone grocery shopping) (Wakefield & Inman, 2003). From this point of view, it is very important that marketers try to understand the price sensitivity of target customers and develop strategies for this (Goldsmith, Kim, Flynn, & Kim, 2005).

2.4.3. Consumer's Purchase intention

Intention stems from psychology and is considered a type of personal motivation that can accurately estimate individual behavior (Eagly & Chaiken, 1993). Intention refers to whether an individual is ready to perform a particular behavior (Yadav & Pathak, 2016). (Ajzen & Fishbein, 1975) became the first to refer to consumers' intention to buy certain products or services. Researchers have defined purchase intention differently to date. According to (Rosa, Garbarino, & Malter, 2006) purchase intention is an important indicator in predicting consumers' future behavior. (Teng, Wu, & Liu, 2013) defined the purchase intention as the prospective of a consumer who planning to buy a product in the future. (Shah, et al., 2012) defined that, purchase intention refers to the purchasing decision-making process in which the consumer takes into account various conditions and reasons. Evaluating an individual's purchase intention is a complex process, that is directly related to the consumer's perceptions, behaviors and attitudes towards the product or service itself or even towards the seller (Huete Alcocer, 2017).

People are more environmentally conscious than before, many of them have concerns about the environment and therefore consumer intend to buy environmentally friendly products that are less destructive (Peattie, 1995). With the increasing green consumption demands, it has become very important to understand the green purchasing intentions of the consumer. Green purchase intention has been discussed by many researchers in the literature. Green purchase intention is conceptualized as the possibility and desire of a person to prefer environmentally friendly products over other traditional products in their purchasing decision (Abdul Rashid , 2009). (Chan, 2001) defined green purchase as a specific type of environmentally friendly behavior that consumers display to express their concerns about the environment. (Ramayah, Lee, & Mohamad, 2010) identified the green purchase intention as representative of the real

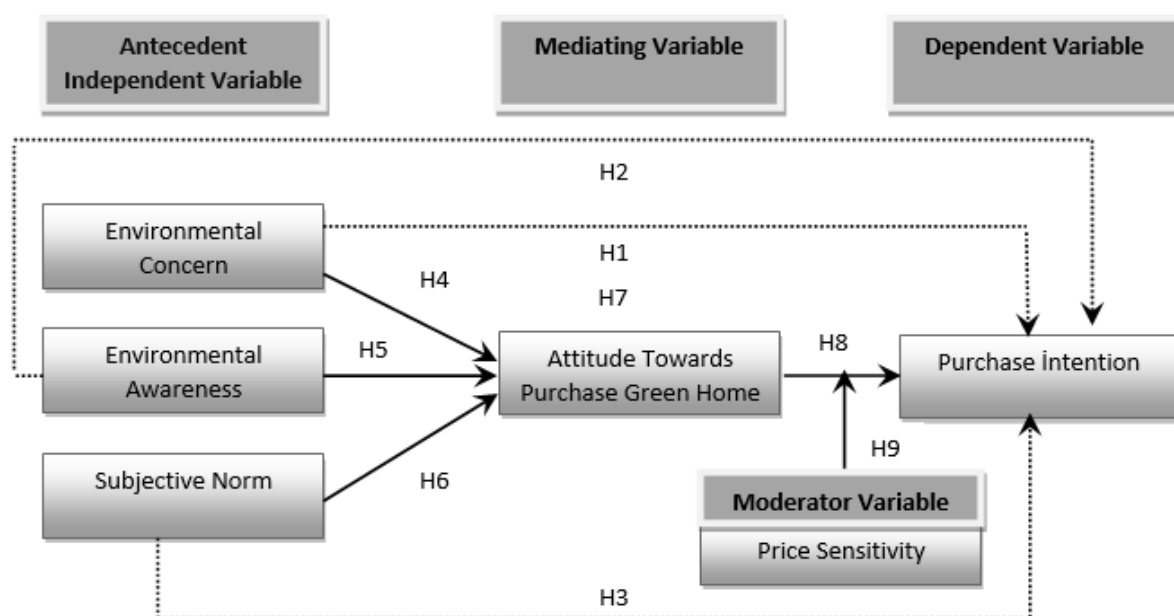
purchase. Green purchase intention has proven to be an effective indicator of green purchasing behavior, including the likelihood of actual purchase decision (Ajzen, 1991).

3. THEORETICAL MODEL AND HYPOTHESIS

3.1 Research Model

The figure below represents the research model that fully demonstrates the study's hypotheses.

Figure 5 : Research Model



3.2 Hypothesis development

3.2.1. Environmental Concern

Past researches have shown that exposure to natural images increases the impact of environmental concern on purchase intention and perceived salience of environmental problems (Hartmann & Apaolaza-Ibáñez, 2012). (Aman, Harun, & Hussein, 2012) conducted a study between Sabahan consumers to identify relationship among environmental concern and purchase intention. This study showed that as the environmental concern of Sabahan consumers increased, so did their purchase intention.

The study that measured relationship between environmental concern and buying green and sustainable home shown that environmental concerns strongly influence behavioral intentions (Tan, 2013). (Paul, Modi, & Patel, 2016) determined that important direct and indirect effect of environmental concern on green purchase intention through the mediation of theory of planned behaviors' variables. In addition, environmentally concerned consumer might also influence other individuals' green purchase intention via the exertion of social pressure as relatives and friends.

Surveys such as that conducted by (Coddington & Florian, 1993) have shown that young people that called Generation Y tend to have been more concerned about green marketing and had influenced their family in purchasing decision. In addition, (Freymeyer & Johnson, 2010) demonstrated that education level is not as effective a variable in environmental action as age and gender.

The study conducted in the Chinese context showed that young consumer's intention to purchase green home can be predicted by environmental concern (Zhang, Kang, & Jin, 2018). (Sang & Bekhet, 2015) stated that, environmentally concerned consumer are more willing to

purchase electric vehicles. Other studies also emphasized that, environmental concern also influence the attitudes toward behavior (Kalafatis, Pollard, East, & Tsogas, 1999). (Li, Li, Jin, & Wang, 2019) showed that, environmental concern has a positive correlation with residents' purchasing energy-efficient appliances. This study also indicated that, environmental concern influence purchase intention indirectly with mediation role of attitude. In addition, environmentally concerned consumer will be more aware of the significance of the energy conservation and about decreasing carbon emissions, increasing positive attitude toward purchasing energy efficient appliances, hence enhancing their willingness to purchase energy efficient appliances.

In summary, the following hypothesis are proposed:

H1. Environmental concern has a significant positive impact on consumers' purchase intention.

H4. Environmental concern has a significant positive impact on consumers' attitude towards purchase green home.

3.2.2. Environmental Awareness

Environmental awareness plays an important role in specifying the intention to purchase green product. (Jaiswal & Kant, 2018) stated that consumer environmental awareness is significant because it can explain consumers' attitudes towards environmentally friendly products. A study conducted in California revealed that a high level of environmental awareness leads to a high level of purchase intention of hybrid electric vehicles (Heffner, Kurani, & Turrentine, 2007). A study among young Chinese consumers showed that awareness positively moderates association between attitude and purchase intention for organic food (Ahmed, et al., 2019). (Kumar, K.Manrai, & Manrai, 2017) found a weak relationship between environmental

awareness and purchase intention. In another study, (Aman, Harun, & Hussein, 2012) found that although environmental awareness positively influences the purchase intention, there is no link between environmental awareness and consumer attitude towards green products. In United Arab Emirates context, (Khaleeli & Jawabri, 2021) found a positive and significant relationship between environmental awareness and consumers' attitudes towards environmentally friendly products. In addition, a positive and significant relationship was found between attitudes towards environmentally friendly products and purchase intention, however, it was found that attitudes did not have a mediating role in the relationship between awareness and purchase intention.

In summary, the following hypothesis are proposed:

H2. Environmental awareness has a significant positive impact on consumers' purchase intention.

H5. Environmental awareness has a significant positive impact on consumers' attitude towards purchase green home.

