ATILIM UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
DEPARTMENT OF BUSINESS ADMINISTRATION
BUSINESS ADMINISTRATION MASTER'S PROGRAMME

THE PREDICTORS OF CONSUMERS' PURCHASING INTENTIONS OF ENVIRONMENT- FRIENDLY PRODUCTS

Master's Thesis

Metin ARSLAN

Ankara-2023

GCPS

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Thesis Advisor

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Ankara-2023

ACCEPTANCE AND APPROVAL

This is to certify that this thesis titled “The Predictors of Consumers’ Purchasing Intentions of Environment- Friendly Products” and prepared by Metin ARSLAN meets with the committee’s approval unanimously as Master’s Thesis in the field of Business Administration following the successful defense conducted on 09/01/2023

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ETHICAL STATEMENT

I accept and acknowledge that I have prepared this thesis study, prepared in line with the Thesis Writing Guidelines of Atılım University Graduate School of Social Sciences;

- within the framework of academic and ethical rules;
- presented the information, documents, evaluations, and results in a way that meets the rules of scientific ethics and morality,
- I have referenced each work from which I have benefited while preparing my thesis, and that
- I hereby present a unique study.

I hereby also understand that I shall accept any loss of rights against my behalf in cases otherwise.

Date and Signature

Metin ARSLAN

ÖZ

ARSLAN, Metin. Tüketicilerin Çevre Dostu Ürünleri Satin Alma Niyetlerinin Etkileyen Faktörler, Yüksek Lisans Tezi, Ankara, 2023.

Türkiye'de nüfusun artmasıyla birlikte tüketicinin hangi ürünleri kullanacağına ilişkin tercihlerinin çevre üzerinde büyük bir etkiye sahip olduğu görülmektedir. Bununla birlikte bir çok işletme, rekabet avantajı elde etmek veya çevreye yönelik hassasiyet nedeniyle tüketicilere çevre dostu ürünler sunmaktadır. Bu çalışmanın amacı, tüketicilerin çevre dostu ürünleri satın alma niyetini belirleyen etmenleri ortaya koymaktır. Planlı Davranış Kuramı bağlamında tüketicilerin tutumunu bir aracı değişken olarak ele alan bu çalışma, çevresel kaygının, algılanan fiyatın, kalite ve risklerin tüketicilerin çevre dostu ürünleri satın alma niyetlerine etkilerini incelemiştir. Buna göre kaygının, algınan fiyatın, kalitenin ve risklerin, tüketicilerin hem çevre dostu ürünlere karşı tutumlarını, hem de satın alma niyetlerini etkileyeceğini beklenmektedir.

Çalışmada kolayda örnekleme yöntemi benimsenmiş ve üniversite öğrencilerine internet üzerinden çevrimiçi anket dağıtılmıştır. Önerilen modeli test etmek amacıyla Yapısal Eşitlik Modellemesi uygulanmıştır. Çalışmanın sonuçları, çevresel kaygı, algılanan fiyat, kalite ve risklerin çevre dostu ürünlere yönelik tutumlar üzerinde anlamlı etkileri olduğunu ve bu tutumların bireylerin çevre dostu ürünleri satın alma niyetini etkilediğini göstermiştir. Tüketici tutumları, çevresel kaygının ve algılanan kalite ve fiyatın satın alma niyetleri üzerindeki etkisine kısmen aracılık ederken, algılanan risklerin satın alma niyetleri üzerindeki etkisine tam olarak aracılık etmiştir. Bu çalışma, tüketici tutumlarının çevre dostu ürünleri satın alma niyetini belirleyen en önemli etmenlerden biri olduğunu ortaya koymaktadır. Ayrıca çevresel kaygının, pazarlamada algılanan riskleri azaltabilecek ve mevcut çevre dostu ürünlerin kalite ve fiyatlarının tüketiciler tarafından kabulünü artırabilecek önemli bir etmen olduğunu vurgulamaktadır.

Anahtar Sözcükler: Çevresel kaygı, Çevre dostu, Algılanan riskler, Algılanan kalite ve fiyat, Satın alma niyeti

ABSTRACT

ARSLAN, Metin. The Predictors of Consumers' Purchasing Intentions of Environment- Friendly Products, Master's Thesis, Ankara, 2023.

With the increased population in Türkiye, it is seen that the consumers' preferences of which products to use, have a great impact on the environment. In addition, many businesses offer environment-friendly products to consumers to gain a competitive advantage or due to environmental sensitivity. The purpose of this study is to reveal the factors that determine the consumers' intention to purchase environment-friendly products. This study, which considers consumers' attitudes as a mediating variable in the context of Planned Behavior Theory, examined the effects of environmental concerns, perceived price, quality, and risks on consumers' intention to purchase environment friendly products. Accordingly, it is expected that environmental concern, perceived price, quality, and risks would affect both consumers' attitudes toward environment friendly products and their purchasing intentions.

In the study, the convenience sampling method was adopted, and online questionnaires were distributed to university students. Structural Equation Modeling was applied to test the proposed model. The results revealed that consumers' environmental concern, perceived price, quality, and risks have significant effects on attitudes toward environment-friendly products, and these attitudes have a significant effect on their purchasing intentions toward environment-friendly products. Consumers' attitudes have partially mediated the effect of environmental concern and perceived quality and price, and completely mediated the effect of perceived risks on purchasing intentions. This study reveals that consumer attitudes are one of the foremost important factors determining the intention to purchase environment friendly products. It also emphasizes importance of environmental concern as component in marketing, that can mitigate the perceived risks and raise the acceptance of the current quality and prices of environment-friendly products among consumers.

Keywords: Environmental concern, Environment friendly, Perceived risks, Perceived price and quality, Purchase intention

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INTRODUCTION

Many businesses started to adopt an increasing responsibility toward environmental concerns. Those concerns also have been growing among the public in a way that cannot be ignored anymore. Although many people were denying the environmental change, the eventual temperature changes, the severe seasonal changes, and many other unexpected weather phenomena which are witnessed lively by humanity would be easily traced back to the thought that the earth and the environment are being damaged. The adopted resolution by the United Nations Environment Assembly on 15 March 2019 indicated much emphasis to conserve the environment with respect to the three Rs" (reduce, reuse, recycle), and more efficient use of water resources. Additionally, the resolution pointed out a less harmful approach to the environment to be adopted by businesses. For example, using the waste produced by one company as valuable raw material for another. Also, businesses can adopt a life-cycle approaches which helps to ensure that materials are used more productively throughout their life cycle (UNEP, 2019). Thereby, such practices can lead to less harm to the environment.

Environment-friendly products (EFPs) are one of the major research aspects of green marketing to stand against ruining the remains of the earth. EFPs are defined as "tangible or intangible that minimizes its environmental impact (direct or indirect) during its whole life-cycle, subject to the present technological and scientific status" (Sdrolia,2018,p.22). The EFPs can ease the transition toward more environmental approaches. Giving up on conventional energy resources is explicitly a hard act to be taken because of no abundance of real alternatives, considering that the current environment-friendly energy solutions cannot fill the gap. Therefore, consuming environment-friendly products at least can relieve the customers who care about the earth that they are doing a positive action for the earth. The increase in concern for the environment and green is already witnessed day by day.

Although many businesses for the sake of maximum profit can segment the market and accordingly provide EFPs and traditional products to meet the preferences of all customers, many corporations have been actively producing and selling EFPs in reaction to growing interest in environmental protection (Chen, 2001). Other companies are disseminating information to customers about the ease of purchasing

EFP (Laroche et al., 2001). Corporate organizations have embraced green labeling to strengthen their brand image, which also can increase competitiveness (Chan & Chau, 2021). Green marketing, ecological marketing, or environment-friendly marketing, is collectively referred to all promoting activities made to empower and keep up customers' environmentally conscious attitudes and activities. (Chen & Chang, 2013). Companies may explore green marketing initiatives if they believe it will pay off (Sarı, 2010), and as the green customers are growing faster, they have already created a market segment that many companies would like to address.

Consumers have noticed that their purchase habits have a direct influence on a variety of environmental issues (Mostafa, 2007) that is, 40% of environmental damage is accounted to households' purchases (Wijekoon & Sabri, 2021). Green consumers are those who are mindful of and concerned about environmental problems (Maichum et al., 2016). They are defined also as consumers who purchase goods and services they believe will have a beneficial (or less negative) influence on the environment (Roberts, 1996). The more the community is knowledgeable about environmental issues, the more customers prioritize environmentally friendly purchases (Gleim et al., 2013). For example, Ha et al. (2021) found out in their study that when tourism customers are aware of the plant, they'll probably buy environment-friendly tourist goods. Nonetheless, when environmentally concerned customers are not finding suitable products which meet their greenish needs, they can alter their purchase behavior, and put a kind of pressure on the market. Therefore, businesses that are not ecologically responsible are often punished by green consumers (Ritter et al., 2015). Thereby, this study tried to predict and figure out how effective is an environmental concern-based marketing strategy with communicating customers toward more positive attitudes and purchase intentions for the EFP. When buying products, green consumers consider how their decisions may affect the physical environment; however, when environment-friendly options are available, non-green customers are those who choose to make purchases that are not in the best interest of the physical environment (Gleim et al., 2013), accordingly, this research is not evaluating the environmental performance aspect of EFPs, but rather, treats the EFPs as ordinary products similar to the conventional products.

Many companies started to adopt the green trend out of social responsibility to meet customers' needs. For example, the Getir company in Türkiye has already

replaced all the plastic bags with fabric-likely bags which are more environmentally. Accordingly, the interest of those companies to be more environmental is leading to research for barriers to green consumption faced by customers. Especially when the market share globally for the EFPs is 7-8% (Wijekoon & Sabri, 2021), the importance of those barriers is increasing among marketing experts as well. This study takes into hand the perceived risks by customers (the negative consequences of purchasing EFPs) and tries to figure out their effect as a potential barrier that may cause an unfavorable hesitation toward EFPs. It's suggested that EFPs are perceived as not having the expected "strength attributes", and that the price is higher than its counterpart products (Luchs et al., 2010). Therefore, this study also investigates whether customers are currently perceiving the prices and quality of EFP as accepted or whether there is a tangible need to adjust the price or the quality.

Since there are only a few studies in the Turkish context on consumers' attitudes and perceptions toward green products and environmentally friendly behavior (Midilli & Kuşçu, 2021), this study comes as a response to the previous studies' suggestions and calls, and additionally includes the perceived risks, perceived quality and price, and environmental concern as predictors for the attitudes toward purchasing intentions. Many studies advocate that environmental concern is a strong motivation and good predictor that can encourage many customers for favoring the EFPs (Wijekoon & Sabri, 2021), and so many marketing strategies are already following the environmental concern to communicate with customers. Yet the effect of consumers' attitudes on purchase intentions with the presence of the perceived risks and the perceived quality and prices in Türkiye is not clear yet. While the extant literature has an abundance of studies that focus on environmental concern which is considered as predictor for purchasing EFPs, there is only one study conducted in the Turkish context that includes the perceived risks as a potential barrier and negative predictor for purchasing EFPs (Bozbay et al., 2019). Thus, this study tries to put more light on the role of the perceived risks which many companies may use as additional guidance. The presence of perceived risks causes negative hesitation and feelings among customers and addressing those perceived risks with appropriate marketing can eliminate a certain barrier. It also may enhance positive attitudes toward EFPs and thereby, enhance the intentions of customers for purchasing them.

