



# **SUSTAINABLE MARKETING PRACTICES IN EUROPEAN AIRLINES**

**Capstone Project**

**Vural Hacimustafaolu**

**Advisor: Assist.Prof.Dr.Petek Tosun**

**İSTANBUL, 2021**



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**İSTANBUL, 2021**

## MEF UNIVERSITY

Name of the project: Sustainable Marketing Practices in European Airlines

Name/Last Name of the Student: Vural Hacımustafaoğlu

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04/01/2021

Asst. Prof. Dr. Petek Tosun

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.../.... /2021

Director

MBA Program

Assoc. Prof. Dr. Hande Karadağ

We hereby state that we have held the graduation examination of Vural Hacımustafaoğlu and agree that the student has satisfied all requirements.

### THE EXAMINATION COMMITTEE

Committee Member

Signature

1. Asst. Prof. Dr. Petek Tosun

.....

2. Assoc. Prof. Dr. Hande Karadağ

.....

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## **EXECUTIVE SUMMARY**

### **SUSTAINABLE MARKETING PRACTICES IN EUROPEAN AIRLINES**

VURAL HACIMUSTAFAOĞLU

Advisor: Assist. Prof. Dr. Petek Tosun

JANUARY, 2021, 35 Page

#### **ABSTRACT**

In recent years, it is observed that consumers behave more environmentally due to the increasingly negative effects of global climate change. As a result of this situation, it can be said that there is an increase in the sustainable marketing activities of airlines. Studies on the sustainable marketing activities of airlines and the attitudes of passengers towards the activities of these airlines are relatively few in our country. Therefore, in this study, while the sustainable activities of airline companies operating in Europe were examined, Turkish and European passengers the general environmental awareness and attitudes towards green airlines were also examined. A questionnaire that included questions about the environmental awareness, flight frequency, flight purposes, airline preferences, and demographic information of the participants was applied to traveling passengers in Turkey and Europe. At the end of the study, the passengers' attitudes towards green airlines were examined and it was observed that there was a similarity in the attitudes of Turkish and European passengers towards green airlines. In addition, it has been observed that the demographic characteristics of the passengers such as their social, and cultural and economic characteristics are also effective in purchasing an eco-friendly product or service. Furthermore, the study found that price is a very important factor in the passengers' choice of green service. Finally, at the end of the study, some suggestions were made to contribute to the sustainable marketing activities of airlines.

**Key words:** Green marketing, sustainability, consumer attitudes, airline sector, green products and services.

## ÖZET

### AVRUPA HAVA YOLLARINDA SÜRDÜRÜLEBİLİR PAZARLAMA FAALİYETLERİ

VURAL HACIMUSTAFAOĞLU

Proje Danışmanı: Dr. Öğr. Üyesi. Petek Tosun

OCAK, 2021, 35 sayfa

## ÖZET

Son yıllarda küresel iklim değişikliğinin giderek artan olumsuz etkileri nedeniyle tüketicilerin daha çevreci davrandıkları gözlemlenmektedir. Bu durumun bir sonucu olarak havayollarının sürdürülebilir pazarlama faaliyetlerinde artış olduğu söylenebilir. Ülkemizde havayollarının sürdürülebilir pazarlama faaliyetlerine ve yolcuların bu havayollarının faaliyetlerine yönelik tutumlarına ilişkin çalışmalar görece azdır. Bu nedenle bu çalışmada Avrupa'da faaliyet gösteren hava yolu şirketlerinin sürdürülebilir faaliyetleri incelenirken, Türk ve Avrupalı yolcuların genel çevre bilinci ve yeşil havayollarına yönelik tutumları da incelenmiştir. Katılımcıların çevre bilinci, uçuş sıklığı, uçuş amaçları, havayolu tercihleri ve demografik bilgileriyle ilgili soruları içeren anket Türkiye ve Avrupa'da seyahat eden yolculara uygulandı. Çalışma sonunda yolcuların yeşil havayollarına yönelik tutumları incelenmiş ve Türk ve Avrupalı yolcuların yeşil havayollarına yönelik tutumlarında benzerlik olduğu görülmüştür. Ayrıca yolcuların sosyal, kültürel ve ekonomik özellikleri gibi demografik özelliklerinin de çevre dostu bir ürün veya hizmet satın almada etkili olduğu görülmüştür. Ek olarak, çalışma, fiyatın, yolcuların yeşil hizmet seçiminde çok önemli bir faktör olduğunu ortaya koymuştur. Son olarak çalışmanın sonunda, havayollarının sürdürülebilir pazarlama faaliyetlerine katkı sağlayacak bazı önerilerde bulunuldu.

Anahtar Kelimeler: Yeşil pazarlama, sürdürülebilirlik, tüketici tutumları, havayolu sektörü, yeşil ürünler ve hizmetler.

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# 1. INTRODUCTION

In the period from the beginning of human history to the present, all the needs of human beings have been met by nature. Nature has protected and nurtured humanity for centuries. For this reason, all civilizations throughout history have regarded nature as a mother and accepted it as sacred. However, the world has been no longer self-sufficient for the last few centuries because of the population growth in the world, industrialization, urbanization, increasing consumption, destruction, and depletion of scarce natural resources have gained momentum (Chen, 2010).

Consumers' purchasing tendencies and preferences have changed due to reasons such as global climate change, increasing population growth, depletion of renewable energy sources. In today's world, consumers make more environmentally friendly choices and prefer environmentally friendly products. As a result of this situation, businesses have started to attach importance to sustainable marketing activities. Sustainable marketing, or green marketing as it is more commonly used, describes an organization's efforts to design, promote, price, and distribute products that will not harm the environment (Pride & Ferrell, 2008). Besides, green marketing for companies is an opportunity to know how best to appeal to today's green consumers, to reach top-tier sales, to increase profits, to increase market share among fast-growing green consumers, to save money, and to increase employee morale (Ottman, 2011). Therefore, in parallel with the increase in consumers' attitudes towards the environment, there is an increase in the green marketing activities of companies. Also, the environment is very important as it is an economic resource not only for people but also for companies. Therefore, green marketing has become the mainstream for today's companies.