3.2.3. Subjective Norm

Past studies have shown the significant relationship between subjective norm and attitude towards green product. These studies revealed that there is a path from subjective norms to attitude towards green product and then to purchase intention (Sreen, Purbey, & Sadarangania, 2018). While there are many studies on subjective norm and purchase intention in the literature, there are few studies on testing the relationship between subjective norm and attitude towards purchase green product. In a study with young consumers between the ages of 20 and 40 in India, (Varshneya, K. Pandey, & Das, 2017) found that there was no significant

relationship between social influence (subjective norm) and the attitude towards using organic clothing. In contrast to this study, another study conducted in India revealed a direct significant relationship between subjective norm and attitude towards green product (Sreen, Purbey, & Sadarangania, 2018).

Previous studies have also stated that subjective norms are the main determinant of purchase intention (Sparks & Shepherd, 1992). In Indian context, (Yadav & Pathak, 2016) found that the subjective norm significantly influences purchase intention towards green products. In the literature, many studies have shown the subjective norm as an important determinant of intention, including the intention to use technology, the intention to buy organic food (Dean, Raats, & Shepherd, 2012) and the intention to revisit green hotels (Han, Hsu, & Sheu, 2010). These studies indicated a positive relationship between subjective norm and purchase intention. On the other hand, In Indian context, (Khare, 2015) revealed that social norms did not influence green buying behavior.

In summary, the following hypothesis are proposed:

H3. Subjective norm has a significant positive impact on consumers' purchase intention.

H6. Subjective norm has a significant positive impact on consumers' attitude towards purchase green home.

3.2.4. Attitude Towards Green Products

Previous green marketing studies revealed that consumers' attitude towards environmentally friendly behavior significantly influences their intention to purchase green products (Aman, Harun, & Hussein, 2012). (Yadav & Pathak, 2016) argued that consumer attitude towards green products significantly affects green purchase intention. In India context,

(Yadav & Pathak, 2016) argued that consumer attitude towards green products significantly make it predictable green purchase intention. A study conducted by (Mostafa M. , 2009) showed that consumers who have a positive attitude towards green products are more likely to develop a stronger predisposition to buy green products. Most of the previous studies used attitudes as a direct variable influencing purchase intention along with environmental concern, environmental awareness and subjective norm. In this study, the attitude towards green homes mediates other variables besides being the variable that directly affects the purchase intention.

In summary, the following hypothesis are proposed:

H8. Attitude towards green home has a significant positive impact on consumers' purchase intention.

H7. Attitude towards green home mediates the relationship between environmental concern, environmental awareness, subjective norm and purchase intention.

H7a. Attitude towards green home mediates the relationship between environmental concern and purchase intention.

H7b. Attitude towards green home mediates the relationship between environmental awareness and purchase intention.

H7c. Attitude towards green home mediates the relationship between subjective norm and purchase intention.

3.2.5. Price Sensitivity

Studies demonstrate that price sensitivity plays a significant role in developing the intention to purchase toward green product (Fam, Annuar, Tan, Lai, & Ingko, 2019). A study conducted by (Ng, Law, & Zhang, 2018), which measures the purchase intention of electric vehicles, showed that price sensitivity is positively associated with purchase intention. (Hahnel,

Ortmann, Korcaj, & Spada, 2014) found that price sensitivity was an important factor influencing the consumer's purchase intention, and that consumers with lower price sensitivity were more likely to pay more for electric vehicles than conventional vehicles. Most studies view price sensitivity as a direct or indirect predecessor to the purchase intention of an environmentally friendly product (Ghali-Zinoubi & Toukabri, 2019). Some researchers explored the moderator role between consumers' environmental awareness and environmental concern and green purchase intention (Erdil, 2018). (Hsu, Chang, & Yansritakul, 2017) proved that price sensitivity plays a moderator role in the relationship between purchase intention of green skin care products and attitude, subjective norm and perceived behavioral control. Likewise, (Bhutto, et al., 2020) used price sensitivity as a moderator in the study on the purchase intention of hybrid vehicles. According to previous research, the positive attitude of price-sensitive consumers towards green products may not be enough to increase the purchase intentions of consumers.

In summary, the following hypothesis are proposed:

H9. Price sensitivity plays a negative moderating role between attitude towards green home and purchase intention.

4. METHODOLOGY

This section focuses on determining the procedures and methods used for this research. This chapter also includes questionnaire design, data collection method, population and sampling.

4.1 Questionnaire Design

Since the sample of the research is those who plan to buy a home in the future, the first question of the survey was asked whether they were considering buying a home in the short or long term. After that, 12 items were prepared in which the characteristics of the green home were listed in order to measure the knowledge level of the participants about the green home. Respondents were asked which ones are one of the characteristics of a green home. 12 items were created by taking expert opinion from the sector and green building associations. After measuring the knowledge level of consumers about green buildings, a brief description was given about green home before starting the other survey questions, as some respondents may not be aware of the green home concept.

The items used to measure environmental concern were adapted from (Dunlap & Van Liere, 1978). This scale, which has been used in environmental issues since 1978, has been named the New Environmental Paradigm (NEP). The scale, which consists of 12 Likert-type question developed by (Dunlap & Van Liere, 1978), was later revised by (Dunlap, Liere, Mertig, & Jones, 2000) by adding new components to the scale. A Likert type 5-point rating was used in the scale consisting of 15 items. Only 4 items were taken from this scale to measure environmental concern. 9 items used to measure environmental awareness were taken from (Berberoğlu & Uygun, 2012). The items of the other independent variable, special norms, were adapted from (Chen & Peng, 2012; Liobikienė, Mandravickaitė, & Bernatoniene, 2016; Dean, Raats, & Shepherd, 2011). The subjective norm scale consists of 2 items. A 1-item, 5-point Likert type scale was operationalized to measure attitude towards green home purchase based on (Taylor & Todd, 1995; Chan, 2001; Mostafa M. , 2009).

The scale used by (Goldsmith, Kim, Flynn, & Kim, 2005) to measure the price sensitivity of new fashion clothes was used to measure the price sensitivity of green homes. In

addition, 2 items were adapted from the (Lichtenstein, Ridgway, & Netemeyer, 1993; Sinha & Batra, 1999). The scale used to measure price sensitivity consists of 5 items. After asking questions about price sensitivity to the participants, the question was asked "what percentage do you think a house designed in accordance with the green home concept is more expensive than other homes" in order to measure the price perception about green home. Along with this question, the question was asked "in how many years do you expect the excess amount you will pay for a green home to amortize itself".

2 items used to measure purchase intention towards green home were adopted from (Yee, 1997; Mostafa M. , 2009; Taylor & Todd, 1995). All items used to measure independent and dependent variables were designed using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The table below shows the sources and numbers of the questions used in the questionnaire of this research, according to the variables (Table 3). Finally, the questionnaire was completed with demographic questions.

In this study, a pilot study was conducted with 15 persons before starting the fieldwork of the survey. As a result of the pilot study, the way of asking some questions has changed. Explanations have been added to some parts of this questionnaire prepared via Google forms to reduce the risk of receiving incorrect answers.

Table 3 : Items used in the survey

Variables	Items	Reference
Environmental concern	4	(Dunlap, Liere, Mertig, & Jones, 2000)
Environmental awareness	9	(Berberoğlu & Uygun, 2012)
Subjective norm	2	(Chen & Peng, 2012; Liobikienė, Mandravickaitė, & Bernatoniene, 2016; Dean, Raats, & Shepherd, 2011)
Attitude towards green home	1	(Taylor & Todd, 1995; Chan, 2001; Mostafa M. , 2009)
Price sensitivity	5	(Goldsmith, Kim, Flynn, & Kim, 2005)
Purchase intention	2	(Yee, 1997; Mostafa M. , 2009; Taylor & Todd, 1995)

4.1.2 Socioeconomic Status Scale

The position of individuals or households in the social hierarchy can be defined as their socioeconomic status. Many methods have been used to determine socio-economic status. While some studies are based on the individual, some studies are based on the general condition of the household (Kalaycıoğlu, Çelik, Çelen, & Türkyılmaz, 2009). In general, the variables that form the socio-economic status in the studies are education level, income level and occupational status. In this thesis, the study developed by the Turkish Researchers' Association in 2012 was used. In this study, social status degrees were determined by questioning

occupational status and education levels of individuals. Afterwards, the groups were categorized into 6 groups as A, B, C1, C2, D, E. The Turkish Research Association explained the statutes as follows (Socia Economic Status Scale, 2021).