The significance of this research is based exactly about the urge to understand the current mindset of consumers in Türkiye and so, it tries to figure out how environmental concern and perceptions about EFP with regard to their quality, prices, and risks affect the consumers' attitudes and purchase intentions for EFPs. It mainly aims to assist marketers with outlining the gaps in the current EFP marketing plans by examining the current customers' profile, preferences, and mindset regarding the transition to use environment-friendly products for focused, ecological marketing yet more comprehensive. To do so, it aims to:

1- Examine the relationships among environmental concern, perceived risks, consumer attitudes and perceived quality and price; and intentions to purchase environment-friendly products.

2- Examine the mediating role of consumers' attitudes toward EFPs on the relationships between environmental concern, perceived price, quality, risks, and purchasing intentions for environment-friendly products.

In the following sections, the related literature for the study variables and definitions of the constructs are presented. Later on, the relationships between the study variables and the study model are clarified. Then, the methodology of this study is described and the findings are presented. Finally, the study findings are discussed and compared with the previous research findings. Additionally, the implications and limitations of the findings and the future research scope were listed.

CHAPTER 1: LITERATURE REVIEW AND THEORETICAL BACKGROUND

1.1 Environment-Friendly Products (EFPs)

The term “product” can embrace many things such as any real or intangible thing that fills a need (Agyekum et al., 2015). The environmental aspect of a product has emerged as one of the most important variables influencing green consumers purchasing decisions (Chen, 2001). Green products also known as environment-friendly products (EFPs) are considered as concerning for the land, water, and air environments (Shrum et al., 1995). Similarly, a product is called an environment-friendly product when its life cycle ‘from cradle to grave’ respects the needs of the environment (Stauffer, 1997). It is noteworthy to mention that there is no unified definition among scholars with regard to EFPs (Sdrolia, 2018; Shukla, 2019). Nowadays, the ways that a product can respect environmental needs are out of count. Saving energy, being able to be recycled, less polluting, may have materials not or less harmful to the living and the environment, good design, and many other specifications can be listed (Sdrolia, 2018).

Nevertheless, EFPs manufacturing is a challenge loaded with danger and uncertainty (Chen, 2001). According to a study (Khan et al., 2021), for a company to support EFP innovations, a structural change within the company is required. This change also can encompass employees, skills, and many other structural variables. In addition, the time necessary for such investments to create a return has not been identified by scholars yet. The cost of merging the environmental attributes with conventional quality together in an EFP, and the number of non-environmental customers are among the known barriers faced by companies and businesses in developing EFP (Chen, 2001). However, similar to any conventional product, an environment-friendly approved product depends on the right marketing strategy to attract more customers.

1.2 Environmental Concern

Even though the concept of environmental concern has been examined by numerous scholars, there is no consensus on the definition of this concept within the literature. Furthermore, several terms have been used for this construct including environmental awareness, environmentally conscious, and environmental concern

(Ritter et al., 2015). Environmental concern is defined as the demeanor or the attitude of human behavior that affects environmental consequences. It's also a construct with several dimensions including cognitive, emotive, and conative components, and takes into account a person's emotional assessment of the effects of their own influence on their biophysical environment (Ham et al., 2015). It is also defined as people's awareness of environmental challenges and motivation to tackle environmental problems (Maichum et al., 2016). Consumers who are environmentally aware also do better on a measure of environmental concern (Roberts, 1996). Moreover, when an individual develops a positive general orientation toward the environment, then it is not surprising that s/he would have an environmental concern.

Considerable research has been established on the effects of environmental concern over consumers. For instance, a systemic review of environment-related studies conducted between 2015-2021 suggests that environmental concern is one of the most important element for environmental behavior and purchase intentions (Wijekoon & Sabri, 2021). It is also an important predictor for environment-friendly behavior (Yue et al., 2020). In a study by Onurlubaş (2018), it was reported that environmental concern affected the attitude and purchase intentions of the residents of Türkiye, İzmir. Erdil (2018) reported in her study with regard to generation Y consumers that environmental concern plays an important role in affecting the intention for purchasing EFP. Moreover, environmental concern emerged as one of the potential reasons for favoring the EFP (Akarapisit, 2019), as it was revealed that participants' being aware of the bad environmental effects on the consumers or their families made them favor the EFP.

Despite the growth of environmental consciousness, the market proportion of many EFP products did not grew yet because it's still not meeting the expectations of customers, specifically its environmental performance (Tseng & Hung, 2013). Moreover, a lack of awareness can be a barrier to purchasing an EFP (Lin & Chang, 2012). While environmental consciousness is strongly related to EFP consumption (Ritter et al., 2015), a lack of knowledge about the seriousness of the current environmental issues may lead to continuing ordinary purchasing behavior. As ignorance over environmental claims may stand between consumer behavior and environmental concern (Roberts, 1996), thus, the importance of environmental concern cannot be neglected.

Nevertheless, many individuals, despite having strong environmental concerns, believe that the government and/or large companies should be in charge of protecting the environment (Laroche et al., 2001). That idea alone puts a hefty load on governments and eco-friendly companies. Environmental conservation, however, will not be successful without public engagement (Ham et al., 2015). Accordingly, in the following section, other factors besides environmental concern that may affect individuals' environmental behaviors are explained.

1.3 Perceived Quality

The complicated process through which individuals choose, arrange, and interpret sensory data to form meaningful pictures of the outside world is known as perception (Agyekum et al., 2015). Also, the way that individuals perceive depends on beliefs, attitudes, and information from the past, and the sensory stimuli also have their character that may amend a human perception. Although marketing experts know that perception is not necessarily reflecting reality, the right use of sensory stimuli can assist with delivering a favorable attribute, minimizing an unfavorable one, or promoting a competitive advantage and value to the targeted customer's segment (Agyekum et al., 2015). For example, purchasing EFPs products may improve the self-image of customers that they are environment-friendly individuals (Cheung & To, 2019). And therefore, marketing experts can put forward stimuli that enhance the self-image as a result of a purchase, so that customers perceive a stronger self-image when purchasing EFPs.

Perceived quality gained its importance in marketing research. Even though the actual measurement and the qualification are thought to be set by managers, it may be perceived differently by customers (Zeithaml, 1988). Accordingly, in markets, customers' perceptions about a product can decide its destiny. The extant literature has different conceptualizations for the perceived quality and price, which makes it harder to stick with a specific and clear definition. Perceived quality is defined by Zeithaml (1988) as a customer's assessment of a product's superiority or excellence, and includes subjective, individual, and situational evaluative judgments by the customer. Some researchers see quality as two types, affective and cognitive quality (Ziethmal, 1988). Affective quality depends on the attitude of the customers which is the appraisal of a product overall, and most likely to be used for the services or non-durable products

(Zeithaml, 1988). On the other hand, cognitive quality is a conscious evaluation and conclusion by customers and can be established with the features of the product. Accurately, if the features of a product that can be assessed before buying are more than the features that require experiencing the product, then the judgment can be more cognitive (Lutz, 1986). This type of quality can be important for marketing EFPs. Cognitive quality is involved with judging the functionality of a product (Braun et al., 2020). Thus, presenting a product's visuals and mentioning its features can generate the required quality perceptions (Zeithaml, 1988). This can support especially the new customers to build their purchase decision on the EFPs.

Consumers' perceptions of a product's quality —both favorable and unfavorable— will affect their choices to buy it (Santy & Atika, 2020). Relating to how customers develop perceptions, their needs, values, and expectations are being shaped by their perceptions (Schiffman et al., 2012). However, the perceived quality can be managed to some extent by companies and businesses (Tsiotsou, 2005), and so, a part of marketing EFPs is to communicate clearly to enable customers to perceive correctly what they are expecting from an EFP.

The perceived quality does not necessarily represent the objective quality, although they may meet on some points, all points, or not at all. Objective quality measurements depend on certain standards to be identified; however, researchers and experts still do not agree on an ideal standard or measurement. Therefore, objective quality is still under debate, and also the specifications of a product are set by the managers according to their perceptions of what is necessary for the product (Zeithaml, 1988). Accordingly, the importance of measuring the customer's perception takes place in assisting the managers and CEOs to take the right direction/ selection during the development and production of EFPs.

When customers are required to choose between product features and product greenness, they could go with product features (Ginsberg & Bloom, 2004). The customers may prefer not to waste their limited monetary resources without granting the maximum real benefit/function from the purchased product. In a study by Witek (2020), it was reported that consumers do not place much emphasis on the product's environmental features and when the initial requirements for the product's attributes are met, then consumers purchase EFPs. Accordingly, when an EFP's perceived quality fails to meet customers' expectations compared to counterpart products,

expecting good engagement from customers is away from reality. That's because the shortcomings of EFPs such as lower efficiency can lead to a conflict between consumers' individual needs and a sense of environmental responsibility (Witek, 2020)

In the extant literature, scholars also use the term "environmental quality" which is the summation of the environmental attributes of interest in a product that is exhibited in the market (Chen, 2001). In other words, it indicates how the environment is improved or less damaged by using that product. In any given market context, increasing the environmental attributes within an EFP will not necessarily improve the environmental condition as the non-environmental customers still use conventional products that already damage any good effect from EFPs. Environment-friendly customers perceive the quality of the ordinary product as lower than EFP because they see the ordinary product as having less environmental quality (Chen, 2001). In the present study, this term is not used, since it does not address the environmental performance of EFPs but the quality of EFPs with regard to conventional attributes.

1.4 Perceived Price

Although "price" is typically thought to refer to the monetary worth of a product, a thorough understanding of the notion also takes into account the time, effort, and sacrifice made by the consumer throughout the consumption experience (Sánchez-Fernández & Iniesta-Bonillo, 2008)**.** EFPs are treated differently regarding their prices. Due to customers' opinions of the goods' added value of being more environment-friendly, most customers are ready to afford a higher cost owing to greater green manufacturing costs(Akarapisit, 2019). From a company aspect, work and effort to produce EFP costs more, and the product has a higher risk to fail the green standards, and these can be reflected in the final price of the product.

Many individuals like the grousers who are unaware customers of the environmental issues, and sprouts who are mindful of the environment issues, are not willing to pay more since they are more sensitive to the price (Ginsberg & Bloom, 2004). In addition, according to a qualitative study by Gleim et al. (2013), non-green customers who really consider price as the biggest factor while purchasing green products, think that the EFP is more expensive. Thus, higher prices have a negative influence on consumers' intentions and behaviors for purchasing EFPs (Joshi & Rahman, 2015). Erdil (2018) also reported that consumers are extremely sensitive to

the comparatively high pricing of EFPs, and they are unwilling to pay more despite their environmental concern and environmental attitudes. However, the literature is not definitive on this relationship, and other studies reported the opposite. For instance, Chen and Chai (2010) concluded that if people are pro-environment, pricing is not the main obstacle to buying green items. Aytop et al. (2019) also reported that environmentally sensitive consumers are prepared to pay a higher price for EFPs than for other goods (Aytop et al., 2019).

On the other side, the price can be seen as another face of the perceived quality, and increasing the price means to customers that the offered package should be increased, too (Heri Satrya Wangsa, 2011). Agyekum et al. (2015) informed in their study that the price is a strong element in addition to the brand name to determine the quality of a product. Price is also the most-known external indicator for quality (Oude Ophuis & Van Trijp, 1995). For example, in general, many cheap Chinese products have the fame of being mid to low quality, because of the perceived low prices, compared to the same counterparts from other manufacturing countries. However, high prices may alter the perception of customers toward products. Customers perceive overpricing as unfair, and they become more hesitant to purchase since the high price is not reflecting the quality anymore in their price perception (Bolton et al., 2003). Additionally, for certain contexts, if the price suddenly overtakes all other considerations for a customer, he/she can buy the less environmentally product without looking for the alternative EFPs (Ham et al., 2015). Accordingly, it can be concluded that the price of an EFP is perceived to be reflecting the quality up to a certain level, and should the prices exceed the accepted limit then the customers may show no appreciation for the price. For many researchers, price is just one of several factors that reflect quality (Zeithaml, 1988).