Today, air transportation is preferred by consumers as it is a faster, more comfortable, and safer form of transportation compared to other transportation options. According to The International Air Transport Association (IATA) (2019), as of the end of 2019, the total number of passengers in the world is 4.1 billion and this number is expected to be 8.2 billion by end of 2037. By the end of 2019, more than 1.1 billion passengers traveled by air in the European Union. Furthermore, about 34 percent of these passengers traveled between European Union member states (Mazareanu, 2020). According to data from the Directorate General of Civil Aviation ([www.web.shgm.gov.tr](http://www.web.shgm.gov.tr)), 210 million people have preferred the airline in Turkey in



2018. However, the increase in the use of air transport has some negative impact on the environment like the release of greenhouse gases into the atmosphere, noise, and waste. According to Sagevik (2009), air transportation is the source of carbon dioxide and greenhouse gas emissions and is one of the most important causes of global climate change. Hence, in the last few decades, there has been an increasing interest in sustainable marketing strategies in the air transport industry as in all sectors. Thus, many airlines have introduced sustainable approaches to their marketing activities to reduce carbon emissions and fuel consumption, dominate the growing green consumer market, and profit economically. Therefore, the universe of the study, consist of the sustainable marketing activities of the airline companies operating in Turkey and Europe and Turkish and European passengers' attitude towards green airlines.

## 2. CONCEPTUAL BACKGROUND

### 2.1. What is green marketing?

Various terms have been used to describe green marketing from past to present such as sustainable, eco – friendly or environmental marketing but in this study, we will use the term green marketing to indicate a marketing perspective that considers the long-term environmental effects of products or consumption. Green marketing is a process of promoting products or services based on their environmental benefits, it has started to be discussed the first time in the 1960s, however, the green marketing concept has become widespread around the world in the 1980s. According to this definition, we can say easily state that green marketing is the study of the negative and positive effects of marketing activities on pollution, energy consumption, and non-energy resource consumption.

Green marketing occurs of activities aimed at meeting human needs and desires with a minimum harmful effect on the natural environment. Furthermore, green marketing or sustainable marketing can be defined as taking an environmentally - friendly approach to meet the needs and demands of customers. According to Çabuk (2008), green marketing is the set of activities that include the production, pricing, distribution, promotion, and after – use of the eco - friendly products or services that meet the needs and wants of the consumers while achieving the objectives of the business. In addition to this definition, environmental marketing, more commonly known as green marketing, can be defined as the effort of a company to design, promote, price, and distribute its products and services in a way that promotes environmental protection (Polonsky, 2011). Furthermore, according to the definition of Kumar (2013 ), green marketing is the marketing of products that are presumed to be environmentally safe; “Therefore, ecological marketing combines a broad range of activities, containing product modification, changes to the production process, packaging changes, as well as modifying advertising.”

In today's world, people are left unprotected against natural disasters due to the increase in global warming and environmental pollution. Besides, increasing disasters have improved the consumer attitudes towards environmental subjects and the consciousness about eco-friendly products or services. Therefore, companies increasingly attach importance to green marketing and make studies because if companies adopt a green marketing culture, they will be

able to achieve their goals more easily, gain a competitive advantage against their competitors, use their resources more efficiently and decrease costs through recycling. Furthermore, corporations may acquire a positive corporate image utilizing green opportunities and comply with environmental trends. (Chen & Chang, 2012). Likewise, according to Moser (2015), Employee satisfaction and loyalty are higher in organizations that can successfully adapt environmental activities to all units.

### **2.1. Green marketing in the aviation industry**

The demand for air transportation has been increasing rapidly in the world and also in Turkey since the use of large-bodied aircraft. As air transport is faster and more comfortable than other transportation options, it is preferred more by people. According to the annual report of the International Civil Aviation Organization (ICAO) (2014), 2,139,000 people traveled by airline in 2005, while in 2014 this number reached 3,303,000. According to these data, there is an increase of 5.2% between 2005 and 2014. Besides, according to the data of another important aviation organization, the International Air Transport Association (IATA) (2019), as of the end of 2019, the total number of passengers in the world is 4.1 billion, and this number is expected to be 8.2 billion by end of 2037. Additionally, air transportation is seen as one of the most important elements for globalization and the development of the modern world. The world is connected globally 24 hours a day, 7 days a week by air transport. It also employs 63 million people worldwide (ATAG, 2016). Although the air transportation industry provides a great advantage to people, it has serious negative impacts on nature and the environment such as air pollution, greenhouse gas emissions, fuel consumption, noise, and waste.

Besides, the shortage of food, water, and other essential natural resources caused by global warming brought environmental sustainability to the agenda of the transportation sector in the world. If a definition needs to be made for sustainable transportation, the most accurate definition may have been given by Dally. (1991), "Transportation that does not risk human health or the ecosystem, meets mobility needs with the use of renewable resources and meets renewal needs". Therefore, many international organizations and institutions started to work on this subject. For example, the European Union Emissions Trading Scheme (EU ETS) has brought additional taxes to decrease the carbon emissions of airlines operating or landing at the airports of EU member countries. Those taxes aim to reduce carbon emissions from airline operations to below 5% by 2020 (Hagmann, Semeijn, & Vellenga, 2015). Also, the

International Civil Aviation Organization (ICAO) works to develop the environmental performance of the aviation industry. Thus, ICAO developed some standards, rules, and materials (ICAO, 2018) to decrease the number of people affected by aircraft noise, the negative impacts of aviation emissions on local air quality and the global climate. Moreover, star Alliance, another major aviation organization, identified society's growing need for environmental sustainability. For this reason, it started to bright various standards to member airlines regarding ecological issues (Marciniak, 2009). Those standards are the introduction of management systems that support environmental awareness and protection of the environment, compliance with environmental laws and regulations of all operations, the inclusion of every stakeholder in supporting ecological concerns and taking responsibility, developing environmentally friendly technologies, and promoting permanent improvements based on need (Star Alliance, 2016).

With sustainability coming to the agenda of airline companies, the environmental focal points of airlines have been shaped around reducing carbon emission, waste, and noise management, making water-use efficient, and protecting biodiversity (Cowper-smith & de Grosbois, D., 2011). The most obvious environmental impact of aviation is the carbon dioxide gases spread into the atmosphere. According to David Wigder (2008), airline companies are responsible for emitting between 2 – 4% of greenhouses gases in the atmosphere. And also, air transportation is the source of carbon dioxide and greenhouse gas emissions and is one of the most important causes of global climate change (Sagevik, 2009). Therefore, reducing carbon emissions is a goal adopted by all airlines. Especially, some airline companies focus on operational measures to reduce fuel consumption using electrical devices in-ground service like pushback or take-off operations for decreasing carbon emissions. Furthermore, the increase in fuel prices shows that using as little fuel as possible also benefits companies economically. Additionally, many airlines company offer a carbon offset plan to decrease carbon emission into the atmosphere, but unfortunately, participation in this plan is quite low.