Figure 6 : Social status groups

A	• Almost all of them are university graduate and about %30 of them are from postgraduate... • Half of them are qualified experts working with salary (Lawyer, Doctor, Engineer, etc.) • Nearly %10 of them are white-collar who has more than 20 employees; • A quarter of them has a big or small place for business (half of those don't have any employees) • %40 of MIPs (Major Income-Generating People) with spouses have also working spouses. • %40 of MIPs (Major Income-Generating People) with spouses have also working spouses. • %20 of these houses are saving up for money.
B	• University/Postgraduate ratio is around %60... %35 of them are graduated either from 2-year education in university or high school. • % 60 of them are civil servants, technical staff or expert (who is not a manager) • %15 of them has big or little places of business (most of them has 1 to 5 employees beside them) • %30 of MIPs with spouses, also have working spouses. • %13 of these houses are saving up for money.
C1	• %60 of these people are high school graduate (%20 of these are vocational high school); %10 of them are from graduate school or higher degree. • %40 of them are craftsmen or store owner; %30 are qualified laborer (with high school education) • About %15 of them are civil servants or technical staff. • About %15 of them are retired. • %13 of MIPs with spouses, also have working spouses. • %5 of these houses are saving up for money.
C2	• Nearly %20 of these people are high school graduate... %80 of them are graduated from middle school or a lower degree... • Most of them are laborer with regular work who are also graduated from primary school (About %60) • %10 of them are working on their own as barrowman. • %20 of them are retired and not working. • The ratio for "MIPs with spouses who also have working spouses" is below %10.
D	• %70 of these people are primary school graduate or dropout, and the rest are from middle school. • %30 of them are retired and not working. • Above %20 of them are laborers (mostly working by piecework), • %30 of them are small scale farmers • %10 of them are housewives
E	• %95 are primary school graduate or dropout • %30 of them are not working (and living by economic support) • %40 of them are retired, not working; %30 of them are retired and working as laborers. • In %20 of the rest of the houses, MIP is the housewife (who doesn't have a regular income but living with economic support)

Note. Adapted from (https://tuad.org.tr/upload/dosyalar/SES_Projesi.pdf, 2021)

4.2 Data Collection, Sampling and Analyses

The universe of this study is potential home buyers in Turkey. In 2020, 1.499.316 houses were sold in Turkey. 469.740 of the houses sold were occurred as the first sales. According to these data, 17.68 percent of these sales were realized in Istanbul, 10.48 percent in Ankara and 6.23 percent in Izmir. In Turkey, 518 green building certified projects have been completed so far. 344 of these projects were carried within the borders of Istanbul, 45 of them in Izmir and Ankara provinces (<https://cedbik.org/tr/sertifikali-projeler>, 2021). Therefore, based on these data, those living in Istanbul, Ankara and Izmir, which has a housing purchase plan, were selected for the sample that will represent the universe of the study.

A total of 332 people participated in the survey and 73 people who did not plan to buy a house in the short or long term were excluded from the survey. A data file consisting of 240 people was obtained by removing 19 more people who were out of the sample from the survey. The Statistical Package for Social Science (SPSS 26) software were used to analyze the data collected from the survey.

5. FINDINGS

The main outputs of the analysis are presented in this section, which consists of three parts. First, the sample and descriptive statistics are summarized. Secondly, the results of factor and reliability analyzes for each dimension are explained. Finally, the results of the regression analysis are shown to explore the relationship between the hypotheses and the constructs of the model.

5.1 Descriptive Analysis

A total of 332 people participated in the survey and 73 people who did not plan to purchase a home in the short or long term were excluded from the survey. A data file consisting of 240 people was obtained by removing 19 more people who were out of the sample from the survey. The result of the descriptive analysis for the sample is shown in Table 4.

Table 4 : *The descriptive analysis of respondents*

Gender	Frequency	Percent	Marital Status	Frequency	Percent
Female	141	58,8	Married	135	56,3
Male	99	41,3	Single	105	43,8
Total	240	100,0	Total	240	100,0

Age	Frequency	Percent	Social status	Frequency	Percent
18-24 years	27	11,3	D	5	2,1
25-34 years	75	31,3	C2	28	11,7
35-44 years	85	35,4	C1	36	15,0
45-54 years	40	16,7	B	87	36,3
55 years and more	13	5,4	A	84	35,0
Total	240	100,0	Total	240	100,0

Income Level	Frequency	Percent	Education	Frequency	Percent
0-2000 TL	28	11,7	Primary School	2	0,8
2.001-5.000 TL	53	22,1	Secondary School	3	1,3
5.001-8.000 TL	75	31,3	High School	24	10,0
8.001-11.000 TL	50	20,8	Associate Degree (2 years)	24	10,0
11.001-14.000 TL	14	5,8	University (distance education)	18	7,5
14.001 and more	20	8,3	University	128	53,3
Total	240	100,0	Postgraduate	41	17,1
			Total	240	100,0

Of the 240 respondents, 58.8 percent (141) were female, 41.3 percent (99) were male; 56.3 percent were single, 44.1 percent were married. Majority of the respondent's 66,7 percent (160) were between 25-44 years old; 31,3 percent (75) were with income level 5.001-8.000 TL; 53.3 percent (128) were university graduates; 71,3 percent (111) had A and B social status.

70 percent (168) of the participants have no knowledge of the green home. While 22.5 percent (54) of the participants have some knowledge, only 7.5 (18) percent claim to know the green home concept (see table 5).

Table 5 : *Do you know the green home concept?*

	Frequency	Percent	Cumulative Percent
I have never heard it before	124	51,7	51,7
I heard, I don't know	44	18,3	70,0
I have some knowledge	54	22,5	92,5
Yes, I know the green home concept	18	7,5	100,0
Total	240	100,0	

The participants were asked which of the following items is one of the characteristics of a house designed in accordance with the green home concept. While, avoiding the factors that cause environmental pollution, energy-saving and effective usage of daylight are considered among the most suitable features for the green home, proximity of the building location to public transport and to social life and good lighting are considered the least suitable (see table 6).

Table 6 : Which of the following items do you think is one of the characteristics of a green home?

	Responses		Percent of Cases
	N	Percent	
The proximity of the building location to social life	59	3,8	24,6
The proximity of the building location to public transport	22	1,4	9,2
Energy-saving	188	12,2	78,3
Water efficiency	144	9,3	60,0
Low carbon footprint	139	9,0	57,9
Indoor air quality	114	7,4	47,5
Good lighting	38	2,5	15,8
Effective usage of daylight	171	11,1	71,3
Avoiding the factors that cause environmental pollution during the construction phase of the building	191	12,4	79,6
The recyclability of the materials used in the building construction process.	151	9,8	62,9
Energy efficiency	159	10,3	66,3
Usage of renewable energy sources	168	10,9	70,0
	1544	100,0	643,3

In another question, respondents were asked how many percent more expensive a green home was than other homes. According to the answers given, 54.6 percent of the respondents think it is 10 percent or more expensive. The rate of those who consider that it is more expensive between 1-3 percent was only 4.2 percent (see table 7).

Table 7 : *What percentage do you think a home designed in accordance with the green home concept is more expensive than other homes?*

	Frequency	Percent	Cumulative Percent
No difference	10	4,2	4,2
1-3 % more expensive	22	9,2	13,3
4-6 % more expensive	36	15,0	28,3
7-9 % more expensive	41	17,1	45,4
10 % or more	131	54,6	100,0
Total	240	100,0	

After this question, participants who thought it was more expensive were asked in how many years do you expect the excess amount you will pay for a green home to amortize itself. The participants in the "No price difference" section consist of participants who consider that there is no difference in price in green home compared to other homes in the previous question. In this question, while 28.3 percent of the participants expect it to amortize for itself in 5-6 years, 27.1 percent expect it to amortize for itself in 3-4 years.