1.5 Perceived Risks

With the emergence of environmental trends, customers are more concerned regarding the environment, and that increases their perception of risk (Chen & Chang, 2012). While traditional products have been for so long in the markets, a customer's perception of risk at the purchasing moment is still much known, because of a previous experience compared to the new environmental trends and the related EFP. Perceived risks can be defined as a subjective estimation (Peter & Ryan, 1976), and an

unpredictable phenomenon faced by consumers while practicing a purchase for a product in terms of the consequence of product usage (Marakanon & Panjakajornsak, 2016). As risk-averse customers assess products and brands in terms of possible losses more than low-risk-averse customers (Peter & Ryan, 1976), marketing experts try to minimize the perceived risks for any new product in order to make the high-risk-averse customers less hesitant for purchasing.

The number of risks that individuals can perceive changes dramatically depending on the related context and individuals. Perceived risks can be classified into six different categories which are psychological, physical, financial, social, and performance risks and time/convenience loss (Jacoby & Kaplan, 1972; Naiyi, 2004). The odds that a purchase may lead to a loss of monetary resources or other resources is referred to as financial risk (Naiyi, 2004). However, not all customers are affected evenly by financial loss (Peter & Ryan, 1976), and lower-income customers consider financial risks more important than high-income customers. For example, keeping a fancy car in good shape for use is relatively costs higher for low-income customers and the financial risk of purchasing this car is high. The possibility that a product purchased will not function or work as planned is referred to as a performance risk (Naiyi, 2004). The risk that a purchased product is not accepted by family or friends is named social risk, and the possibility that a product provokes disharmony with one's self-image is referred to as psychological risk. Furthermore, the physical risk is related to the chances a product purchased causes physical injury, whereas time risk relates to the likelihood of wasting time purchasing or keeping the product (Kang & Kim, 2013). The aforementioned perceived risks varieties can act independently from each other, and every customer individually has a situation that may enlarge a variety and decrease the other varieties, and vice versa (Jacoby & Kaplan, 1972).

Eventually, eliminating all the associated perceived risks doesn’t guarantee the acceptance of a product since eliminating the perceived risks does not necessarily increase the possibility that it is accompanied by purchasing behavior (Mitchell, 1999). Therefore, it is understandable that many competitors are trying to balance their products and competing in many other aspects, besides minimizing the perceived risks, such as increasing the perceived value, saving the real value for longer after purchase, and decreasing the real risks if possible (Mitchell, 1999).

1.6 Attitudes Toward EFPs

Attitude is described as the degree of favorable or unfavorable assessment of the behavior under study (Ajzen, 1991). It is also a preset inclination of reacting to any subject in his or her immediate surroundings (Onurlubaş, 2018). According to Fazio (1995), in memory, when an individual faces an object (tangible or non-tangible), the result of the interaction process between that object and the individual's evaluation of this object is forming the attitude. The stronger the interaction is, the stronger the formed attitudes can influence an individual's favorability toward that object. In other words, attitudes explain the extent to which a person finds a behavior favorable or not. Therefore, forming positive attitudes toward an object is important to behave in favor for that object. Onurlubaş (2018) mentioned in her study, that an individual with positive attitudes toward environment will work to preserve and restore it, and vice versa. That's why marketers focus on building positive attitudes, which are somehow equal to the acceptance of that object, whether it's a product or a service.

In accordance with the Theory of Planned Behavior (Ajzen, 1991), a consumer's attitude toward a certain behavior predicts the person's intention to carry out that behavior (Hansen, 2008). In the extant literature, attitudes are examined by researchers in relation to purchase intentions for EFPs. Environmental attitude is defined as the psychological propensity to positively or negatively assess the natural environment and is reported as the strongest predictor for any environmental behavior intention (Kumar Sharma & Bhuian (2017). Similarly, it was proposed that an individual's environmental attitude consists of his or her beliefs, feelings, and environmental needs about environmental actions and concerns (Onurlubaş, 2018), and a strong relationship between consumers' attitudes and intentions toward purchasing EFPs was demonstrated (Mostafa, 2007). For instance, Ali and Ahmad (2016) indicated that responders who have a positive attitude toward EFPs are willing to purchase green items more frequently.

1.7 Consumers' Purchase Intention for EFPs

Intentions refer to how hard individuals would undertake, of how much effort they intend to put in to achieve the action (Ajzen, 1991), and considered as a conscious plan of action (Maichum et al., 2016). In the organizational literature, the importance of intention as a factor of influencing behavior is acknowledged (Kayabaşı & Bozkurt,

2017). Putting unforeseen circumstances beside, individuals are expected to act in line with their intentions (Ajzen, 1985). Intentions are considered more effective than other behavioral factors (Wijekoon & Sabri, 2021). Many studies have focused on the factors and the drives that enhance the purchase intentions for EFPs. Accordingly, in their systemic review of environment-related studies between 2015-2021, Wijekoon and Sabri (2021) stated that purchase intentions for EFPs are consumers' willingness to purchase environment friendly products and reflect their interest in protecting the environment. They additionally identified 212 variables that affect environmental purchase intention. They also reported some of the major causes that positively affect the purchase intentions such as consumers' attitudes, environmental concern, and environmental knowledge.

Based on the Theory of Planned Behavior (TPB), Maichum et al. (2016) reported that environmental purchase intentions were positively and significantly affected by consumers' attitudes, subjective norms, and perceived behavioral control (PBC) as results of his study with the extended model of TPB. In another extended TPB model to assess the millennial's purchase intention of EFPs by Shukla (2019), environmental concern, attitude, perceived behavioral control, and subjective norm significantly predicted the purchasing intentions of EFPs. Similarly, in another study with the context of the Theory of Planned Behavior, Kayabaşı and Bozkurt (2017) reported that environmental attitudes, environmental concern and social influence significantly affected the intentions of purchasing EFPs.

In a study about the effect of environmental awareness, attitudes, and previous purchase experiences, Costa et al. (2021) reported that the purchase intentions of EFPs were only positively and significantly affected by positive attitudes. In another study by Yue et al. (2020), environmental concern and environmental responsibility positively and significantly predicted green consumption intentions while the price sensitivity moderated these relationships. With adopting the Theory of Planned Behavior, Kumar (2012) reported a positive and significant relationship between purchase intention and purchase behavior for EFPs. Onurlubaş (2018) also reported that the purchase intentions toward EFPs were significantly affected by consumers' positive environmental concern and environmental attitudes. Erdil (2018) also reported the same conclusion with her study on the millennial generation. Bozbay et al. (2019) concluded in their study that perceived quality and trust for electronic EFPs

significantly predicted the consumers purchasing intentions for electronic EFPs, and these intentions positively affected the consumers' purchase behavior.

And it is noteworthy to mention that purchasing intention can change after purchasing and experiencing a product (Saleem et al., 2015), depending on whether the experience is negative or positive. The purchasing intentions may also change over time due to unanticipated circumstances (Ajzen, 1985). In environmental concern and attitude studies, the TPB is often adopted (Ham et al., 2015). Wijekoon and Sabri (2021) in their systemic review of environment-related studies between 2015-2021 found that the Theory of Planned Behavior was the most commonly used theory by researchers to explain environmental behavioral intentions and environmental behaviors. Since the current study adopts a modified model of TPB, a general understanding is required of the role and components of TPB.

The Theory of Planned Behavior initially emerged from Theory of Reasoned Action (TRA). The TRA states that behavior is the primary consequence of an individual's intention, and an individual's intention is predicted by attitude toward the action, and subjective norms. Within the TRA, attitude is considered personal to the individual, and subjective norms are reflecting social pressure and influence. Yet, TRA assumes that the individual has the means and control over the behavior (Ajzen, 1985). And due to the notion that individuals show differences in their ability to exert control over their behaviors, their ability to perform the intended behavior will show a difference, too (Ajzen, 1985). Hence, by adding the perceived behavioral control to TRA, researchers introduced the TPB as shown in figure 1 (Ajzen, 1985).

The Theory of Planned Behavior (Ajzen, 1991) is a well-established theory model which offers empirical evidence to understand the cognitive antecedents of behavior (see Figure 1). The TPB predicts the performance of behavior by the mean of the intentions and the individual's confidence in their ability to conduct the behavior (Ajzen, 1991). The intention itself is predicted by attitudes toward the behavior, subjective norms about engaging in that behavior, and perceptions about whether the individual is able to successfully engage in the target behavior or not (Ajzen, 1991). Attitudes, as one of the predictors of behavioral intentions, are frequently considered to serve as a bridge between consumer beliefs and behavior (Hansen, 2008), and in psychology, attitudes alone cannot adequately explain behavior (Kayabaşı & Bozkurt, 2017). That's the TPB presented an empirical framework to understand the behavior

(Ajzen, 1985). Thus, many research studies use the TPB model to test attitude-behavior consistency (Wijekoon & Sabri, 2021).

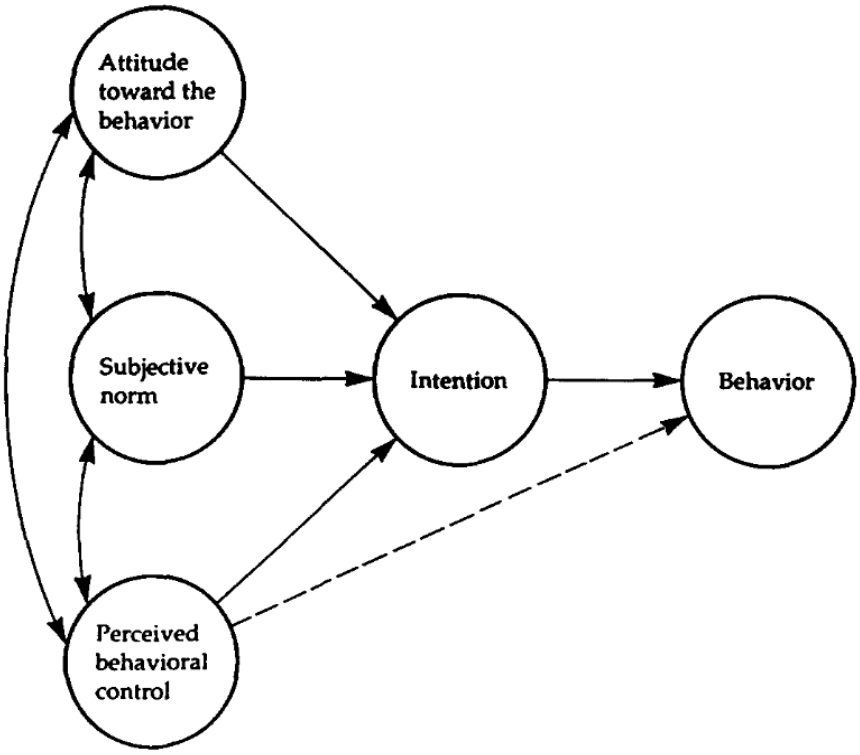

Figure 1: The Theory of Planned Behavior

Source: Ajzen (1991).