In the last few years, there has been a rising interest in green marketing in the airline industry so more airline companies are adding an emissions calculator on their websites that lets passengers to calculate emissions for their booked flights and allowing funding environmental initiatives elsewhere, such as wind farms or tree planting. Secondly, noise pollution, which is another important issue besides carbon emissions, is one of the factors

affecting the growth of the aviation industry where airports are located so it is adopted by all airlines (Öztürk, 2016). Various practices are carried out where the noise level is constantly monitored to manage noise pollution at airports like Frankfurt airport and Istanbul with high air traffic. Thirdly, waste management is an important indicator of sustainability. For this reason, waste management is included in the sustainability agenda of airlines. The waste accumulated from the catering and cabin services is composed of litter generated during aircraft maintenance and services provided at the terminals. Airline companies published their corporate environmental reports or corporate social responsibility (CSR) reports on how they manage these damages to the environment in return for their air transportation services (Öztürk, 2016). Besides, many airlines such as Air France and Turkish Airlines stated in their reports that they use recyclable products for in-flight catering services to reduce waste consumption. Also, airlines started to share flight routes, tablets, to reduce paper consumption in the cockpit. Lastly, at airports, both human health and biological diversity are endangered as a result of mixing of the liquids used in applications such as de-icing applications of aircraft and washing aircraft wings with a special chemical liquid against freezing, with surface and underground water resources (Öztürk, 2016). Therefore, water consumption and protection of biodiversity are among the environmental reports and green marketing strategies of airline companies within the scope of sustainability.

Moreover, the environmental awareness of consumers is increasing day by day with the influence of social media and their consumption habits are constantly changing. This situation caused to increase demands of society for environmental sustainability and created substantial pressure on businesses. This change in the consumer profile has increased the pressure on airline companies and to bring green marketing strategies to the top of their agenda. However, companies are trying to adapt and often advertisement more than they contribute to a better environment. This can pose a good reputational risk for goals that only benefit in the short term. Another disadvantage can be said that many carriers only show one environmentally friendly product (Brunton, 2015). With green marketing, carriers aim to reduce the consumption of scarce resources, gain competitive advantage through product and service improvement, increase customer satisfaction and avoid penalties and misleading behaviors to protect brand reputation. In short, airlines aim to protect the image of the company and increase profits by implementing green marketing strategies.

### **2.1.1. Green operations and marketing in European and Turkish airways**

The environment is a very major subject not only for people but also for companies because the environment is an economic resource for companies. Therefore, reducing environmental damage is of great importance for companies (Han & Yunhi Kim, 2010). Besides, the increase in environmental problems in recent years has also caused a change in the environmental awareness of consumers. For this reason, companies have had to take sustainability into their agenda. According to Öztürk (2016), reducing carbon emission to the atmosphere, noise and waste management, reducing water consumption, and protecting biodiversity are at the center of the focal points of airlines in environmental issues.

First of all, the best way for airline companies to demonstrate that they contribute to environmentally friendly air travel is to show the environmental certificates that are indicative of the international standards they apply. There are 5 internationally recognized international standards including IATA, ISO 14001, ISO 15001, EMAS, and IENVA. IATA and ISO 14001 are the standards widely applied by airlines. Also, no airline company in Europe has all of these certificates (Kermer, 2017). For example, Lufthansa holds IATA and ISO 14001 certification, while Turkish Airlines only hold ISO 14001 certification. Also, Pegasus Airlines is another Turkish company that has ISO 14001 certification like Turkish Airlines. Pegasus Airlines has the ISO 14001 environmental management system certification (Pegasus, 2020).

The most important issue that airline companies emphasize is to reduce carbon emissions and fuel consumption. As it is known, air transport is carried out with aviation fuel obtained from petroleum and the amount of carbon gas released by this fuel to the atmosphere is quite high. According to International Energy Agency (IEA), the CO<sub>2</sub> emissions caused by civil aviation is currently 2.83%. (Lutfansa, 2019). Besides the carbon dioxide gas released into the atmosphere, conventional aviation fuel is not sustainable. Hence, airline companies have to work on the production of aircraft fuel to replace the aviation fuel that can be obtained from petroleum to continue their commercial activities, to gain profit, and to ensure customer satisfaction. Hari et al. (2015) have stated that aviation fuel can be produced using renewable biological resources. In the same study by Hari et al. (2015), it was emphasized that the alternative fuel in question should have reduced greenhouse gas emissions, be sustainable, and should be compatible with conventional aviation fuel or when used completely instead of it. However, although biological fuel is environmentally friendly, it causes trees to be cut down.

Therefore, we cannot say that it is completely environmentally friendly, but we can say that it causes less damage (Kermer, 2017).

Considering the alternative fuel report published by IATA between 2012 and 2015, Lufthansa, Air France, KLM, and Finn Air are the airlines that contributed the most to generate aircraft fuel from renewable sources in Europe (IATA). Moreover, looking at the sustainable aviation roadmap published by IATA in 2015, we observe multi-stakeholder initiatives involved in sustainable aviation fuel production. An example is the Aviation initiative for renewable energy (AIREG), of which Lufthansa airlines is a member, or the Austrian initiative for sustainable aviation fuels, of which Virgin Air is a member (IATA, 2015). Lufthansa group aims to reduce its carbon emission rate by 25% by the end of 2020 compared to 2006. Additionally, looking at the end of 2018, the group reached 67% of this target (Lufthansa, 2019). The Lufthansa group began experimenting with sugar-based bio aviation fuel to develop biosynthetic aviation fuels instead of traditional aviation fuel to reduce carbon emissions. The group is also a partner of the "blending study" and "burn fair" projects working on biosynthetic aviation fuel and One of the partners of the sustainable aviation fuel users' group (SAFUG) (Öztürk, 2016). With these activities, the Lufthansa group aims to reduce the impact of carbon emissions on the environment and society, as well as reduce operational costs and increase profits.