Table 8: *In how many years do you expect the excess amount you will pay for a green home to amortize itself?*

	Frequency	Percent	Cumulative Percent
No price difference	10	4,2	4,2
In 1-2 years	33	13,8	17,9
In 3-4 years	65	27,1	45,0
In 5-6 years	68	28,3	73,3
In 7-8 years	31	12,9	86,3
9 years and more	33	13,8	100,0
Total	240	100,0	

5.2 Data Analysis

The data of the current study were analyzed using SPSS 26.0, exploratory factor analysis was performed first, followed by reliability analysis, normality analysis, and regression analysis.

5.2.1 Exploratory Factor and Reliability Analyses

Primarily, factor and reliability analysis of the scales should be performed, before testing of the hypotheses. Before the start exploratory factor analysis, Kaiser Meyer Olkin (KMO) and Bartlett tests, which show the suitability of the sample data for factor analysis, were performed and appropriate results were produced (KMO =0,916, Bartlett = .000; see table 10).

The fact that the KMO value takes a value between 0.5 and -1 indicates that there is a necessary sample size for factor analysis. For the KMO value; Below 0.5 is “unacceptable”, between 0.5 and 0.7 “moderate”, between 0.7 and 0.8 “good”, between 0.8 and 0.9 “very good”, 0.9 It is rated as “excellent” for above (Coskun, Yildirim, & Altunisik, 2017).

Bartlett's Test of Sphericity; It is the test method used to test whether the relationship between the variables in the correlation matrix is at the rate where factor analysis can be made. The test result being at $p < 0.05$ level indicates that the relationship between the variables is significant (Kalaycı, 2010).

Table 9 : KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,916
Bartlett's Test of Sphericity	Approx. Chi-Square	4524,976
	df	190
	Sig.	,000

In order to perform the factor analysis of the scale, the "direct oblimin method", one of the "principal components" analysis, was used. Since there is a correlation between the factors, the "direct oblimin method" was preferred. Results of the exploratory factor analysis distributed the questions to 5 different factors (see table 10). EC2 (environmental concern), PS1 (Price Sensitivity) were excluded from the factor analysis due to double loading. The EC4 (If things continue their present course, we will soon experience a major ecological catastrophe) item, which is included in the environmental concern scale, was loaded on the environmental awareness factor at a high rate of 0.900. These items, which was used to measure environmental

concern in studies conducted abroad, found its place in the environmental awareness scale in this study conducted in Turkey.

Table 10 : *Factor Analysis / Pattern Matrix^a*

	Component				
	1	2	3	4	5
EA4	,963				
EA1	,929				
EA2	,926				
EA3	,906				
EC4	,900				
EA5	,898				
EA9	,864				
EA7	,805				
EA8	,778				
EA6	,769				
PS3		,860			
PS2		,852			
PS5		,785			
PS4		,603			
PI2			,976		
PI1			,965		
EC3				,851	
EC1	,357			,664	
SN1					-,923
SN2					-,764

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Note. EA = Environmental Awareness, PS = Price Sensitivity, PI = Purchase Intention, EC = Environmental Concern, SN = Subjective Norm

The first factor explains 50.382 % of the scale, the second factor 10.530% of the scale, the third factor 9.302 % of the scale, the fourth factor 6.185 % of the scale and the fifth factor explains 3.872 % of the scale. All of these 5 factors explain 63.066 % of the scale (see table 11). One of the accepted criteria is that the explained variance value is between 40% and above (Kalaycı, 2010).

Table 11 : *Factor Analysis/ Total Variance Explained*

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	% of		Cumulative	% of		Cumulati	Total
	Total	Variance	%	Total	Variance	ve %	
1	10,076	50,382	50,382	10,076	50,382	50,382	9,564
2	2,106	10,530	60,912	2,106	10,530	60,912	3,965
3	1,860	9,302	70,214	1,860	9,302	70,214	3,242
4	1,237	6,185	76,399	1,237	6,185	76,399	2,467
5	,774	3,872	80,271	,774	3,872	80,271	4,033

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

In Likert-type measurements, the Cronbach's Alpha coefficient is a widely used method to test the reliability of the scale. The alpha value in the scales expresses the degree of reliability.

Cronbach's Alpha reliability rates are as follows (Kalaycı, 2010);

- If " $0.00 \leq \alpha < 0.40$ ", the scale is "not reliable",
- If " $0.40 \leq \alpha < 0.60$ ", the scale is "low reliability",
- If " $0.60 \leq \alpha < 0.80$ ", the scale is "quite reliable",
- If " $0.80 \leq \alpha < 1.00$ ", the scale is a "highly reliable" scale.

According to (Hair, Babin, Money, & Samouel, 2003), Cronbach's alpha value greater than 0.60 is acceptable and considered good. In addition, to measure convergent validity, Composite Reliability (CR) and Average Variance Extracted (AVE) tests were performed. The CR value was between 0.733 and 0.970, and the Ave value was between 0.582 and 0.760. In the literature, it is accepted that the Ave value should be greater than 0.5 and the CR value should be greater than 0.7. Thus, these results revealed the reliability and internal consistency of the scales (see table 12).

Table 12 : Reliability analysis

Construct	Items	Factor Loadings	Factor %	Cronbach's alpha	AVE	CR
Environmental Awareness	EA4	0,963	50,38%	0,973	0,760	0,970
	EA1	0,929				
	EA2	0,926				
	EA3	0,906				
	EC4	0,9				
	EA5	0,898				
	EA9	0,864				
	EA7	0,805				
	EA8	0,778				
	EA6	0,769				
Price Sensitivity	PS3	0,86	10,53%	0,815	0,611	0,860
	PS2	0,852				
	PS5	0,785				
	PS4	0,603				
Purchase Intention	PI2	0,976	9,30%	0,928	0,941	0,970
	PI1	0,965				
Environmental Concern	EC3	0,851	6,18%	0,623	0,582	0,733
	EC1	0,664				
Subjective Norm	SN1	-0,923	3,87%	0,822	0,717	0,834
	SN2	-0,764				

5.2.2 Analysis of the Research Hypothesis

Regression analysis was conducted by using summated scales of the constructs within the theoretical model. The aim is to understand whether there is a significant relationship between dependent and independent variables.

5.2.2.1 Regression Analysis

Initially, multiple linear regression analysis was done to attitude towards purchase green home as the dependent variable, and environmental awareness, environmental concern and subjective norm as the independent variables.

Before multiple regression analysis, it is necessary to test whether there is a multicollinearity problem. Multicollinearity occurs when an independent variable is highly correlated with one or more of the other independent variables in a multiple regression equation (Allen, 1997). In general, it is considered appropriate that the correlation between independent variables is below 0.80 (Berry & Feldmen, 1985). Another way to test the multicollinearity problem is to check the VIF value. There are sources in the literature showing that this value should be below 2.5 (Allison, 1999), 5 (Craney & Surles, 2002) and 10 (Hair, Anderson, Tatham, & Black, 1995). Values were found to be appropriate for both analyzes (see table 13 and 16).

Table 13 : Multiple Regression Analysis 1

		PI	EC	SN	EA
Pearson Correlation	PI	1,000	,196	,439	,315
	EC	,196	1,000	,462	,479
	SN	,439	,462	1,000	,513
	EA	,315	,479	,513	1,000
Sig. (1-tailed)	PI	.	,001	,000	,000
	EC	,001	.	,000	,000
	SN	,000	,000	.	,000
	EA	,000	,000	,000	.

Note. EA = Environmental Awareness, PS = Price Sensitivity, PI = Purchase Intention, EC = Environmental Concern, SN = Subjective Norm ATTGH = Attitude Towards Purchase Green Home

Table 14 shows that environmental awareness, environmental concern, subjective norm explain 19.6 percent of the purchase intention. In addition, the model is significant as shown in Table 15.