CHAPTER 2: THE RELATIONSHIPS AMONG STUDY VARIABLES

This chapter presents the relationships among the included predictors in this study (environmental concern, perceived risks, perceived quality, and prices) and the dependent variable (purchasing intentions for environment-friendly) under the mediating role of attitudes toward environment-friendly products. To understand and predict the relationship between consumer behavior (buying decision) and attitude, psychologists and scholars put forward models to explain and correlate the inherent factors substantially with procreating the intention which may lead to the final consumer behavior. As stated previously, the Theory of Planned Behavior proposed that, the intention of doing any behavior is related to attitude, subjective norms, and perceived behavioral control (Ajzen, 1991). The importance of TPB is that it measures the consumer's attitude toward carrying out behavior and predicts how likely the consumer is intending to conduct that behavior.

In environmental concern and attitude studies, the TPB is often adopted (Ham et al., 2015), and the TPB constructs have been adjusted in diverse circumstances by integrating relevant antecedents and changing the routes, etc., perhaps increasing the predictive capacity of intention/behavior (Joshi & Rahman, 2015; Shukla, 2019). This study partially applies the TPB as a theoretical framework on which to build the study's hypotheses. Accordingly, this study proposed that environmental concern, perceived risks, perceived quality, and prices are the antecedents of the purchasing intentions for environment-friendly products under the mediating impact of attitudes toward environment-friendly products.

2.1 Environmental Concern, Consumers' Attitudes toward EFP, and Intentions for Purchasing EFP

Individuals' eco-friendly attitudes are substantially correlated with their judgments of the value of the environment (Laroche et al., 2001). For instance, the previous study has shown that environmental consciousness was positively correlated with attitudes toward environmental issues and has a positive effect on environmental purchasing behaviors (Cheung & To, 2019). That is, environmental concern is forming the environmental attitude which can lead to environmental behavior (Roberts & Bacon, 1997). According to a study by Onurlubaş (2018), there was a significant

relationship between environmental concerns and environmental attitudes. Thus, in the current study, as shown in Figure 2, it is expected that;

H1: There is a positive relationship between environmental concern and consumers' attitudes toward EFP.

In this study, it is also proposed that consumers' attitudes toward EFPs mediate the effect of environmental concern on their intentions toward purchasing these products. According to the TPB (Ajzen, 1991), the intention of doing any behavior is related to attitude. Environmentally conscious customers do not necessarily intend to buy EFPs, yet their intentions to purchase EFPs might be related to their attitudes toward EFPs (Midilli & Kuşçu, 2021). In environmental and ethical consumption research, attitudes play an important role as a legitimate mediator of the impact that various factors (e.g., knowledge, value, concern, and emotion) may cause on behavioral intentions (Kang & Kim, 2013). Onurlubaş (2018) also reported that environmental attitudes mediated the linkage between environmental concern and purchasing intentions towards EFPs.

Ngoc et al.(2015) indicated that environmental knowledge, which is a part of environmental concern (Roberts & Bacon, 1997), is strongly connected to the attitude of building the intention for buying behavior. The attitude acts as an important antecedent to the behavioral intention (Ajzen, 1991). Changing people's attitudes toward turning green leads to green purchasing habits (Cheung & To, 2019). Attitude, concern, and knowledge were found to be the most important predictors of customers' environmental behavior (Kumar Sharma & Bhuian, 2017). As suggested by Aizen (1991), an approbative attitude toward specific behavior supports the intention for that behavior to be carried out. Salom et al. (2021) also indicated that environmental attitude is an antecedent for consumers' environment friendly purchase intention. Similarly, Erdil (2018), and Kayabaşı and Bozkurt (2017) suggested that environmental concern and environmental attitude have a significant effect on green purchase intention. Thus, the following hypotheses are developed;

H2: There is a positive relationship between consumers' attitudes toward EFP and purchasing intentions for EFPs.

H3: There is a positive relationship between environmental concern and purchasing intentions toward EFPs.

H4: The relationship between environmental concern and purchasing intentions toward EFP is mediated by attitudes toward EFPs.

2.2 Environmental Concern, Perceived Price and Quality, and Perceived Risks

Consumers who consider environmental issues when making a purchase are more likely to spend more on environment friendly products (Laroche et al., 2001), and it might indicate that they regard the high prices of EFP as acceptable. Also, as the price is an indicator of the quality (Agyekum et al., 2015), many people might perceive the quality of EFP as good. However, the extant literature has different views on how concern can influence customers. For example, if a customer is environmentally concerned, it does not necessarily indicate that he or she acts more green (Ham et al., 2015). Besides, the customers who are purely environmentally motivated, it is still not logical for many to pay more for a product whose only extra attribute is being more respecting to environment if not concerned for environment.

Previous studies show that people who are mindful of environmental issues are prepared to pay a higher price for EFPs (Akarapisit, 2019). If people are pro-environment, pricing is not the main obstacle to buying green items (Chen & Chai, 2010). Aytop et al.(2019) reported that environmentally sensitive consumers are willing to pay more for EFPs than for other goods. Thus, it's hypothesized that;

H5: Environmental concern is positively related to the perceived quality and price of EFPs.

It is also proposed that if individuals are concerned enough about the environment, then they are willing intentionally to raise the threshold of the accepted perceived risks that come from purchasing an EFP. For example, previous studies show that people who are aware of environmental issues are willing to pay a higher price for EFPs (Akarapisit, 2019), although paying higher prices may indicate an increased financial risk. And accordingly, it's hypothesized that;

H6: Environmental concern is negatively related to the perceived risks of EFPs.

2.3 Perceived Quality and Prices, Perceived Risks and Attitudes toward Purchasing EFP

Researchers found that green products are perceived to be less effective than regular products (Lin & Chang, 2012). The prices and quality of EFP still not meeting

the expectation of customers (Gleim et al., 2013). The gap between the customers' expectation and their perceptions with regard to EFP does still exist (Tseng & Hung, 2013). Higher prices are described as a noteworthy obstacle to buying eco-friendly products (Wijekoon & Sabri, 2021). Yet, some EFPs utilize less energy and/or resources, and customers feel that using such items will provide greater advantages and increase consumers' favorable attitudes toward environmental conservation (Cheung & To, 2019). Besides, customers' purchase intentions have been demonstrated to be directly affected by perceived product quality (Tseng & Hung, 2013). As stated previously, attitudes play as a legitimate mediator of the impact various factors (e.g., knowledge, value, concern, and emotion) on behavioral intentions (Kang & Kim, 2013). This study assumed that attitudes are mediating the relationship between customers' perceived quality and price and purchase intention. Therefore, in case that perceived prices and quality is within the expectations of customers and perceived positively, then it's hypothesized that;

H7: Perceived quality and price are positively related to customers' attitudes toward purchasing EFPs.

H8: Perceived quality and price are positively related to purchasing intentions toward EFPs.

H9: The relationship between perceived price and quality and purchasing intentions toward EFP is mediated by attitudes toward EFPs.

Since the greater the perceived risk, the greater the gamble in the purchasing choice, Mitchell (1995) pointed out that a high level of perceived risk often causes a consumer to avoid a purchase. The prospect of loss significantly increased the negative association between behavioral intentions and attitude (Mitchell, 1999). There is a well-built relationship between perceived risks and negative consumption emotions, that when negative emotions increase, customers explore alternative products. (Chaudhuri, 1997). Therefore, high perceived risks from EFPs which in turn are associated with high negative emotions may encourage consumers not to favor EFPs. Thus, it is expected that;

H10: Perceived risks from EFPs are negatively related to attitudes toward EFPs.

Additionally, emotions and feelings are the affective components of the attitude (Ham et al., 2015), also in environmental and ethical consumption research, attitudes play an important role as a legitimate mediator of the impact that various factors (e.g., knowledge, value, concern, and emotion) on behavioral intentions(Kang & Kim, 2013). The perceived risks were observed as vital negative factors in purchasing intentions for EFPs (Wijekoon & Sabri, 2021), as well as the relationship between perceived risks and behavioral intentions can be mediated by attitudes (Kang & Kim, 2013). and thus, it hypothesized;

H11: Perceived risks are negatively related to purchasing intentions toward EFPs.

H12: The relationship between perceived risks and purchasing intentions toward EFPs is mediated by attitudes toward EFPs.

When customers perceive high performance and physical risk from a product, they become more concerned about the quality of that product (Kang & Kim, 2013). In a given EFP, even if the environmental attributes are perceived to be fulfilled, a low perceived traditional attribute of the quality can discourage customers to involve in a purchase. The results of a previous study by Marakanon and Panjakajornsak (2016) suggested that there is a link between perceived quality and perceived risks for electronic EFPs. Customers search for lower costs or gather data on the price-quality ratio in order to reduce financial risk (Kang & Kim, 2013). And accordingly, in the current study, it is hypothesized that;

H13: Perceived risks are negatively related to perceived quality and price.

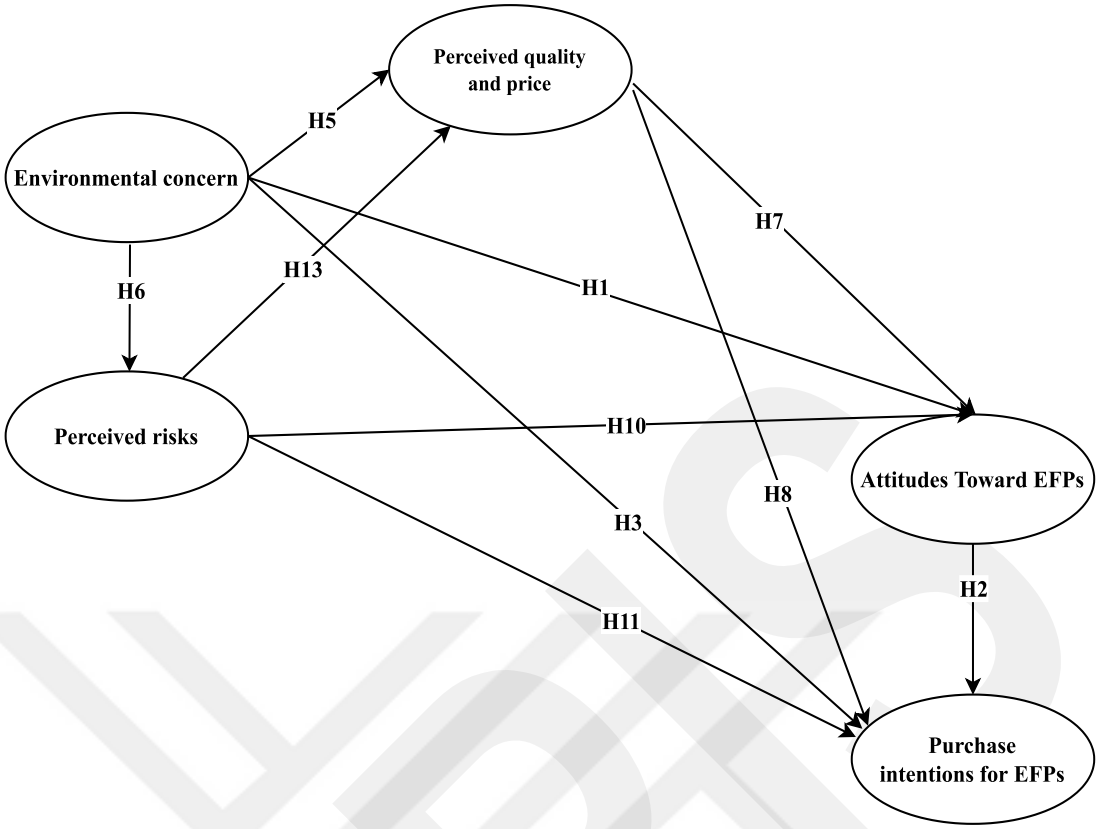

Figure 2: The proposed model.