Similar to Lufthansa, Air France, KLM, and British Airways have decided to renew their aircraft fleets to reduce fuel consumption and carbon emissions. Also, Air France, KLM group have reduced carbon emissions per passenger-km by 30% compared to 2005, and 22 new more efficient aircraft were added to its fleet. (AirFrance, Sustainability report , 2019). Turkish Airlines has ordered Boeing 75 and Airbus 92 new-generation aircraft to reduce fuel consumption (Öztürk, 2016). Additionally, with fleet modernization, Turkish Airlines have reduced carbon dioxide emissions into the atmosphere by 20% and achieved fuel savings between 15% and 20% (THY, 2019).

Providing fuel efficiency and reducing carbon emissions; It introduced operational measures such as less use of auxiliary power sources, more efficient flight planning, and reduction of flight weight (IATA, 2009). To ensure fuel efficiency and reduce carbon emissions through operations, Lufthansa and Swiss airlines make special planning to prevent their aircraft

from staying in the air for a long time and late landing at Paris and Zürich airports. Furthermore, Lufthansa airlines use the OMEGA (Operations Monitoring and Efficiency Gap Analyzer) program to analyze flight zones and shorten the flight route (Öztürk, 2016). Another operational precaution is to reduce the flight weight. Lufthansa Group has replaced aluminum freight containers with composite, which is a lighter material, in cargo flights. Besides, it replaced the vehicles they use at the Frankfurt airport in-ground services with electric vehicles. Thus, the operational cost has been reduced and fuel efficiency has been increased.

In addition to Lufthansa, Air France and KLM airlines tried to reduce flight weight to increase fuel efficiency. For this, they started to produce food carts, carpets, and seats from lighter materials. For example; Air France began using lighter luggage containers made of composite fiber material for long-haul flights. Similar to Lufthansa, Air France and KLM are working on the airways to reduce fuel and carbon dioxide emissions used in airplanes, to ensure that aircraft fly on an optimal route and to shorten their waiting times in the air (Öztürk, 2016). Air France started to use electric vehicles in ground service. For example, in the "taxi" process, where the plane reaches the runway and the parking lot while landing, to reduce the fuel and carbon dioxide emissions used in airplanes, instead of consuming fuel, electric systems are used. According to the Air France sustainability report (2019), carbon emissions generated by ground operations have been reduced by 32% compared to 2018. British Airlines, on the other hand, focused on measures such as using a single-engine while going to the runway in their two-engine aircraft and using the auxiliary power source at a minimum level (Öztürk, 2016). Turkish Airlines focused on some operational measures to reduce greenhouse gases and increase fuel efficiency. According to Turkish Airlines (2019), reducing aircraft weight reduces fuel consumption and carbon emission. When 1 kg of fuel is saved, 3.15 Kg of CO<sub>2</sub> emission is prevented. In this context, the use of I-PAD instead of paper in the cabin of the flight crew provided a reduction in aircraft weight and greenhouse gas emissions then Skylife magazine was published using less paper. Besides, the replacement of 2,614 luggage containers with lighter composite containers and the use of 3,000 light networks and 2,000 light pallets increased fuel efficiency and reduced carbon dioxide emissions. Moreover, fuel efficiency by installing sharklets on aircraft wings there was a 2-3% increase and a decrease in greenhouse gas emissions. Also, the replacement of steel brakes with carbon brakes in 30 aircraft reduced carbon emissions. Single engine taxi, low flap takeoff, and landing, low installment engine braking (idle reverse), low altitude flap collection (NADP2) is among the leading pilotage



applications in Turkish Airlines. Turkish Airlines increase fuel efficiency and reduce carbon emissions through effective flight planning (THY, 2019).

Besides, some airlines allow passengers to calculate the carbon emissions of their travels and voluntarily participate in climate protection projects through carbon reduction. For example, Air France, and KLM airlines allow their passengers to view the carbon emissions of their travels with a carbon-calculating tool they post on their website (AirFrance, 2020). Also, British Airways is the first airline in the world to offer its passengers a voluntary carbon footprint reduction project. Although the project started in 2010, the participation rate of the passengers was only 0.3% (Kim, 2016). Not only British airwayslines, but also Lufthansa, Swiss, Austrian Airlines, Lufthansa subsidiary AirPlus' passengers have the opportunity to support airlines to combat climate change with voluntary CO2 compensation. (Bartels, 2016). Turkish Airlines, on the other hand, provide their passengers with the opportunity to calculate their individual CO2 emission after booking with their miles & more loyalty card programs (Kermer, 2017).

Waste management is another important issue for sustainability in the aviation industry. Because they aim to decrease waste cost and prevent environmental pollution with waste management. Lufthansa Group airlines are working to reduce waste with "fly greener" implementation by collecting and sorting waste during flight and disposing of them after the flight (Lutfansa, 2019). According to öztürk (2016), Lufthansa cargo has zeroed the costs caused by the waste with the practice of recycling waste. Also, LSG Sky Chefs, one of its partners, is working on recycling all waste to the highest possible level. Besides, LSG Sky Chefs, a Lufthansa group partnership, works to recycle all waste to the highest possible level. For instance; Lufthansa flight attendants and Sky Chefs employees separated and recycled a total of 1,078 kilograms of garbage from 105 returned trolleys (skychefs, 2015). Air France recycles 80% of the materials used in aircraft, while KLM airlines recycle 40%. for example, Plastic materials such as forks and spoons used in flights are recycled into serving trays through recycling (Öztürk, 2016). Furthermore, Air France converted 31 percent of its waste compared to 2011 and aims to reach 50 percent by the end of 2030 (AirFrance, 2019). British Airways ended the use of more than 700 tons of single-use plastic. for example, bamboo mixers started to use instead of plastic mixers in flights and Removed inflight retail plastic bags. Also, water bottles were manufactured at 50% of the recycled plastic. British airways reduced waste per

customer 50% on short distances and 5% on long distances compared to 2015. In addition to the company recycled 55% of its waste, excluding food waste. (British Airways, 2020). Turkish Airlines attaches importance to using recyclable materials for waste management. Also, it works on the collection, sorting, and recycling of wastes. Some of the efforts of Turkish Airlines to reduce hazardous wastes harmful to nature; Turkish Airlines started in-cabin unbundling on 22 domestic and 46 international flights in 2017. Besides, bioplastic bags in accordance with TS EN 1342 (Packaging-biodegradation and composting and recyclable packaging features) standards started to be used instead of the plastic bags used in the headphones and blanket packages given to the passengers in the cabin. Besides, plastic toys given to child passengers were replaced with wooden toys made of (FSC) approved forest products. Turkish Airlines recycled 258 thousand tons of packaging waste, 124 thousand tons of non-hazardous waste (glass, plastic, and paper, etc.), and 115 thousand tons of hazardous waste (electronic waste, toner, and waste oil, etc.) in 2018. also, 69 tons of glass packaging, 28 tons of plastic packaging, and 1,225 tons of paper packaging were recycled as a result of separation in the cabin (THY, 2019).