Table 14 : Model 1 Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,453 ^a	,206	,196	,84498

a. Predictors: (Constant), EA, EC, SN.

Note. EA = Environmental Awareness, EC = Environmental Concern, SN = Subjective Norm

Table 15 : Model 1 Sig./ ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43,622	3	14,541	20,365	,000 ^b
	Residual	168,502	236	,714		
	Total	212,124	239			

a. Dependent Variable: PI.

b. Predictors: (Constant), EA, EC, SN.

Note. EA = Environmental Awareness, EC = Environmental Concern, SN = Subjective Norm, PI = Purchase Intention.

Table 16 shows the direction and significance of the relationship of the independent variables on the dependent variable. Accordingly, a significant positive correlation was found between the subjective norm and the purchase intention ($\beta = .392$, $p < .001$). However, significant relationship was not found between the environmental concern and the purchase intention ($\beta = -.051$, $p > .045$). Likewise, no significant relationship was found between

environmental awareness and purchase intention ($\beta = .139$, $p > .05$). Thus, while H3 was accepted, H1 and H2 were not.

Table 16 : Model 1 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
(Constant)	1,742	0,380			4,583	0,000		
EC	-0,053	0,071	-0,051		-0,741	0,459	0,707	1,415
SN	0,374	0,067	0,392		5,551	0,000	0,676	1,479
EA	0,190	0,098	0,139		1,945	0,053	0,662	1,510

a. Dependent Variable: PI.

Note. EA = Environmental Awareness, PS = Price Sensitivity, PI = Purchase Intention, EC = Environmental Concern, SN = Subjective Norm.

Secondly, multiple linear regression analysis was done to purchase intention as the dependent variable, and environmental awareness, environmental concern and subjective norm as the independent variables.

In Table 17, the correlation between the independent variables is less than 0.80 and the VIF value is less than 3. Therefore, there is no multicollinearity problem in the model (see table 17 and 20).

Table 17 : Multiple Regression Analysis 2

		ATTGH	EC	SN	EA
Pearson Correlation	ATTGH	1,000	0,367	0,689	0,554
	EC	0,367	1,000	0,462	0,479
	SN	0,689	0,462	1,000	0,513
	EA	0,554	0,479	0,513	1,000
Sig. (1-tailed)	ATTGH		0,000	0,000	0,000
	EC	0,000		0,000	0,000
	SN	0,000	0,000		0,000
	EA	0,000	0,000	0,000	

Note. EA = Environmental Awareness, PS = Price Sensitivity, PI = Purchase Intention, EC = Environmental Concern, SN = Subjective Norm ATTGH = Attitude Towards Purchase Green Home

Table 18 shows that environmental awareness, environmental concern, subjective norm explain 52.4 percent of the attitude towards purchase a green home. In addition, the model is significant as shown in Table 19.

Table 18 : Model 2 Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,728 ^a	,530	,524	,642

a. Predictors: (Constant), EA, EC, SN

Note. EA = Environmental Awareness, EC = Environmental Concern, SN = Subjective Norm

Table 19 : Model 2 Sig./ ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	109,331	3	36,444	88,547	,000 ^b
	Residual	97,132	236	,412		
	Total	206,462	239			

a. Dependent Variable: It is more attractive to me to buy a home designed in accordance with the green building concept.

b. Predictors: (Constant), EA, EC, SN.

Table 20 shows the direction and significance of the relationship of the independent variables on the dependent variable. Accordingly, a significant positive correlation was found between the subjective norm and the attitude towards purchase green home ($\beta = .557$, $p < .001$). Significant positive correlation was found between the environmental attitude and the attitude towards purchase green home ($\beta = .280$, $p < .001$). However, no significant relationship was found between environmental concern and attitude towards purchase green home ($\beta = -.024$, $p > .65$). Thus, while H5 and H6 were accepted, H4 was not.

Table 20 : Model 2 Coefficients

Model	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B		Beta			Tolerance	VIF
(Constant)	0,432	0,289		1,497	0,136		
EC	-0,024	0,054	-0,024	-0,453	0,651	0,707	1,415
SN	0,525	0,051	0,557	10,253	0,000	0,676	1,479
EA	0,378	0,074	0,280	5,095	0,000	0,662	1,510

a. Dependent Variable: ATTGH

Note. EA = Environmental Awareness, EC = Environmental Concern, SN = Subjective Norm

Thirdly, Simple linear regression analysis was done to purchase intention as the dependent variable, and attitude towards purchase green home as the independent variables.

Table 21 shows that attitude towards purchase a green home explain 18.9 percent of the purchase intention. In addition, the model is significant as shown in Table 22.

Table 21 : Simple linear regression analysis / Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	,435 ^a	,189	,186	,85003

a. Predictors: (Constant), It is more attractive to me to buy a home designed in accordance with the green building concept.

Table 22 : Model 3 Sig./ ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40,159	1	40,159	55,579	,000 ^b
	Residual	171,965	238	,723		
	Total	212,124	239			

a. Dependent Variable: Purchase Intention

b. Predictors: (Constant), It is more attractive to me to buy a home designed in accordance with the green building concept.

Table 23 shows the direction and significance of the relationship of the independent variables on the dependent variable. Accordingly, a significant positive correlation was found

between the attitude towards purchase green home and the purchase intention ($\beta = .435$, $p < .001$). Thus, H8 was accepted.

Table 23 : Model 3 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	2,052	,251	8,182	,000
	ATTGH	,441	,059	,435	7,455

a. Dependent Variable: Purchase Intention ATTGH = Attitude Towards Purchase Green Home.

5.2.2.2 Mediator variable analysis

In this section, the mediating role of attitude towards purchase green home among independent variables was questioned using model 4 SPSS Process 3.5. In order for a variable to be considered a mediating variable, the independent variable must have a significant relationship with the dependent variable (Baron & Kenny, 1986). For this reason, a mediation test was not performed because there was no significant relationship between environmental concern and purchase intention, environmental awareness and purchase intention in previous regression analyzes. Thus, hypotheses H7a and H7b were rejected without the need for testing.

The mediating variable may explain all or only a part of the observed relationship between the dependent and independent variable. The situation that it reflects the whole

relationship is defined as complete mediation, and the situation that it reflects a part of it is defined as partial mediation. In the case of complete mediation, when the mediating variable is added to the analysis, the relationship between the dependent and independent variable is expected to weaken considerably or become statistically insignificant. In the case of partial mediation, the mediating variable cannot explain the entire relationship between the dependent and independent variable. The relationship between the dependent and independent variable continues to be significant, but there is a decrease in the level of significance (Yılmaz & Dalbudak, 2018). In addition, according to (Preacher & Hayes, 2004), the lower and upper confidence intervals obtained in the resampling (Bootstrap) method should not contain zero. As a result, both the lower and upper confidence intervals must be either positive or negative.

In Table 24, the mediating role of attitude towards green home between subjective norm and purchase intention is tested. First, it shows the influence of subjective norm on purchase intention alone. Secondly, the subjective norm is shown together with the attitude variable. In this model, although the strength of the relationship between subjective norm and intention to buy decreased, the level of significance remained. This shows that attitude towards green home has a partial mediating role between subjective norm and purchase intention. It was concluded that the mediating effect was significant because the bootstrap confidence intervals did not contain zero. Hence, H7c was accepted.