CHAPTER 3: METHOD

3.1 Research Sample and Procedure

To accomplish the objectives of this study, the measurement scales of interest were obtained from the extant literature. Additionally, an informed consent emphasizing the voluntary basis, confidential and anonymous data collection was prepared. After receiving ethical approval from Atılım University's Ethical Committee, the self-administered online questionnaires were sent to the targeted sample of university students at Atılım, Batman, and Antalya universities in Türkiye. 202 undergraduate/graduate students filled out the questionnaire in this study and only 192 questionnaires were valid for analysis.

The convenience non-probability sampling method was adopted in this research, and it is adequate for multivariate data analysis purposes (Ahn et al., 2016). Choosing university students was for 2 reasons: Firstly, it was easier to reach out to them among the general population (Mostafa, 2007). Secondly, university students are the upcoming future of any country (Ali & Ahmad, 2016) and are the future customers, and studying that population's mindset can provide a prediction of future purchasing uptrends (Kumar, 2012). Data collection took around one month.

The demographic characteristics of the participants are shown in table 1. The age average of participants is 23.28 years old (*SD* = 2.82), indicating that the questionnaire has reached the study's targeted population. As can be seen from Table 1, the sample consisted of 101 (52.6%) male, and 91 (47.4%) female participants (*N*= 192). Thus, it's possible to consider equal gender participation in the study The sample consisted of 156 (81.3%) undergraduate students, 33 (17.2%) master students, and 3 (1.6%) Ph.D. students. In addition, 103 (53.6%) participants were unemployed / job seekers, 46 (24%) participants were part-time employees, and 43 (22.4%) participants were full-time employees. Accordingly, it was concluded that the majority of the sample was unemployed and depended on others for their living expenses.

Table 1: Demographic characteristics of the participants (N=192).

Gender		
	Frequency	**Percent**
Female	91	47.4
Male	101	52.6

Level of Education		
	Frequency	**Percent**
Bachelor	156	81.3
Master	33	17.2
Ph.D.	3	1.6
Occupational Status		
	Frequency	**Percent**
Full-time Employee	43	22.4
Part-time Employee	46	24.0
Unemployed / Job Seeker	103	53.6

3.2 Questionnaire Design

The first part of the questionnaire included an informed consent and an explanation of the EFP and perceived risks. The second part contained 5 demographic questions (age, gender, educational level, study department, and occupational status). Finally, the third part contained 25 items measuring the model constructs obtained from the extant literature, translated to Turkish, and then back-translated to English (Cheung & To, 2019) to make sure that they are translated precisely. The measurements used in the study are as follows:

Environmental concern (EC). A ten-item scale obtained from Straugandan and Roberts (1999) and adapted into Turkish by Sarı (2010) was used to evaluate the extent to which participants are concerned about the environment and the planet's future. Sample items are: "The earth is like a spaceship with only limited room and resources"; "Humans need not adapt to the natural environment because they can remake it to suit their needs (reverse coded)"; "Mankind is severely abusing the environment". Five-point Likert-type scale ranged from 1 "Strongly Disagree" to 5 "Strongly Agree" was used. High scores indicate a positive environmental concern by consumers.

Perceived quality and price (PQP). A scale with three items was adopted to measure the acceptance of participants to the available price-quality of EFP (Ritter et al., 2015). The sample items are: "EFPs have an acceptable standard of quality and a fair price"; "Buying EFPs would be the best option if they had the same price as non-environment friendly products"; "The purchase of EFPs would be leveraged if they were more available in the market". Five-point Likert-type scale ranged from 1

"Strongly Disagree" to 5 "Strongly Agree" was used. High scores indicate an acceptance by consumers of EFPs' current quality and prices.

Perceived risk (PR). A scale that measures 4 different perceived risks toward EFP with four items ("There is a chance that there will be something wrong with the performance of this product"; "There is a chance that this product will not work properly with respect to its design") and one item ("There is a chance that using this product will negatively affect the environment") that measures the environmental performance was used It was adopted from Chen and Chang (2013) and edited for the present study. Even though time loss is another component for perceived risks, it is not included in this study as many dimensions such as the logistics and the available maintenance services also need to be considered and the role of time risk may show differences across consumers (Kang & Kim, 2013). Five-point Likert-type scale ranged from 1 "Strongly Disagree" to 5 "Strongly Agree" was used. High scores indicate high perceived risks.

Attitudes toward environment-friendly products (ATEFP). A scale that measures conative, cognitive, and affective dimensions of attitude with three items was used (Midilli,2018). The sample items are; "I have a……". attitude toward the eco-friendly products"; "I would describe myself as environmentally ……. ", "It is ……. to spend time for environment". A semantic differential scale was used as a response scale for each item with five scores from 1 "Negative, Irresponsible or Boring" to 5 "Positive, Responsible, or Interesting". High scores mean that consumers have favoring attitudes toward purchasing EFPs.

Purchasing intentions for environment-friendly products (PIEFP). A scale with four items was used to measure the participants' purchasing intentions for EFPs (Chan, 2001; Uzundal, 2019). The sample items are "I will consider switching to brands with a green label to protect the environment"; "I will consider environment-friendly products to minimize environmental pollution". Five-point Likert-type scale ranged from 1 "Strongly Disagree" to 5 "Strongly Agree" was used. High scores indicate a higher willingness to purchase an EFP.

The full version of the used questionnaire is found in Appendix 1.

CHAPTER 4: RESULTS

This section represents the findings of the descriptive statistics, confirmatory factor analyses, and SEM model assessment. The collected data were first checked for any missing or reluctant cases, and the final data (*N*= 192) was computed. Then, the preliminary analyses were performed via IBM SPSS statistics version 26 (IBM Corp, 2019). Subsequently, confirmatory factor analysis (CFA), construct reliability, convergent validity, and discriminant validity for measurement scales, and the Structural Equation Modelling (SEM) analyses were performed by AMOS version 26 (Arbuckle, 2019).

4.1 Descriptive Statistics

Descriptive statistics for the Environmental Concern scale revealed an overall mean score of 3.87 (*SD*= .61). Each item of the environmental concern construct and the descriptive statistics of the responses are presented in Table 2. The means of items generally articulate that the participants are highly aware and concerned about the environment. Compared to the previous study (Sarı, 2010) using the same scale, the items of this study showed significantly higher means (Table 2). After 12 years of Sarı's study (2010), it is well noticed that concern for the environment raised among the population in Türkiye, and the reason can be for the recent sudden weather changes and forest fires which were and are still witnessed by the Türkiye's residents. As it is argued, the evident change in the environment is associated with environmental conscientiousness in individuals (Ritter et al., 2015)

Table 2: Descriptive statistics for environmental concern.

		This study		**(Sarı, 2010)**	
No	**Items**	**Mean**	***SD***	**Mean**	***SD***
1	The earth is like a spaceship with only limited room and resources.	3.93	.393	1.627	1.145
2	Humans need not adapt to the natural environment because they can remake it to suit their needs (reverse coded).	4.11	.535	4.233	1.261
3	Mankind is severely abusing the environment.	4.22	.643	1.167	.606
4	Humans have the right to modify the natural environment to suit their needs (reverse coded).	3.99	.513	4.04	1.253

5	Plants and animals exist primarily to be used by humans (reverse coded).	3.51	.735	3.95	1.376
6	We are approaching the limit of the number of people the earth can support.	2.58	1.025	2.093	1.376
7	To maintain a healthy economy, we will have to develop a steady-state economy where industrial growth is controlled	4.00	.452	1.533	.905
8	When humans interfere with nature, it often produces disastrous consequences.	4.19	.729	1.44	.834
9	Humans must live in harmony with nature in order to survive	4.25	.613	1.267	.646
10	Mankind was created to rule over the rest of nature (reverse-coded).	3.94	.431	4.04	1.266

Descriptive statistics for the Perceived Price and Quality scale revealed an overall mean score of 4.12 (*SD* = .48). Each item of the perceived price and quality construct and the descriptive statistics of the responses are presented in Table 3. Item 1 shows that the participants are already finding the price fair and quality standards are accepted. The higher levels of perceived quality enhancements might indicate the recent technology development which is supported by scientific research. Item 2 shows that the participants still consider buying EFPs if the prices are like the ordinary products, and indirectly, indicates that the participants still perceive the prices of EFP are higher than ordinary products. Item 3 may indicate that consumers are paying more to reach the EFPs, which indeed is added to the cost burden on consumers.

Table 3: Descriptive statistics for perceived price and quality

No	**Items**	**Mean**	***SD***
1	EFPs have an acceptable standard of quality and a fair price.	4.03	.422
2	Buying EFPs would be the best option if they had the same price as non-environment friendly products.	4.16	.487
3	The purchase of EFPs would be leveraged if they were more available in the market.	4.16	.526

Descriptive statistics for the Perceived Risks Scale revealed an overall mean score of 2.17 (*SD* = .70). As can be seen in Table 4, all the items of the perceived risks

scored low means, which is under 2.5, and this indicates that the majority of participants are not sensing any further risks with purchasing EFPs. Paying attention to item 1 with a mean of 2.45 is representing the main concern of the participants which is related to performance, and this result is not surprising, because performance risk has more statistical variance than other risks (Kaplan et al., 1974).

Table 4: Descriptive statistics for Perceived Risks

No	Items	Mean	*SD*
1	There is a chance that there will be something wrong with the performance of this product.	2.45	.698
2	There is a chance that this product will not work properly with respect to its design.	2.24	.783
3	There is a chance that you would get penalty or loss if you use this product.	2.07	.702
4	There is a chance that using this product will negatively affect the environment.	2.01	.650
5	Using this product would damage your reputation or image	2.06	.655

Descriptive statistics for the scale that assess consumers' attitudes toward environment-friendly products revealed an overall mean score of 3.87 (*SD* = .82). The general orientation for participants showed a positive attitude toward EFPs and the environment (Table 5). Item 1 shows the cognitive dimension of attitude, and the majority stated that they have positive attitudes toward EFPs. Item 2 identifies the conative dimension which shows the commitment and responsibility of participants and most of the participants identified themselves as environmentally responsible. Item 3 discloses the affective (emotional) side of the attitudes and participants have shown high interest in spending time for the environment.

Table 5: Descriptive statistics for ATEFP

No	Items	Mean	*SD*
1	I have a……. (1= negative/5= positive) attitude toward the eco-friendly products	4.05	.796
2	I would describe myself as environmentally ……. (1= irresponsible; 5= responsible)	3.87	.848

3	It is ……. (1=boring/ 5= Interesting/) to spend time for environment.	3.69	.827

Descriptive statistics for the scale that assess consumers' intention to purchase EFPs revealed an overall mean score of 3.92 (*SD* = .66).Overall, as shown in Table 6, the participants have shown high intention to get involved with purchasing EFPs.

Table 6: Descriptive statistics of PIEFP

No	Items	Mean	*SD*
1	I will consider switching to brands with a green label to protect the environment	3.90	.634
2	I will consider environment friendly products to minimize environmental pollution	3.98	.598
3	I plan to switch to environment friendly products of the products I consume.	3.88	.695
4	I will consider buying eco-friendly products as they are beneficial to the environment	3.93	.723

4.2 Preliminary Analyses

With regard to the 202 responses, the data were checked for missing data, reluctant cases, and outliers. Accordingly, one case was deleted due to missing data, and 3 cases were deleted as they are reluctant cases (when a respondent does not show his/her real tendency and chooses the same response for all questionnaire items). Additionally, multivariate analysis was performed to reach the values of Mahalanobis d-squared with a significance level of *p1* or *p2* < ".001" which are the outliers (Dhewi et al., 2018). Based on the analysis, 6 outliers were excluded. Thus, the final sample became 192.