Another issue central to the green operations of airlines is noise management. Lufthansa airlines use noise reduction technologies in group flights. Lufthansa Group airways participated in the MODAL (Models and Data for the Development of Active Noise Protection Measures in Aviation) project to identify the factors that cause noise in different aircraft, and by participating in the NORAH (Noise-Related Annoyance, Cognition, and Health) project, it has worked on how the population in the settlements on the route of the aircraft is affected (Öztürk, 2016). Air France is trying to renovate its aircraft first to reduce noise pollution. Also, Air France has participated in a working group called "IROQUA", contributing to aircraft noise reduction efforts (Öztürk, 2016). According to the Air France group sustainable report (2019), Air France has reduced noise in its operations by 43% compared to 2000. British Airways is replacing its noisy aircraft with newer, quieter aircraft. Furthermore, twin-engine aircraft run only one engine when going to the runway to decrease noise. The company is also in contact with other stakeholders such as airline companies, airport managers, aircraft manufacturers, which are parties to noise management by participating in Sustainable Aviation (SA) in the UK (Öztürk, 2016). Turkish Airlines has established one of the youngest aircraft fleets in the world with an average age of 8.2 to reduce noise emissions. Noise emission will be further reduced by the

taking of the new generation aircraft ordered from Turkish airlines' Boeing and Airbus companies in 2023 (THY, 2019).

Comparing the sustainability efforts of some of Europe's leading airline companies and airlines operating in our country. Although the efforts of airlines to reduce the number of carbon emissions in the atmosphere differ, we have seen that their work for waste and noise management is largely similar. Europe and Turkey big airline companies have more attention to environmental issues than small airline companies.

## **2.2. Green consumer profile**

Since the industrial revolution, in parallel with industrialization and population growth, the resources required for life are rapidly being depleted. This situation causes water and food shortages in the world and also it brings about a series of disasters such as melting of glaciers, global warming, piercing of the ozone layer, earthquakes, and global epidemics. Therefore, in today's world, consumers are more environmentally conscious and their interest in green products has been increasing rapidly for a sustainable world. According to Jacob & Joll (2012), with the increased awareness of environmental problems, the lifestyle of some consumers has changed. There has been an increase in positive attitudes towards a green lifestyle, green products, and services. As a result of this increase, the green consumer profile has emerged with the increased awareness of consumers on environmental issues.

Green marketing depends on the consumer's attitude against environmental issues. Therefore, if there is no strong desire for such a change in consumer attitude, businesses will not make the extra effort to promote green products and services. (Jacob & Joll, 2012). Current consumption in the world environment consists of very high includes many and unsustainable products and services. Therefore, there is a need for a change in consumers' attitudes towards green products. Research in recent years shows that there is a positive development in consumers' attitudes and behaviors regarding green issues. There is an increment in expressed concerns for environmental protection leading to "green consumerism" (Eriksson, 2004). The green consumer can be defined as the consumer who refrains from purchasing a product that may harm any living organism, cause deterioration of the environment during the production or use process, and takes care to consume products that have minimal or no environmental

damage. According to Akehurst et al. (2012), The green consumer is the person who prefers to buy products that have the least or no harm to the environment, disposes of products that they consider to be environmentally and health-risky, consume less energy, and avoid purchasing packaged products. Besides, Green consumers are aware of the environmental impact of misuse of limited environmental resources and are making efforts to remedy this situation.

According to Han et al. (2010), attitude is a major indicator of environmental awareness. In their previous research, they found that environmentally conscious consumers have a more positive attitude towards environmentally friendly businesses and generally have a higher intention to purchase products and services from these businesses. In other words, especially in recent years, the major depletion of non-renewable energy resources and global disasters like the Covid-19 pandemic experienced has led to an increase in people's awareness of green marketing issues. Because most individuals feel the need to do something for the environment when they become aware of the dangerous consequences of global warming and feel truly responsible. On the other hand, the high environmental concerns of consumers caused them to purchase environmentally friendly products and services. According to Chen and Chang (2012), If consumers are environmentally conscious, they are more likely to buy green products. This situation positively affects the purchasing decision of consumers and the green activities of businesses.

Environmentally conscious consumers buy higher levels of green products and services (Çabuk & Nakıboğlu, 2003). According to a study by Han et al. (2011), 90% of consumers have a positive attitude towards businesses that are sensitive to environmental problems. Thus, Organizations and businesses have seen the change in consumers' attitudes as environmental awareness increases. and also, they have been trying to gain a competitive advantage over their competitors using green marketing. However, although consumers are concerned about environmental issues and express that they are environmentally friendly, only a minority group is willing to take measures to protect the environment (Olson, 2013). Besides, Marciniak shows a ratio of 30: 3 in a study conducted in 2009. So only 3 out of 30 people who claim to be concerned about the environment turn it into action (Marciniak, 2009).

Consumers' demographic profiles are as important as their environmental awareness in their decision to purchase a green product. There is a direct relationship between environmental

attitudes and behaviors and demographic (social, economic, cultural, and personal) factors, so it should be evaluated together. A series of studies have been conducted to understand the attitudes and behaviors of consumers. Kotler and Armstrong (2010) define buyer characteristics as factors affecting consumer behavior. hence, they describe cultural, social, personal, and psychological factors that strongly affect consumer characteristics; therefore, the consumers' characteristics are defined as a combination of psychological, social, and personal factors. Also, Kotler stated that the characteristics of a buyer are a very important element for sellers and since each buyer has different characteristics, it should be understood before developing a marketing strategy (Kotler, 2010).