Table 24 : Mediating Variable Analysis of Attitude Towards Green Home

Constant	Coeff	p	LLCI	ULCI
SN	.4196	.000	.1661	.0490

Constant	Coeff	p	LLCI	ULCI
SN	.2535	.0009	.1051	.4019
ATTGH	.2557	.0016	.0983	.4132

Mediator Variable	Total Effect	Direct Effect	Indirect Effect	BootLLCI	BootULCI
ATTGH	.4196	.2535	.1661	.0490	.3623

Note. SN = Subjective Norm ATTGH = Attitude Towards Purchase Green Home

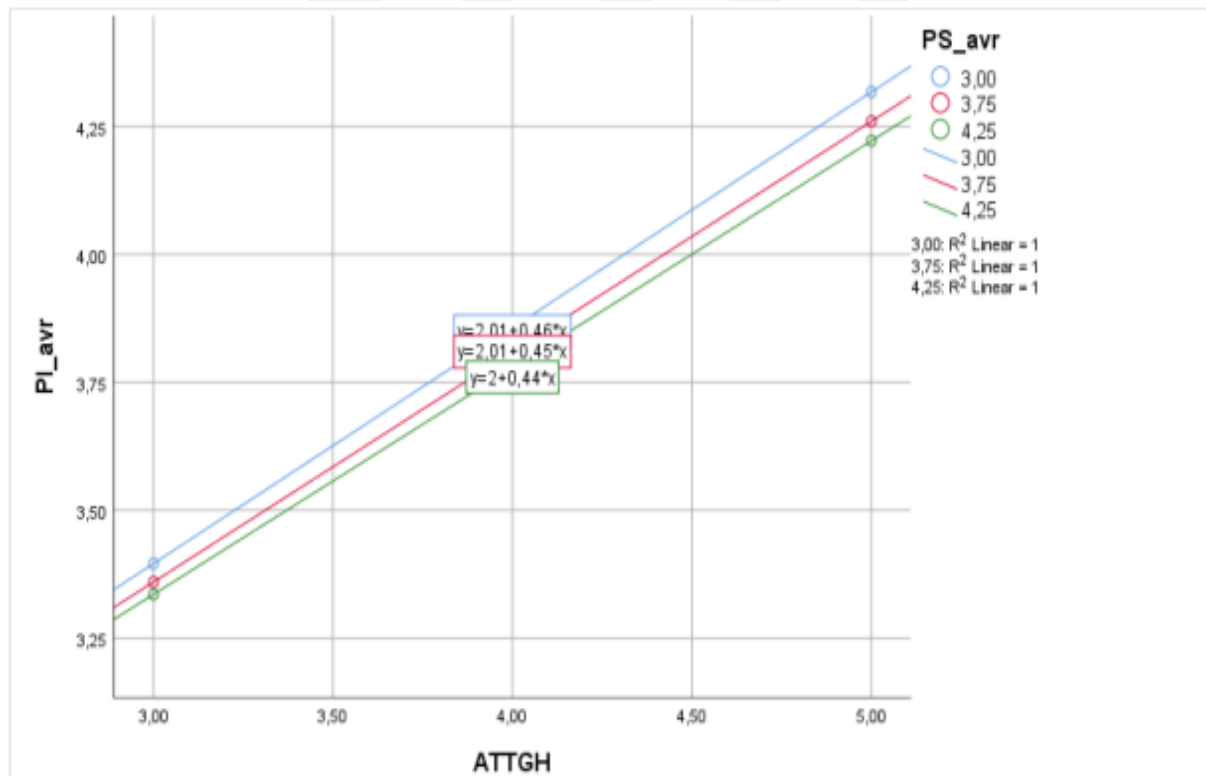
5.2.2.3 Moderator variable analysis

In this section, the moderating role of price sensitivity among attitude towards green home and purchase intention were questioned using model 1 SPSS Process 3.5. Although the model created to measure the regulatory effect was significant, price sensitivity and interaction term were not significant. Thus, hypothesis H9 that price sensitivity has a moderating effect is rejected. In Figure 5, it is seen that the increase in price sensitivity does not have a negative effect on purchase intention.

Table 25 : Moderating Variable Analysis of Price Sensitivity

Constant	Coeff	p	LLCI	ULCI
ATTGH	.5032	.0019	.1881	.8163
PS	-0,006	.9761	-0,3999	.3879
Int_1	-0,0141	.7680	-0,108	.0798

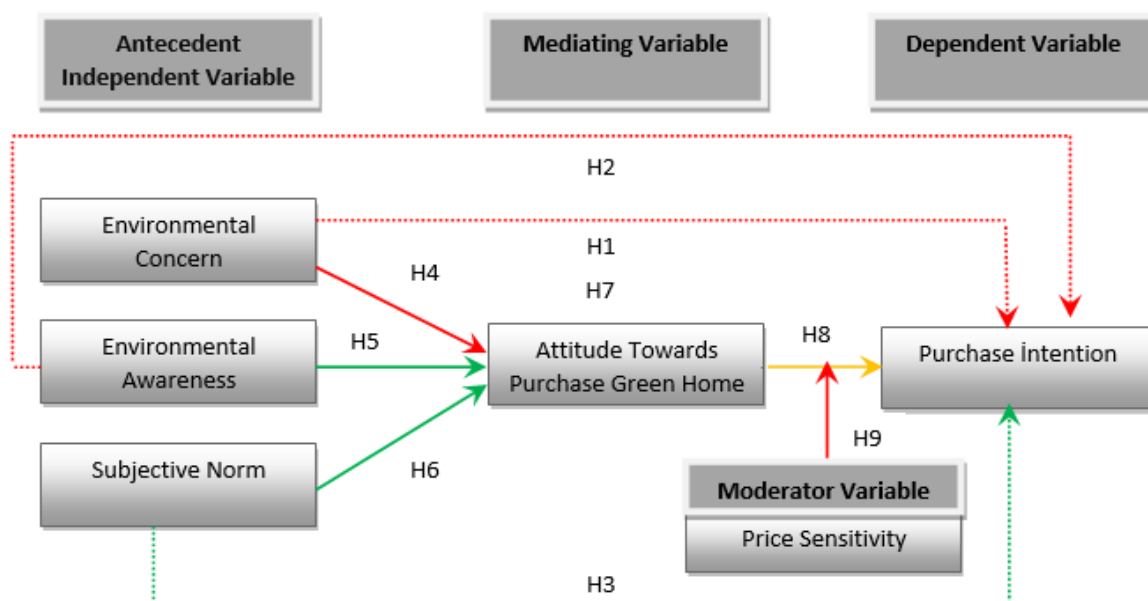
Note. PS = Price Sensitivity, ATTGH = Attitude Towards Purchase Green Home

Figure 5: Moderator Effect of the Price Sensitivity

As a result, the results of the hypotheses can be seen in Table 5.10.

Table 26 : Results of the Hypotheses Testing

Hypotheses	Results
H1. Environmental concern has a significant positive impact on consumers' purchase intention.	Rejected
H2. Environmental awareness has a significant positive impact on consumers' purchase intention.	Rejected
H3. Subjective norm has a significant positive impact on consumers' purchase intention.	Accepted
H4. Environmental concern has a significant positive impact on consumers' attitude towards purchase green home.	Rejected
H5. Environmental awareness has a significant positive impact on consumers' attitude towards purchase green home.	Accepted
H6. Subjective norm has a significant positive impact on consumers' attitude towards purchase green home.	Accepted
H7. Attitude towards green home mediates the relationship between environmental concern, environmental awareness, subjective norm and purchase intention.	Partially accepted
H7a. Attitude towards green home mediates the relationship between environmental concern and purchase intention.	Rejected
H7b. Attitude towards green home mediates the relationship between environmental awareness and purchase intention.	Rejected
H7c. Attitude towards green home mediates the relationship between subjective norm and purchase intention.	Accepted
H8. Attitude towards green home has a significant positive impact on consumers' purchase intention.	Accepted
H9. Price sensitivity plays a negative moderating role between attitude towards green home and purchase intention.	Rejected

Table 27: Research Model with Hypothesis Results

Note. Green Color = Accepted, Red Color = Rejected Orange Color = Partially accepted

6. RESULTS, DISCUSSION AND IMPLICATIONS

In this study, it was tested whether there is a relationship between consumers' environmental concern, environmental awareness, subjective norm and attitude towards green home and purchase intention, and whether attitude is the mediating variable and price sensitivity is the negative moderating variable.