It's considered that to use the maximum likelihood procedures for the structural equation model, with minimum sample size should exceed 150 (Hair et al., 2010). With a valid *N* = 192, the study claimed to have a sufficient sample. In order to meet the required assumption of SEM, the data must be normally distributed. For the multivariate normality confirmation, the critical ratio (CR) should be between -1.96 and 1.96, and the multivariate Kurtosis should be less than 5 (Tabachnick, 2012). In this study, the value in multivariate CR was 12.411, which indeed is above the limit of 1.96, and indicates that the data is not normally distributed. Even if normal distribution

cannot be met, the estimating approach is relatively robust and more subsequent analysis can still be undertaken (Dhewi et al., 2018).

4.3 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was computed using AMOS (Arbuckle, 2019) to test the measurement model. As part of CFA, the factor loadings were calculated for each item, and 2 items (Env5 and Env6) were deleted because of low factor loadings (<.50). The model-fit measures were used to evaluate the overall goodness of fit of the model (CMIN/DF, GFI, CFI, TLI, SRMR, and RMSEA), and as shown in Table 7, all values were within their particular common accepted level (Bentler, 1990; Hair et al., 2010; Hu & Bentler, 1998). The five-factors model (EC, PR, PQP, ATEFP, and PIEFP) presented a good fit for the data as follows: (CMIN/DF = 1.5, GFI = .916, CFI = .957, TLI = .947, SRMR =.061, and RMSEA =.05).

Table 7: Goodness of fit structural model results

Fit Indices	Recommended Value	Source(s)	Obtained Value
P	Insignificant	Hair et al., (2010)	.000
CMIN/df	CMIN/DF< 5 is good	Hair et al., (2010)	1.5
GFI	>.90	Hair et al., (2010)	.916
CFI	>.90	Bentler (1990)	.957
TLI	>.90	Bentler (1990)	.947
SRMR	<.08	Hu and Bentler (1998)	.061
RMSEA	<.08	Hu and Bentler (1998)	.05

4.4 Construct Reliability, and Convergent and Discriminant Validity

Construct Reliability was assessed using Cronbach's Alpha and Composite Reliability. Cronbach Alpha for each construct was observed above the required limit of .70 (Nunnally & Bernstein, 1994). Composite reliabilities ranged from .749 to .896, above the .70 standard (Hair et al., 2010). As a result, construct reliability for each construct within study was confirmed (Table 8).

Convergent Validity is a measure that indicates whether the items of a construct are sharing a high proportion of variance in common. The average variance extracted (AVE) from the scale items was used to measure their convergent validity (Fornell & Larcker, 1981). The AVE values passed the 0.50 criterion (Fornell & Larcker, 1981). Consequently, the scales utilized in this study exhibit the necessary convergent validity. (Table 8).

Table 8: Factor loadings for all items, Cronbach's alpha, composite reliability, and AVE for the scale constructs.

Items	Loadings	Cronbach's Alpha	Composite Reliability	AVE
EC		.885	.896	.519
Env1	.808			
Env2	.665			
Env3	.677			
Env4	.660			
Env7	.736			
Env8	.742			
Env9	.724			
Env10	.739			
PR		.864	.857	.547
Risk1	.660			
Risk2	.765			
Risk3	.832			
Risk4	.755			
Risk5	.672			
PQP		.745	.749	.500
Qua1	.675			
Qua2	.673			
Qua3	.769			
ATEFP		.841	.849	.654
Att1	.728			
Att2	.890			
Att3	.801			
PIEFP		.864	.858	.603
Int1	.652			
Int2	.765			
Int3	.873			
Int4	.801			

Note. *EC: Environmental concern, ATEFP: Attitudes toward EFPs, PQP: Perceived quality and price, PR: Perceived risks, PIEFP: Purchasing intentions for environment-friendly products.*

Discriminant validity measures the ability of a construct to be unique in capturing phenomena other constructs cannot capture. In this study, the discriminant validity was evaluated using Fornell and Larcker Criterion and Heterotrait-Monotrait (HTMT) Ratio. As stated by Fornell and Larcker criterion, discriminant validity is confirmed when a construct's square root of AVE is larger than its correlation with the other constructs in the research. Yet lately, the Fornell and Larcker criterion has been questioned, and HTMT ratio which is a new method for evaluating discriminant validity, is becoming more popular. Regarding Fornell and Larcker criteria,

discriminant validity is demonstrated in this study. When applying the HTMT ratio, however, all ratios were below the limit of .85 (Henseler et al., 2015). As a result, discriminant validity has been confirmed. The results of discriminant validity are shown in Table 9 and Table 10.

Table 9: The square root of AVE for every construct and the correlations with the other constructs

	EC	PR	PQP	ATEFP	PIEFP
EC	.72				
PR	-.237**	.739			
PQP	.263**	-.101	.707		
ATEFP	.336***	-.258**	.272**	.809	
PIEFP	.392***	-.149	.344***	.599***	.777

Note. *EC: Environmental concern, ATEFP: Attitudes toward EFPs, PQP: Perceived quality and price, PR: Perceived risks, PIEFP: Purchasing intentions for environment-friendly products.*
*Significance of correlations: * p<0.050, ** p < 0.010, *** p < 0.001.*

Table 10: HTMT ratios for all scale constructs

	EC	PR	PQP	ATEFP	PIEFP
EC					
PR	0.206				
PQP	0.268	0.045			
ATEFP	0.354	0.247	0.293		
PIEFP	0.387	0.111	0.355	0.656	

Note. *EC: Environmental concern, ATEFP: Attitudes toward EFPs, PQP: Perceived quality and price, PR: Perceived risks, PIEFP: Purchasing intentions for environment-friendly products.*

4.5 SEM Model Assessment

The relationships in the proposed model were examined using an AMOS-generated structural equation model. If the value of the CMIN/df < 5, the goodness-of-fit (GFI) indices (Hair et al., 2010), the Tucker and Lewis (1973) index (TLI), and the Confirmatory fit index (CFI) (Bentler, 1990) is > .90, the model is to be considered as well-fitting (Hair et al., 2010). Additionally, if the computed value of the standardized root mean square residual (RMR) was less than .05 and the root mean square error approximation (RMSEA) was between .05 and .08, the model was considered to be appropriate (Hair et al., 2010). The fit indices for the model are within the acceptable levels (CMIN/DF = 1.809, GFI = .901, CFI = .928, TLI = .914, SRMR = .0681, and RMSEA = .063) (Table 11).

Table 11: Goodness of fit structural model results

Fit Indices	Recommended Value	Source(s)	Obtained Value
P	Insignificant	Hair et al., (2010)	.000
CMIN/df	CMIN/DF< 5 is good	Hair et al., (2010)	1.809
GFI	>.90	Hair et al., (2010)	.901
CFI	>.90	Bentler (1990)	.928
TLI	>.90	Bentler (1990)	.914
SRMR	<.08	Hu and Bentler (1998)	.0681
RMSEA	<.08	Hu and Bentler (1998)	.063

The squared multiple correlation was .18 for ATEFP, and this shows that an 18% variance in ATEFP is accounted for by EC, PR, and PQP. Also, the squared multiple correlation was .39 for PIEFP, which indicates that a 39% variance in PIEFP is accounted for by ATEFPs. The study assessed the impact of EC, PR, and PQP on ATEFP. The impact of EC on ATEFP was positive and significant (β = .241, t = 3.091, p = .002), supporting H1. The impact of PR on ATEFP was negative and significant (β = -.172, t = -2.256, p = .024), supporting H10. The impact of PQP on ATEFP was positive and significant (β = .203, t = 2.461, p = .014), supporting H7. The study also assessed the impact of ATEFP on PIEFP, and it was positive and significant (β =.623, t = 6.82, p <.000), supporting H2.

EC showed also a positive and significant effect on PQP (β = .245, t =2.751, p = .002), supporting H5, and EC had also a negative and significant effect on PR (β = -.247, t = -3.083, p = .002), supporting H6. However, PR showed no significant effect on PQR (β = -.039, t = -.444, p = .658) and thus, H13 is rejected.

Table 12: SEM model paths coefficients

Path	Coefficient(β)	*t*	*p*
EC → ATEFP	.241	3.091	.002
EC → PQP	.245	2.751	.002
EC →PR	-.247	-3.083	.002
PR → ATEFP	-.172	-2.256	.024
PQP → ATEFP	.203	2.461	.014
ATEFP → PIEFP	.623	6.82	<.000
PR → PQR	-.039	-.444	.658

Note. *EC: Environmental concern, ATEFP: Attitudes toward EFPs, PQP: Perceived quality and price, PR: Perceived risks, PIEFP: Purchasing intentions for environment-friendly products.*

The mediating effects

The study also evaluated the mediating impact of ATEFP on the relationships between the independent variables (EC, PQP, and PR), and the dependent variable (PIEFP). Direct, indirect, and total effects were calculated using the bootstrap option within AMOS (Table 13). With the presence of the mediator, the results indicated a significant positive indirect effect of EC on PIEFP (β =.131, p = .001), a significant direct effect of the EC on PIEFP (β = .182, p =.021), and a significant total effect of EC on PIEFP (β=.313, p < 000). Those findings indicate that consumers' environmental concern positively influences their attitudes toward purchasing EFPs, which sequentially, positively affects their purchasing intention for EFPs, at the same time, the direct effect of environmental concern on purchasing intentions is still positive and significant supporting H3. Thus, it was concluded that the relationship between EC and PIEFP is partially mediated by the attitudes toward EFPs, supporting H4.

Similarly, PQP was found to have a significant indirect effect on PIEFP (β= .172, p= .042), a marginally-significant direct effect on PIEFP (β= .103, p= .06), and a significant total effect on PIEFP (β= .275, p= .004). It is noticed that consumers' perceived quality and price positively influence their attitudes toward EFPs, which in turn positively affects purchasing intentions of consumers' for EFPs, at the same time, the direct effect of perceived quality and prices on purchasing intentions is still positive and significant supporting H8. Thus, it revealed that ATEFP partially mediated the relationship between PQP and PIEFPs, supporting H9.

However, for PR, there was no significant total effect on PIEFPs, rejecting H11. With the presence of the mediator, the results showed a significant positive indirect effect of PR on PIEFP (β = -.082, p = .033), an insignificant direct effect of the PR on PIEFP (β = .059, p = .374). Thus, it revealed that ATEFP fully mediated the relationship between PR and PIEFPs, supporting H12. After adding the effects of the EC, PR and PQP to intentions, the squared multiple correlation for PIEFP increased from .39 to .42, this shows that 39% of the variance in PIEFP is accounted for by ATEFPs, and 3% of the variance in PIEFP is accounted for by EC, PR and PQP.