In addition to environmental awareness, personal, social, and cultural factors affect consumers' purchasing decisions positively. According to Onurlubaş et al (2017), 80% of consumers choose eco-friendly products in shopping and there is a strong relationship between their behavior in purchasing eco-friendly products and demographic elements like gender, income, age, and marital status. Hence, we can easily say that the demographic character of green consumers is very important for companies to develop marketing mix strategies. First of all, there is a difference in attitudes and behaviors on environmental issues between men and women. Women tend to be more capable of taking charge and control of alleviating the problems in the world, and they also have a stronger understanding of ethics (Jacob & Joll, 2012). Therefore, compared to men, women take a higher level of personal responsibility to protect the environment. A study by (Bord & O'Connor, 1997) on the perception of environmental risks concluded that women are more sensitive than men to the risks of global warming and other related waste.

Secondly, the environmental awareness of consumers varies according to age. Because people of different age groups have different approaches to environmental problems. In other words, the social and cultural events of the period they lived in affected the attitudes of consumers towards the environment so every generation has a different environmental approach. For example, Baby boomers were born between 1946 and 1964. came to the world after the Second World War and witnessed the Vietnam War in 1960. This generation is made up of the great anti-business environmental activists. Generation X, they were born between 1964 – 1979. They witnessed a fire in India, in which 3000 people lost their lives. And also, they saw the live aid concert organized due to the scarcity in Ethiopia, attended by world-

famous artists such as Queen, Bob Dylan, Madonna, and Neil Young, watched by 400 million people worldwide. Generation Y, they were born between 1980 and 1990. They are the first generation to grow with computers and the internet. They can easily express their opinions through social networks and do not recognize authority. they are aware of global climate change and think it is caused by human activities. Also, they are twice as likely to buy green products compared to previous generations. Generation Z, they are the first generation to grow up in an environmentally friendly world. Being sensitive to the environment is a part of their daily life and education (Ottman, 2011). As you can see above, every age group or generation has been affected by the social, cultural, and economic events of the period in which they live. Besides, according to studies conducted by different authors in different periods, young consumers are more environmentally friendly than middle and elderly consumers (Çabuk S. , 2008).

Another important variable is the education level of the consumers. The education level of consumers has a positive effect on their environmental attitudes. On the other hand, As the education level of the consumers' increases, their awareness about the environment increases (Çabuk, Güreş, Inan, & Arslan , 2019). According to a survey conducted by Arslan and Çınar (2015) to understand university students' attitudes towards the environment, university students are not aware of green marketing activities and are hesitant about purchasing green products. The last important indicator is the economic level of the consumers. Green products and services are sold at higher prices than traditional products and services so consumers think they are more expensive. For this reason, it can be said that people with high environmental awareness have high-income levels (Awad, 2011).

As we have seen above, there is a direct relationship between the companies' green marketing activities, consumers' environmental awareness, and demographic characteristics of consumers in the decision to purchase a green product or service.

## **3. METHOD**

### **3.1. The purpose of research**

There has been an incredible increase in environmental awareness since global climate change. For this reason, airline companies are doing a series of studies to look green such as voluntary carbon footprint reduction projects or the use of recyclable materials in products and services. The purpose of this study is to analyze whether the green marketing activities of European and Turkish airlines affect consumers' purchasing decisions and to understand how they affect consumers' attitudes towards these airlines. Also, we aim to understand the difference in the environmental attitudes and behaviors between European and Turkish passengers.

### **3.2. Data Collection**

This study, it is aimed to analyze the attitudes of European and Turkish passengers towards green marketing activities of airline companies operating in Europe. Therefore, the target population of our study is Turkish and European passengers of airline companies operating in Europe. The questionnaire, one of the quantitative methods, was used in the study. And also, two different questionnaires were conducted in Turkish for Turkish passengers and in English for European passengers to enable participants to better understand and respond to what they read. The questionnaire consists of three parts. The first part aims to understand the environmental awareness of the participants. The second part comprises the attitudes of passengers toward green airlines operating in Europe and Turkey. The last part is aimed at understanding the demographic characteristics of the participants such as gender, age, economic and cultural level.

The questionnaires were prepared with google form and filled out by the participants via the internet. There are 6 different European countries' citizens who participated in the survey except for Turkey. These are France, Germany, Spain, Italy, England, and the Netherlands. And also, two different questionnaires were conducted in Turkish for Turkish passengers and in English for European passengers to enable participants to better understand and respond to what they read. Besides, only people who can speak English have participated in the survey in Europe. The survey was composed of the participation of 117 Turkish participants and 67

European participants. European passengers from Germany, France, Britain, Netherlands, Italy, and Spain participated in the survey.

### **3.3.Data analysis**

In this study, we will examine whether European and Turkish passengers' environmental awareness and attitudes towards green airlines differ according to demographic variables. We will also try to understand the relationship between environmental awareness and attitudes towards green airlines. Furthermore, in this study, it was wanted to compare the environmental awareness and attitudes of European and Turkish passengers towards green airlines with the help of demographic variables.



## 4. RESULTS

### 4.1. Assessment of passengers' demographic characteristics

We conducted our questionnaire in two different languages to prevent errors stemming from the language in the research and to make the flow of information better. The demographic characteristics of the passengers who participated in the survey were as follows for Turkish passengers (Table 1) and European passengers (Table 2). There are 53% of respondents were males, 46.2% were females and 0,8% were others from Turkey. On the other hand, 50.7% of the respondents from Europe were men and 49.3% were women. A majority of respondents to the survey 45 percent of turkey with age is that z generation aged 20-30. Besides, Generation Z is the age group with the highest rate in Europe with 78 percent. In both surveys, the lowest participation was baby boomers over 55 years old. Furthermore, 64% of Turkish participants have a university or higher education degree, while 88% of European participants have a university or higher education degree. Also, 9% of the Turkish passengers who participated in the survey stated that they have primary education or below but this ratio is 0 for the European passengers who participated in the survey. in turkey, 30 respondents have income between 3501 TL- 5000 TL with %26. Lower-income categories below 2324 TL and higher-income categories above 7000 TL were 25% and 16% of total respondents respectively.