Firstly, the relationship between independent variables and purchase intention towards green home was tested. As a result of this regression analysis, only a significant relationship was found between subjective norm and purchase intention. It was not determined that environmental concern and awareness had a significant effect on purchase intention. As in this study, a significant relationship between subjective norm and purchasing has been found in

many studies in the literature (Sparks & Shepherd, 1992; Yadav & Pathak, 2016; Dean, Raats, & Shepherd, 2011; Han, Hsu, & Sheu, 2010). In addition, many studies have found a significant relationship between environmental awareness and purchase intention (Heffner, Kurani, & Turrentine, 2007; Jaiswal & Kant, 2018). Unlike, (Kumar, K. Manrai, & Manrai, 2017) found a weak relationship between environmental awareness and purchase intention. Although almost all studies found a significant relationship between environmental concern and purchase intention, surprisingly, no significant relationship was found in this study. As a result, in this study conducted in Turkey, it is understood that the purchase intention is related to the behavior of people adapting themselves to social norms.

Secondly, the relationship between independent variables and attitude towards green home was tested. As a result of this regression analysis, a significant relationship was found between environmental awareness and attitude towards green home. Similarly, (Khaleeli & Jawabri, 2021) found a significant relationship between subjective norm and attitude, while (Aman, Harun, & Hussein, 2012) found no significant relationship. Although almost all studies found a significant relationship between environmental concern and attitude towards green home, surprisingly, no significant relationship was found in this study.

Thirdly, the mediating role of attitude towards green home between the subjective norm and purchase intention was tested. Since environmental anxiety and awareness are not directly and significantly related to purchase intention, mediator variable analysis was not performed. As a result of the analysis, it was determined that attitude has a partial mediating role between subjective norm and purchase intention. Although the subjective norm influences purchase intention, relationship is strengthened via attitude towards green home.

Finally, the moderating effect of price sensitivity between attitude and purchase intention was tested. Contrary to (Hsu, Chang, & Yansritakul, 2017), no significant relationship was found in this test. It was thought that price sensitivity would negatively affect purchase intention. When the respondents were asked how expensive a green home was compared to other home, it was determined that 54.6 percent of the respondents had an expectation of more than 10 percent. It is considered as a positive result that the expected price difference of green homes is higher than the real price difference and that there is no decrease in the purchase intention of price sensitive people.

According to the results, Subjective norm and environmental awareness have an important role in developing a positive attitude towards green home. The positive attitude also significantly increases the purchase intention of the consumer. Contrary to many different countries, the fact that there is no negative effect on the purchasing intentions of people with high price sensitivity, will support the studies on the concept of green home. For this reason, marketers, non-governmental organizations and the government have a great responsibility. First of all, it is important to create environmental awareness in order to increase the intention to buy a green home. Business and marketing managers need to use engaging, educational marketing messages and slogans that combine the characteristics of these green home with desired consumer values. Avoiding environmental pollution during the construction of the building, energy saving and efficient use of daylight, which are among the most well-known features of the green home, should be emphasized more. In addition, marketers should be more educational and informative about one of the least known features of the green home, the proximity of the building location to public transportation and social life, about having good lighting. According to this study data, 51.7 percent of consumers have never heard of the green home concept before. If we take into account the people with have limited information knowledge, 92.5 percent of the consumers do not have enough information about the green

home concept. For this reason, it is very significant for marketers, non-governmental organizations and the government to implement educational and instructive marketing strategies.

The importance of the subjective norm, which is the belief about the extent to which personal behaviors will be approved by others, and to what extent they conform to social behavior patterns, should not be denied. For this reason, the involvement of people valued by the society in marketing strategies will have a positive effect on raising awareness towards green home concept and raising purchase intention and attitude towards green home.

Studies show that green buildings are between 1-2% more expensive than other homes (Kats, 2003). In addition, a study has calculated that the overpaid amount for the green building will pay for itself in 6-7 years (World Green Building Trends 2018, 2018). According to the data of this study, 54.6 percent of consumers consider that green home are 10 percent or above more expensive than other home. When we take into account that the 7-10 percent excess amount that the consumers will pay for the green home does not have a negative effect on the purchase intention, it is clearly seen that there is a situation that will create added value for the construction companies. With the spread of the green home concept, it is clear that consumers will be able to own these homes with a difference far below the price difference expectation range.

6.1 Implications for Construction Companies

Due to the high price expectations of consumers, there is a situation that will create added value for the construction companies. The approach of green home prices to conventional homes prices will increase the level of consumers' satisfaction and demand. Currently, almost

all of the green buildings built in Turkey have the status of commercial buildings. For this reason, there is a serious potential for green residential buildings investments. In this context, the things to be done can be listed as follows;

- Execution of marketing strategies that will positively affect the attitude towards green home.
- The involvement of people valued by the society in marketing strategies will have a positive effect on raising awareness towards green home concept and raising purchase intention and attitude towards green home.
- It should be well explained to the consumers that the excess amount they will pay at the beginning will pay for itself in a short time.
- Well-known features of the green home such as energy saving should be emphases, in the least known features such as the social life facilitating effects of the home location, consumer awareness should be created.
- A positioning strategy can be implemented based on the characteristics of the green home that are valuable to the residents.

6.2 Implications for Construction Materials Suppliers

With the increase in green building projects, there is an opportunity to differentiate for manufacturers which are suppliers to construction companies. Recyclable and environmentally friendly products should be given priority. This created value should be used in marketing communication. Marketing strategies should use engaging, educational marketing messages and slogans that combine the characteristics of these green products with desired consumer values. In addition, marketing managers can increase their sales and brand value by increasing green awareness by using integrated marketing communication tools such as conferences, symposiums, university meetings and advertisements.

6.3 Implications for NGOs and NPOs

In general, non-governmental organizations and Non-Profit Organization have an important role in informing and educating the public about a certain issue. As this study shows, we still have a long way to go to enlighten consumers about green buildings. For this reason, it is important for NGOs to increase environmental awareness and knowledge about green home to creating purchase intention towards green home. In this context, the things to be done can be listed as follows;

- Many features of green buildings are unknown, promotional advertisements should be made about the features and benefits of green homes.
- Calculation programs can be prepared to show how long the overpaid amount will pay for itself.

6.4 Implications for Governments

Firstly, the most important factor that will expedite all these processes is the increase of the state's audit over the buildings and the prepare and implementation of the necessary legislation. Secondly, Broadcasting about creating environmental awareness in public announcement will form the infrastructure of creating a positive attitude towards green home.

6.5 Implications for Finance Sectors

The development of green finance is extremely important in order to ensure the sustainability of all these investments and to provide financing for green home/building projects.

7. LIMITATIONS AND FUTURE RESEARCH

The data of this study was collected only from Istanbul, Ankara and Izmir provinces in Turkey. In this study, data collection was carried out using the nonprobability sampling technique. For this reason, education and social status levels were above the Turkey data averages. The majority of the participants in the study are university or postgraduate graduates and people with socioeconomic status level A and B. The second limitation of the study is that there are many factors in the literature that affect the attitude and purchase intention towards green home, but in this study, only the effects of anxiety, awareness, subjective norm factors on purchase intention and attitude towards green home were examined. In future studies, many factors that are accepted in the literature that affect attitude towards green home and purchase intention can be added to the research model.

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Appendix A: Online Questionnaire

Yeşil Ev Anket Formu

Değerli Katılımcı,

Bu çalışma Yeditepe Üniversitesi Sosyal Bilimler Enstitüsü İşletme bölümü yüksek lisans programında gerçekleştirdiğim bir bilimsel çalışmada veri olarak kullanılmak üzere tasarlanmıştır. Bu çalışmanın amacı, çevresel farkındalık, çevresel kaygı ve öznel normların yeşil eve karşı tutum ve satın alma niyeti üzerindeki etkisini incelemektir. Araştırma sonuçları tamamen bilimsel çalışma için kullanılacak olup, kişisel bilgiler gizli tutulacaktır. Arzu etmeniz durumunda çalışma sonuçlarımız sizinle paylaşılacaktır. Gösterdiğiniz ilgi ve sağladığınız katkılardan dolayı teşekkür ederiz.