Table 13: The direct, indirect, and total effects of the EC, PR, and PQP on PIEFP

Relationship	**Direct Effect**	**Indirect Effect**	**Confidence Interval**		**Total Effect**	**Conclusion**
			Lower Bound	**Upper Bound**		

EC→ ATEFP → PIEFP	.182 (.021)	.131 (.000)	.071	.409		
EC→ PIEFP					.313 (.000)	Partial Mediation
PR→ ATEFP → PIEFP	.059 (.374)	-.082 (.033)	-.167	-.010		
PR→ PIEFP					-.019 (.758)	Full Mediation
PQP→ ATEFP → PIEFP	.172 (.042)	.103 (.060)	-.005	.420		
PQP → PIEFP					.275 (.004)	Marginal Partial Mediation

Note. *EC: Environmental concern, ATEFP: Attitudes toward EFPs, PQP: Perceived quality and price, PR: Perceived risks, PIEFP: Purchasing intentions for environment-friendly products.*

4.6 Conclusion

According to the results of SEM analysis, EC and PQP revealed positive and significant effects on ATEFP, while PR showed a negative but significant effect on ATEFP. Furthermore, ATEFP also showed a positive significant effect on PIEFP. When it comes to the effect of EC, PR, and PQP on PIEFP, it was found that the impact of EC on PIEFP was partially mediated by ATEFP. Additionally, the impact of PQP on PIEFP was also marginally partially mediated by ATEFP. However, the PR showed no direct relationship with PIEFP, and ATEFP fully mediated the relationship between PR and PIEFPs. Finally, EC showed a positive and significant effect on PQP and had also a negative and significant effect on PR. As a result, all the study's hypotheses are accepted except H11, and H13 (Table 14).

Table 14: Hypotheses, path correlations, and results

Hypothesis	Path correlation	Results
H1	Environmental concern → Attitudes toward EFPs	Accepted
H2	Attitudes toward EFPs → Purchasing intentions for EFPs	Accepted
H3	Environmental concern → Purchasing intentions for EFPs	Accepted
H4	Environmental concern → Attitudes toward EFPs → Purchasing intentions for EFPs	Accepted
H5	Environmental concern → Perceived quality and price	Accepted
H6	Environmental Concerns → Perceived risks of EFPs	Accepted
H7	Perceived quality and price → Attitudes toward EFPs.	Accepted

Hypothesis	Path correlation	Results
H8	Perceived quality and price → Purchasing intentions for EFPs	Accepted
H9	Perceived price and quality→ Attitudes toward EFPs → Purchasing intentions for EFPs	Accepted
H10	Perceived risks → Attitudes toward EFPs.	Accepted
H11	Perceived risks → Purchasing intentions for EFPs	Rejected
H12	Perceived risks→ Attitudes toward EFPs → Purchasing intentions for EFPs	Accepted
H13	Perceived Risks → Perceived quality and price	Rejected

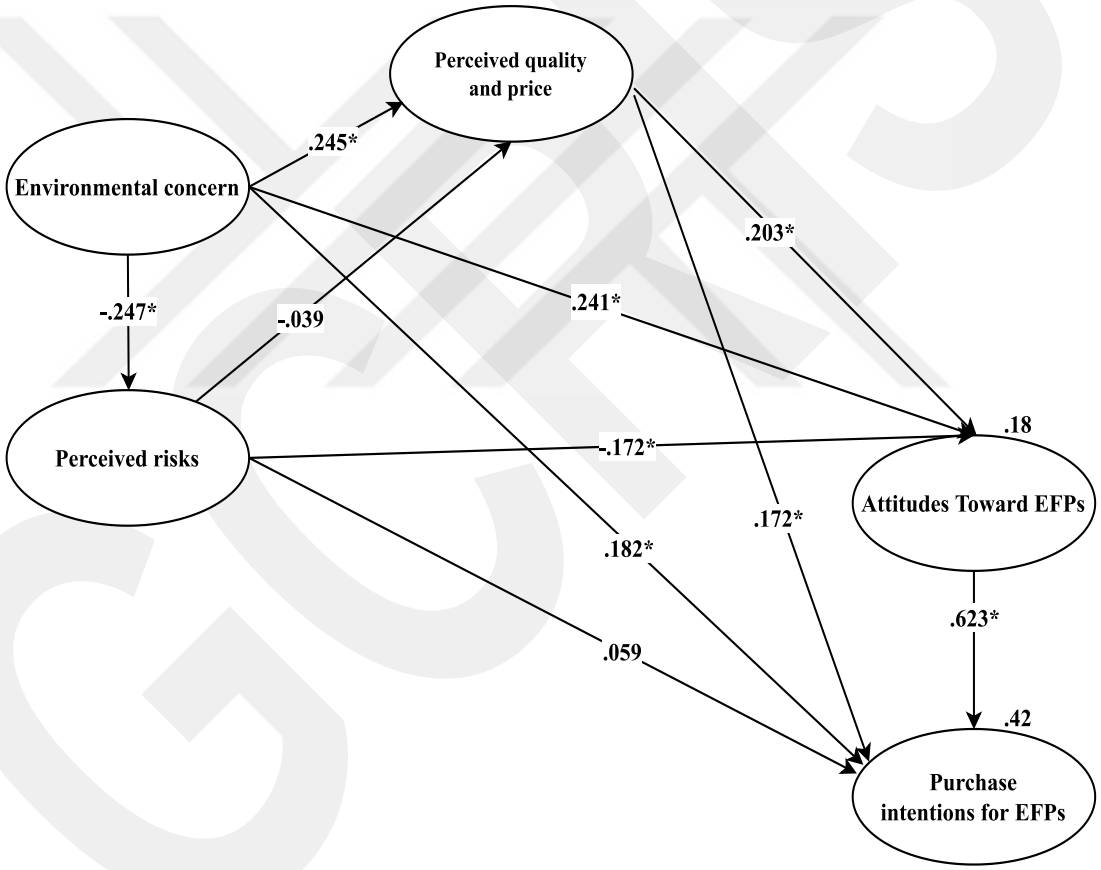

Figure 3: Model with Standardized coefficients (Note. *p < 0.05.).

CHAPTER 5: DISCUSSION

This chapter discusses the study results and implications. In addition, the limitations of the study are identified as well as future research opportunities.

5.1 Discussion of the Findings

This study examined the partial model of the TPB, whereby the environmental concern, perceived risks, perceived quality, and prices are the antecedents to the dependent variable (purchasing intentions for EFPs), under the mediating impact of attitudes toward EFPs. The study focused on university students who can be current or will be future consumers, and the purpose of this study was to investigate the predictors that may affect their mindset and intentions regarding the transition to use environment-friendly products. The findings of this study may support better-focused ecological marketing.

Based on the SEM analysis, the results show that participants' attitudes toward EFPs still account for their purchase intentions for EFPs, and these attitudes are affected by environmental concern, perceived risks, and perceived quality and price. While an environmental concern, perceived quality and price, and the perceived risks have significant effects on the consumers' attitudes, the environmental concern effect extended to reach the purchase intentions for EFPs with partial mediation by the attitudes toward EFPs. The population of this research demonstrated that they are aware of and already concerned about the environment. Those results are consistent with previous related studies, as environmental concern was positively associated with attitudes toward environmental issues (Cheung & To, 2019), and in a TPB full model study, the environmental concern was significantly affecting the attitudes (Maichum et al., 2016). On other hand, environmental consciousness was also found to be strongly correlated with green consumption (Ritter et al., 2015). The environmental attitudes have a mediation effect between the linkage of environmental concern and purchase intentions for EFPs (Onurlubaş, 2018). The results are also supported by the findings of Kumar Sharma and Bhuian (2017) that environmental concern significantly affected the consumers' environmental behavioral intention.

The research findings indicate that attitudes toward the environment have a positive and significant impact on the consumers' purchase intentions for EFPs. The findings showed that attitudes play a mediating role in the relationship between

environmental concern and purchasing intentions for EFPs, as well as the relationship between perceived quality and price and purchasing intentions for EFPs. This finding is parallel with the previous study that, among all other predictors, attitudes were found to be the stronger predictor of purchase intention for EFP (Maichum et al., 2016). In another study, similarly, the attitudes were found to be mediating other relationships of antecedents with the intention to purchase (Midilli & Kuşçu, 2021). The positive attitudes were also found to be strongly bearing the antecedent effects to the green purchase intentions (Chan, 2001). Salom et al. (2021) indicated that environmental attitude is an antecedent for consumers' green purchase intention. Furthermore, Erdil (2018), and Onurlubaş (2018) reported that environmental attitude has a significant relationship with purchase intentions for EFPs.

The study findings revealed that the perceived quality and price of EFPs have a positive and significant impact on attitudes toward EFPs. The major responses regarding the perceived quality and price items showed that EFPs' current price and quality are perceived as acceptable and satisfactory. These findings are in parallel with previous studies (Akarapisit, 2019; Cheung & To, 2019; Laroche et al., 2001). Furthermore, the impact of the perceived quality and prices on consumers' purchase intentions for EFPs was partially mediated by the attitudes toward EFPs, and this finding is in parallel with Saleem et al. (2015) and partially supported by Bozbay et al.(2019). By other words, the study confirmed that the perceived quality and price is still a valid factor to predict environmental behavior.

Moreover, its revealed that environmental concern has a positive and significant and considerable impact on the perceived quality and price of EFPs. This result is also supported by Laroche et al.(2001) and Chen and Chai (2010). Additionally, it is partially in line with the findings of Aytop et al.(2019) as they reported that environmentally sensitive consumers are willing to pay more for EFPs than for other goods.

The results of this study revealed that perceived risks have a negative relationship with attitudes toward EFPs which converges with earlier findings (Kang & Kim, 2013). The results also suggested that the participants perceived social risk from using EFPs as low, and it was expected as environmentally responsible behavior is necessary and it is not deemed as an inconvenience (Laroche et al., 2001). Still, the main concern for the participants is the perceived performance risk. This is also in

parallel with the previous studies showing that for the majority of product types, performance consequences are the best predictors of total perceived risk (Kaplan et al., 1974). In another study, researchers investigated the perceived risks from the aspect of environmental consequences and found that they negatively affected the consumers' trust in the greenish aspect of the product (Chen & Chang, 2013).

This study has addressed the general consequences of using the EFPs considering them as ordinary products and did not measure their environmental performance, and the results of this study showing the negative effect of perceived risks on attitudes toward EFPs indicates a similarity to earlier findings (Chen & Chang, 2013). It was also demonstrated that participants' perceived risks were relatively weak and could not affect their purchase intentions directly, but were fully mediated and conveyed to the purchase intentions by the attitudes. This result conflicts with (Bozbay et al., 2019), and agrees partially with the findings of Dhewi et al. (2018), which showed that the perceived risks of the low-cost green car were negatively correlated with the intention for purchasing EFPs. Those findings suggest that the perceived risks of EFPs currently are not that stronger determinant to prevent consumers from being willing to purchase EFPs but also cannot be neglected because of their effect on the attitude toward EFPs, and indirect effect on the purchase intentions. The study has additionally revealed a new finding that environmental concern has a negative and significant effect on the perceived risks of EFPs. This finding supports the proposed idea that as concern toward environment issues increases, individuals are willing intentionally to raise the threshold of the accepted perceived risks that come from purchasing EFPs.

5.2 Implications

To protect the earth and the environment, many researchers are advocating for sustainable consumption and trying to find out the related predictors that may assist all involved parties from the government to the private sector businesses and individuals to adopt and commit to more environmental behavior. Sustainable consumption is defined as "the use of goods and services that respond to basic needs and bring a better quality of life while minimizing the use of natural resources, of toxic materials and emissions of waste and pollutants over the life-cycle, so as not to jeopardize the needs

of future generations"(Pinto de Moura et al., 2012, p.452). Thus, the importance of conducting environment-related studies became self-evident.

This study discloses that environmental concern, perceived quality and price, and perceived risks are effective predictors for forming the attitude toward EFPs. The population of this research demonstrated that they are aware and concerned about the environment, they perceive the quality and prices of EFPs as accepted and they don't sense further risk from involving with an EFP purchase. The results show that those predictors are responsible for 18 % of the variance in forming their attitude toward EFPs. This also answers the question of whether an environmental concern-based strategy is enough and suggests that environmental concern should be included to motivate consumers to build attitudes and intentions for EFPS. Indeed, many other important factors within consumers motivate them to purchase EFPs. For instance, marketers can still make use of environmental concern and provide more information about the environmental issues for non-environment-friendly consumers, thus, they may reshape their behavior toward more friendful environmental behavior.