**Table 1. Demographic Characteristics for Turkish passengers**

Turkey		Number	%
Gender	Female	54	46,20
	Male	62	53,00
	Other	1	0,80
Age	19 and below	3	2,00
	20 - 30	53	45,00
	31 - 40	36	31,00
	41 - 55	23	20,00
	56 and above	2	2,00
Education level	Primary education and below	10	9,00
	High school	32	27,00
	University degree	61	52,00
	Master's degree and above	14	12,00
Average monthly income	2324 TL and below	29	25,00
	2325 TL - 3500 TL	27	23,00
	3501 TL - 5000 TL	30	26,00
	5001 TL - 7000 TL	12	10,00
	7000 TL and Above	19	16,00
Flight purpose	Visiting family members	17	14,00
	Education	4	3,00
	Busines	9	8,00
	vacation	77	66,00
	Other	10	9,00
Domestic flight frequency	A few times a month	3	3,00
	Once a month	3	3,00
	Once a quarter	25	20,00
	Once every six months	16	14,00
	Once a year	57	49,00
	Never	13	11,00
International flight frequency	A few times a month	2	2,00
	Once a month	0	-
	Once a quarter	6	5,00
	Once every six months	4	3,00
	Once a year	34	29,00
	Never	71	61,00
The Reason for Selecting Airlines	Price	54	22,00
	Environmental activities	15	6,00
	Recommendation	33	13,00
	Destination	41	16,00
	Promotion	21	8,00
	Flight safety	81	32,00
	Advertisements	7	3,00

On the other hand, In Europe, 52% of the respondents had the lowest income with an average monthly income of 1200 € or less. Besides, the average monthly income of 3% of the respondents is 4001 € or more, which is the highest income. In both surveys, the majority of the participants stated that they were traveling for holiday purposes. Moreover, 14 percent of Turkish respondents and 21 percent of European respondents stated that they flew to visit their family members. Turkish participants flew for the least educational purpose with 4% but European participants flew for the least business purpose with 6%. Also, 32% of Turkish participants stated that the most important factor in airline selection is flight safety. flight safety was followed by price (22%) and direction (16%). However, Passengers of European origin who participated in the survey stated that the most important reason for choosing an airline is the price (25%). Price was followed by flight safety (21%) and destination (17%). The top three choices of participants are the same in both surveys. Also, in both surveys, consumers stated that ads were not sufficient reason to choose an airline.

**Table 2. Demographic Characteristics for European passengers**

Europe		Number	%
Gender	Female	33	49,00
	Male	34	51,00
	Other	0	-
Age	19 and below	2	3,00
	20 - 30	52	78,00
	31 - 40	11	16,00
	41 - 55	2	3,00
	56 and above	0	-
Education level	Primary education and below	0	-
	High school	8	12,00
	University degree	30	45,00
	Master degree and above	29	43,00
Average monthly income	1200 EURO and below	35	52,00
	1201 - 2000 EURO	14	21,00
	2001 - 2700 Euro	6	9,00
	2701 - 3500 Euro	7	10,00
	3501 - 4000 Euro	3	5,00
	4001 Euro and above	2	3,00
Flight purpose	Visiting family members	14	21,00
	Education	6	9,00
	Busines	4	6,00
	Vacation	42	63,00
	Other	1	1,00
Domestic flight frequency	A few times a month	1	2,00
	Once a month	7	11,00
	Once a quarter	14	21,00
	Once every six months	11	16,00
	Once a year	19	28,00
	Never	15	22,00
International flight frequency	A few times a month	3	4,00
	Once a month	6	9,00
	Once a quarter	9	13,00
	Once every six months	16	24,00
	Once a year	30	45,00
	Never	3	4,00
The Reason for Selecting Airlines	Price	39	25,00
	Environmental activities	12	8,00
	Recommendation	16	10,00
	Destination	27	17,00
	Promotion	24	15,00
	Flight safety	34	21,00
	Advertisements	6	4,00

When Table 3 is examined, 36% of Turkish passengers in the Survey stated that they purchased an environmentally friendly product to protect the environment. Also, health (30%) is the second, and quality (19%) is the third reason to buy an eco-friendly product. Unlike Turkish exhibitors, health (29%) is the most important reason for European participation to buy an environmentally friendly product. And also, protect the environment is the second (27%) and quality is the third (24%) reason to buy an eco-friendly product. In both surveys, participants stated that design and color are not important to them. Besides, 3% of Turkish passengers and 2% of European passengers stated that they do not purchase an environmentally friendly product or service. Besides, 28% of Turkish passengers and 32% of European passengers expressed that they find eco-friendly products and services expensive. Also, 26% of Turkish passengers and 16% of European passengers stated that they cannot find any environmentally friendly products or services in the market.

**Table 3. Attitudes of Passengers towards Eco-Friendly Products**

		Turkey		European	
		N	%	N	%
Why did you buy any eco-friendly product?	Quality	55	19,00	42	24,00
	Design and color	7	2,00	7	4,00
	Protect the environment	101	36,00	48	27,00
	Health	85	30,00	51	29,00
	Brand	10	3,50	15	9,00
	Other reasons	16	6,00	9	5,00
	Not use	10	3,50	4	2,00
Why did not you buy any eco-friendly product?	Expensive	52	28,00	49	32,00
	Poor quality	19	10,00	17	11,00
	No different than other products or services	19	10,00	16	11,00
	No eco-friendly products or services	48	26,00	26	17,00
	Other reasons	48	26,00	45	29,00

#### 4.2.Passengers' attitudes towards the environmental products or services

To measure passenger attitudes towards environmental issues, some question was asked to participants in the survey. You can see those questions in Table 4. The linear method was used in these questions. And also, the questions were scored from 1(I strongly disagree) to 5 (I strongly agree) by the passengers. In both surveys, the environmental awareness of female passengers was higher than that of male passengers. In the survey in which Turkish passengers participated, the average of the answers given by women for environmental awareness was 4.67, while the average of men was 4.63. European passengers' survey was not very different from Turkish passengers because in this survey, while the environmental awareness of women is 4.33, the average of men is 4.29.

**Table 4. Environmental awareness questions**

Q1	I want the airline I choose to be environmentally friendly.
Q2	I want the airline company I chose to protect the environment.
Q3	The balance of nature is very delicate and can be easily disturbed.
Q4	When humans interfere with nature, often devastating consequences occur.
Q5	People must live in harmony with nature to survive.
Q6	People abuse the environment.