Ozan Atik

Kısa veya uzun vadede bir ev almayı düşünüyor musunuz? *

- ☒ Evet
- ☐ Hayır

Geri

Sonraki

Sayfa 2 / 8

Yeşil Ev

Yeşil ev konseptini biliyor musunuz? *

- ☐ Daha önce hiç duymadım
- ☐ Duydum, bilgim yok
- ☐ Biraz bilgi sahibiyim
- ☐ Evet, yeşil ev konseptini biliyorum

Aşağıdaki maddelerden hangilerinin yeşil bir evin sahip olduğu özelliklerden biri olduğunu düşünüyorsunuz? *

Bir veya birden fazla madde seçebilirsiniz.

- ☐ Arazi konumunun sosyal yaşama yakınlığı
- ☐ Arazi konumunun toplu taşıma araçlarına yakınlığı
- ☐ Enerji tasarrufu
- ☐ Su verimliliği
- ☐ Düşük karbon ayak izi
- ☐ İç hava kalitesi
- ☐ İyi aydınlatma
- ☐ Gün ışığının etkin kullanılması
- ☐ Bina yapım aşamasında çevre kirliliğine sebep olan etkenlerden uzak durulması
- ☐ Bina yapımında kullanılan malzemelerin geri dönüştürülebilir olması
- ☐ Enerji verimliliği
- ☐ Yenilenebilir enerji kaynaklarının kullanımı

Geri

Sonraki

Sayfa 3 / 8

Yeşil Bina Tanımı

Bu bölümdeki sorulara başlamadan önce size yeşil binalar/evler hakkında bilgi vermek istiyoruz. Çevre Dostu Yeşil Binalar Derneği (ÇEDBİK) eş kurucusu Dr. Duygu Erten Yeşil Bina' yı aşağıdaki gibi tanımlamıştır.

Yeşil binalar, sürdürülebilir yapı malzemelerinden oluşan, su ve enerji verimliliği diğer binalardan oldukça yüksek olan; yapının arazi seçim sürecinden başlayarak yaşam döngüsü çerçevesinde değerlendirilip tasarlandığı, bulunduğu doğaya özgü koşullara uygun, enerji verimli ve yenilenebilir kaynaklara yönelmiş, çevresel etkileri düşük malzemelerin seçildiği, su verimliliği sağlayan çevreci, ekonomik ve sağlıklı binalardır.

Lütfen, aşağıdaki yargılara katılım düzeyinizi belirtiniz. *

Bu bölümdeki soruların cevapları kesinlikle katılmıyorum, katılmıyorum, kararsızım, katılıyorum, kesinlikle katılıyorum ifadelerini içermektedir. Akıllı telefonlardan anketi dolduran kişilerin diğer seçenekleri görmesi için ekranı sola kaydırmaları gerekmektedir.

	Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle katılıyorum
İnsanoğlunun doğaya müdahalesi genellikle felaketle sonuçlanır.	☐	☐	☐	☐	☐
İnsanlar doğayı ve doğal kaynakları aşırı kullanmaktadır.	☐	☐	☐	☐	☐
Doğadaki denge çok çabuk bozulacak kadar hassastır.	☐	☐	☐	☐	☐
Bugünkü tüketim alışkanlıkları değiştirilmezse, ileride çok büyük çevre problemleri ile karşılaşılacaktır.	☐	☐	☐	☐	☐

Biyolojik
çeşitliliğin
azalmaması için
orman
tahribatının
önüne
geçilmelidir.

☐
☐
☐
☐
☐

Biyolojik çeşitlilik
üzerine olumsuz
etkileri olması
nedeni ile küresel
ısınma kontrol
altına alınmalıdır.

☐
☐
☐
☐
☐

Karbon salınımını
azaltmak için
güneş alan
coğrafyalarda
güneş
enerjisinden
faydalanılmalıdır.

☐
☐
☐
☐
☐

Karbon salınımı
azaltmak için
enerji verimli
kullanılmalıdır.

☐
☐
☐
☐
☐

Enerjinin verimli
kullanılması için
evlerde ısı
yalıtımı
yapılmalıdır.

☐
☐
☐
☐
☐

İçme suyu
kaynaklarının
kirlenmemesi için
tarım arazisinde
kontROLSÜZ gübre
kullanılmamalıdır.

☐
☐
☐
☐
☐

Daha az atık
oluşması için geri
dönüşüm
uygulamaları
yapılmalıdır.

☐
☐
☐
☐
☐

Topraktaki biyolojik çeşitliliğe zarar verilmemesi için fabrika bacalarına filtre takılmalıdır.

☐☐☐☐☐

Elektrik sarfiyatını azaltmak için enerji tasarruflu lambalar kullanılmalıdır.

☐☐☐☐☐

Benim için önemli olan insanlar, yeşil bir ev satın almamı beklerler.

☐☐☐☐☐

Benim için önemli insanlar, yeşil bir ev satın almamı onaylar.

☐☐☐☐☐

Bir evin yeşil bina konseptine uygun olarak tasarlanmış halini satın almak bana daha cazip gelmektedir.

☐☐☐☐☐

Yeşil ev satın alırken daha fazla ödeme yapmamın sakıncası yok.

☐☐☐☐☐

Fiyat daha yüksek olursa, yeşil ev satın alma konusunda daha az istekli olurum.

☐☐☐☒☐

Ev alımında fiyata karşı çok hassasım.

☐☐☐☐☐

Fiyatları
karşılaştırmaktan
hoşlanırım.

☐☐☐☐☐

Ev satın alma
tercihimde fiyat
benim için en
önemli faktördür.

☐☐☐☐☐

Yeşil ev konseptine uygun olarak tasarlanmış bir evin diğer evlerden yüzde kaç
daha pahalı olduğunu düşünüyorsunuz. *

- ☐ Fark yoktur
- ☐ 1-3% daha pahalıdır
- ☐ 4-7% daha pahalıdır
- ☐ 7-10% daha pahalıdır
- ☐ %10 ve üstü daha pahalıdır

[Geri](#)[Sonraki](#)

Sayfa 4 / 8

Yeşil bir ev için ödeyeceğiniz fazla tutarın kendini kaç yılda amorti etmesini
beklersiniz. *

- ☐ 1-2 Yılda
- ☐ 3-4 Yılda
- ☐ 5-6 Yılda
- ☐ 7-8 Yılda
- ☐ 9 Yıl ve üstü

[Geri](#)[Sonraki](#)

Sayfa 5 / 8

Bu bölümdeki soruların cevapları kesinlikle katılmıyorum, katılmıyorum, kararsızım, katılıyorum, kesinlikle katılıyorum ifadelerini içermektedir. Akıllı telefonlardan anketi dolduran kişilerin diğer seçenekleri görmesi için ekranı sola kaydırmaları gerekmektedir.

Lütfen, aşağıdaki yargılara katılım düzeyinizi belirtiniz. *

	Kesinlikle katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
Gelecekte yeşil bir ev satın almayı düşünüyorum.	☐	☐	☐	☐	☐
Gelecekte yeşil bir ev satın almak için çaba göstereceğim.	☐	☐	☐	☐	☐

[Geri](#)

[Sonraki](#)



Sayfa 6 / 8

Lütfen aşağıda yer alan soruları yanıtlayınız.

Cinsiyetiniz *

☐ Kadın

☐ Erkek

Medeni Haliniz *

☐ Evli

☐ Bekar

Yaşınız *

- ☐ 18-24
- ☐ 25-34
- ☐ 35-44
- ☐ 45-54
- ☐ 54 ve Üstü

Aylık gelir düzeyiniz *

- ☐ 0-2000 TL
- ☐ 2001-5000 TL
- ☐ 5001-8000 TL
- ☐ 8001-11.000 TL
- ☐ 11.001-14.000 TL
- ☐ 14.000 ve Üzeri

Lütfen, iş durumunuzu seçiniz. *

Seçin

Lütfen, eğitim durumunuzu seçiniz. *

Seçin

Yaşadığınız şehir *

Seçin ▼

Geri Sonraki

Sayfa 7 / 8

Anketi Gönder

Anket sorularımız burada sonlanmıştır. Anketi tamamlamak için lütfen gönder seçeneğine basınız.

Geri Gönder

Sayfa 8 / 8