Although the study results suggest that the acceptance of EFPs' prices and quality is affected by environmental concern, some of EFPs still can find acceptance by non-environmental consumers. For example, some types of EFPs utilize less energy and/or resources, and consumers feel that using such items will provide greater advantages and increase consumers' favorable attitudes toward environmental conservation (Cheung & To, 2019). Accordingly, for some types of EFPs, many consumers understand that purchasing them actually can be costly in the short term but can save more in the long run, for instance, purchasing a highly efficient fridge may cost more at the moment of purchase but can save credibly from the electricity bill for the near future. Marketers should communicate and emphasize the extra advantages of those EFPs products, which non-green customers also can find appealing.

Marketers exhibit much attention to the perceived quality and price. That's because product perceived quality directly influences purchase intentions (Saleem et al., 2015), and higher prices are described as a noteworthy obstacle to purchasing eco-friendly products (Wijekoon & Sabri, 2021). Consumers perceive the difference in prices among competitors as related to profit and not costs, and perceive the higher price as fair only when its related to extra quality (Bolton et al., 2003), and furthermore,

consumers do perceive quality to make a comparison of products in order to decide whether purchasing that product is worthy or not (Marakanonn & Panjakajornsak, 2016). Market penetration strategies via prices are unlikely to be applied soon due to the manufacturing costs of EFPs. However, the quality of EFPs should stay consistent with consumers' expectations. So companies should continue to promote conventional product features such as price, quality, convenience, and availability, with environmental attributes serving as a secondary draw to customers (Ginsberg & Bloom, 2004). Advocating for locally produced EFP may minimize the produced CO_2 emissions for shipment, which is emphasized by Nieuwenhuis et al. (2012). Locally produced EFP may also cut off many shipment costs as well as government can lower the applied taxes over EFPs to make them more appealing and competitive.

Ham et al. (2015) have reported that the affective (emotional) dimension of the attitude is considered the leading predictor of environment-friendly behavior. And that's because emotions are simple to understand without the extra effort of understanding the complex components of the arguments about environmental issues. They added also that attitudes can lead to more awareness whereby consumers can see the environmental issues with more conscious (Ham et al., 2015). Environmental affects (emotions) were found to be more influencing the attitudes toward EFPs than environmental knowledge (Chan, 2001). The results of this study suggested that attitudes toward EFPs are the stronger predictor for the purchase intentions for EFPs, as while the whole model accounted for a 42% variance in purchase intentions for EFPs, attitudes toward EFPs alone was responsible for 39% variance in purchase intentions for EFPs. Marketers can benefit from including the affect dimension of attitudes besides the knowledge about environmental issues in their EFPs marketing plans. For example, the feeling fear of a dark future because of the accumulated environmental problems, or the fear of health problems because of the bad environment may lead to more purchase intentions for EFPs. Similarly, love and acceptance feelings can be conveyed to consumers as a prize if they are willing to purchase EFPs.

Marketers should do all possible to reduce perceived risk. Although the results suggested its effect on attitudes toward EFPs , and indirect effect on purchasing intentions for EFPs, Dhewi et al. (2018) found that perceived risks of a low-cost green car were negatively correlated with the intention for purchasing EFPs. Their

respondents felt debut that the product is not tested yet and may suffer from durability and efficiency issues (Dhewi et al., 2018). And since the performance risks were the most associated type of risks with EFPs in this study, marketers should emphasize the durability of those products. For this purpose, showing live demos and trails where possible may convey the appropriate message that those products will not fail them. And to be up to this level of confidence, the capacity of the provided warranties on those products can be extended to cover many subs-related performance risks too. Also, a money-back guarantee can be helpful in approving the quality of those products (Roberts & Bacon, 1997). Extending the period of the money-back guarantee can be more appealing to many consumers too. And because of the negative impact of environmental concern on perceived risks, marketers can also implement environmental concern as an active factor in their marketing to decrease the phenomena of perceived risks.

5.3. Limitations of the Study

The encountered limitations of this study are as follows, Firstly, this study focuses on consumers' purchase intentions rather than their actual purchase behaviors. Although there is a high link between consumers' attitudes, intentions, and their behaviors, often they can behave differently from what they report (Roberts & Bacon, 1997). While attitudes are strong predictors of intention and intentions are leading to purchasing EFPs, yet they do not indicate the real behavior and thus, it's not confirmed whether the participants have developed a real behavior toward purchasing EFPs. For example, the customers who showed their willingness to buy the EFPs actually acted differently, which left British markets stocked with not sold EFPs because of the higher price in the early 1990s (Laroche et al., 2001). Thus, it is suggested that surveying purchasing behavior rather than intentions will provide better insights. The use of other methods (e.g., observation) will also minimize the possibility of social desirability bias as data were collected through self-report in the current study (Grimm, 2010).

Secondly, higher educated individuals, on average, have a better comprehension of the topic under examination (Chan, 2001), and for that reason, it's hard to generalize the results of studies conducted with university students to the general population. The ability of higher educated people to understand and analyze different contexts with regard to EFP may mislead market experts since the general

population may have other perspectives with regard to environmental problems. Thirdly, using a convenience sample might have produced a biased result as it does not reflect the general population.

Lastly, this study examines EFPs from a general perspective, and no specific type of EFP was mentioned in the scales as it might make it more confusing for participants. Also, the results may differ when a specific type of EFPs is used. Because some of the EFPs are more preferred in the market due to their high technology offering many features and advantages and low perceived risks.

5.4 Suggestions and Future Research Opportunities

A huge portion of consumers in Türkiye has difficulty understanding some environmental-related terms (Midilli & Kuşçu, 2021), and product knowledge showed a significant link with consumers purchasing behavior (Santy & Atika, 2020). Thus, for the validation of the results of this study or any EFP-related study, it is helpful to include a scale that measures the knowledge about EFPs is highly recommended.

The need for market, economic, and policy incentives for businesses to develop and produce EFPs, is another field to be studied in the Türkiye context. Pursuing environmental goals without proper economic incentives and regulation would end up in a "danger zone" (Chen, 2001). Consumers are not expected to change their behaviors if businesses and governments are not participating in environmental behavior (Roberts & Bacon, 1997). The attitudes toward green products were affected by the governments' implemented policies, and individual norms and beliefs (Chan & Chau, 2021). It's suggested that researchers study the impact of the government policy and incentives to figure out if it's leveraging the adoption of EFPs correctly and whether any further and suitable incentives can be implemented in the Türkiye context.

Individuals' personality traits may show an effective role in speeding or slowing adoption of EFPs. For example, greater self-efficacy may boost consumer confidence in protecting the environment by establishing a call to action (Cheung & To, 2019). Socially responsible behavior may enhance capability with environmental awareness, and advocating such behaviors may assist with more protection for environmental behavior (Ham et al., 2015). The brand name is a high criterion in determining the perceived quality (Agyekum et al., 2015). Exploring what competition of the available EFP brands and whether they have a meaningful

difference in consumers' preferences and whether they are satisfying the green needs of consumers besides traditional attributes are further questions that scholars might investigate.

Online marketing is over rolling around the world and Türkiye, and how businesses in Türkiye are utilizing online marketing for EFPs can be an interesting area for research. Lastly, since this research takes a general perspective, it’s strongly suggested to conduct separate research for each type of EFPs to have an accurate idea about the EFPs and their marketing possibilities.

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Appendix 1: ENGLISH VERSION OF STUDY QUESTIONNAIRE

Introduction

Before you start the questionnaire, you may need to know some information about some terminologies that are used in this questionnaire.

Firstly, a product can be only qualified as being environment friendly when its life cycle 'from cradle to grave' respects the needs of the environment. In other words when a product is respecting the general guidelines of environment, by not hurting the environment or has a less hurting effect than its conventional peer product, then it can be called environment friendly product.

Secondly, perceived risks, which is a subjective estimation described as an unpredictable phenomenon faced by consumers while purchasing a product in terms of the consequence of product usage, and includes psychological, physical, financial, social, and performance risk that you think you may face if you buy that product. Perceived risks may not reflect the real risks, as they are the consumer's subjective estimations.

Now you can move to the next page.

SECTION 1.

1- Age: ….....

2- Gender:

( ) Female ( ) Male ( )Other

3- Level of Education (please indicate the degree of your current study):

( ) Bachelor's degree ( ) Master's degree ( ) PhD's degree

4- Department of study: …….

5- Occupational Status

( ) Full-time Employee ( ) Part--timeEmployee ( ) Unemployed / Job Seeker

SECTION 2.

This section includes some statements about environment. Please indicate your level of agreement with these statements by using a 5-point scale below. (1. strongly disagree, 2: ...., 3:…, 4:..., 5. strongly agree).		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	The earth is like a spaceship with only limited room and resources.	1	2	3	4	5
2	Humans need not adapt to the natural environment because they can remake it to suit their needs.					
3	Mankind is severely abusing the environment.					
4	Humans have the right to modify the natural environment to suit their needs.					
5	Plants and animals exist primarily to be used by humans.					
6	We are approaching the limit of the number of people the earth can support.					
7	To maintain a healthy economy, we will have to develop a steady-state economy where industrial growth is controlled.					
8	When humans interfere with nature, it often produces disastrous consequences.					
9	Humans must live in harmony with nature in order to survive.					
10	Mankind was created to rule over the rest of nature.					

SECTION 3.

This section includes several statements related to environment friendly products. Please indicate your level of agreement with these statements by using a 5-point scale below (1. strongly disagree, 2: ...., 3:..., 4:..., 5. strongly agree).		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
11	Environment friendly products have an acceptable standard of quality and a fair price.	1	2	3	4	5
12	Buying Environment friendly products would be the best option if they had the same price as non-environment friendly products.					

This section includes several statements related to environment friendly products. Please indicate your level of agreement with these statements by using a 5-point scale below (1. strongly disagree, 2: ...., 3:..., 4:..., 5. strongly agree).		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
13	The purchase of Environment friendly products would be leveraged if they were more available in the market					
14	There is a chance that there will be something wrong with performance of environment friendly products					
15	There is a chance that environment friendly products will not work properly with respect to its design					
16	There is a chance that you would get penalty or loss if you use environment friendly products.					
17	There is a chance that using environment friendly products will negatively affect the environment.					
18	Using this product would damage your reputation or image					

SECTION 4.

This section includes some statements about purchasing environment friendly products. Please choose the best answer that describes your opinion by using the 5-point scale indicated separately for each item.		Negative	Moderate negative	neutral	Moderate positive	positive
19	I have a……. (1= negative/5= positive) attitude toward the eco-friendly products	1	2	3	4	5
		Irresponsible	Moderate irresponsible	neutral	Moderate responsible	Responsible
20	I would describe myself as environmentally ……. (1= irresponsible; 5= responsible)	1	2	3	4	5

		Boring				Interesting
21	It is ……. (1=boring/ 5= Interesting/) to spend time for environment.	1				5

SECTION 5.

This section includes some statements about purchasing intentions for environment friendly products. Please indicate your level of agreement with these statements by using a 5-point scale below (1. strongly disagree, 2: ...., 3:..., 4:..., 5. strongly agree).		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
22	I will consider switching to brands with a green label to protect the environment.	1	2	3	4	5
23	I will consider environment friendly products to minimize environmental pollution.					
24	I plan to switch to environment friendly products of the products I consume.					
25	I will consider buying eco-friendly products as they are beneficial to the environment.					

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Publications:

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