When the answers given to the questions in Table 4 are examined by age group, the generation Z, whose ages are between 30-40, is the generation with the highest environmental awareness. While the average of the answers given by Turkish passengers in this age group is 4.78, it is 4.59 for European passengers. Besides, the age group with the lowest environmental awareness in both studies is the x generation and baby boomers who are 40 years and over. However, there is a serious difference between Turkish passengers in this age group and European passengers because when the average of environmental awareness by Turkish passengers 4.48, European passengers average is only 2,58.

When Table 4 is analyzed according to income level, as the income level increased in both groups, environmental awareness increased. In both surveys, the Income level was examined in 3 groups. For Turkish passengers, those with an income level of 2324 TL and below are considered low-income passengers. Also, this group has the lowest environmental awareness (4,45), average income between 2325 TL and 5000 TL are medium level (4.71),

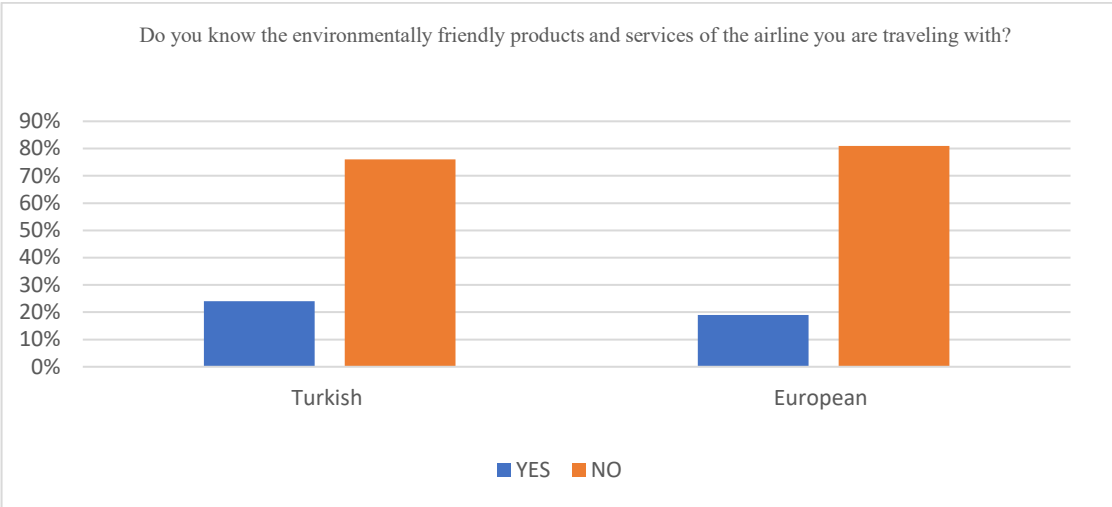
5000 TL and above are high-income level and also highest environmental awareness (4.78). For European passenger earned an average monthly income of 2000 € and below are low, the average monthly income between 2001 € and 3500 € are medium level and 3501 € and above high-income level.

When the environmental awareness of the passengers is examined according to their education levels, based on the answers given to the questions in Table 4, as the education levels of Turkish passengers increased, their environmental awareness increased. According to the answers given to the questions in Table 4, primary school graduates are the ones with the lowest environmental awareness (4,33) and master degree graduates are the ones with the highest environmental awareness (4.82). But, when the answer given by European passengers are examined, there is no primary school graduate participant. And also, passengers who graduated from university are the lowest environmental awareness (3.77).

**4.3.Passengers' attitude towards green airlines**

To understand passengers' attitudes towards green airlines, some questions were asked to passengers. First of all, passengers were asked if they were aware of the green activities of the airline companies they travel with. In both surveys, both Turkish and European passengers were not aware of the green activities of the airlines. The answers are demonstrated in Figure 1.

**Figure 1. Do passengers know about the airlines' green products and services?**



Again, using the linear method, the attitudes of the passengers towards green airlines were tried to be understood. Would you like to buy an environmentally friendly product or service that airlines will offer you? Passengers answered the question from 1 (I strongly do not want) to 5 (I strongly do). Contrary to environmental awareness questions, looking at table 5, European passengers are more willing to buy green products and services than Turkish passengers. While the average score given by European passengers from 1 to 5 is 3.5, Turkish passengers are only 3.1. Again, looking at table 5, European passengers are willing to pay extra money than Turkish passengers while purchasing environmentally friendly products and services to protect our world. While the average score given by European passengers are 3.53, Turkish passengers are only 3.03. However, this result contradicts the answer to the next question. Because, in the next question, 9 percent of Turkish passengers stated that they would not pay extra money, while 22 percent of European passengers stated that they would not pay extra money.

**Table 5. Passenger attitudes towards green airlines**

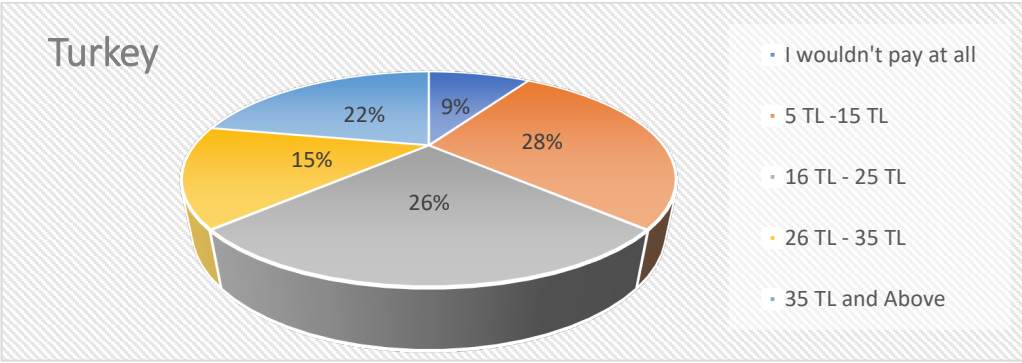
	Turkey	Europe
Would you like to buy an environmentally friendly product or service that airlines will offer you?	3,085	3,5
Would you pay some extra money to buy these eco-friendly products and services to protect our world?	3,025	3,53

When the graphs in Figure 2 and 3 are examined, 9% of Turkish passengers and 22% of European passengers stated that they would not pay extra to purchase a green product or service. Looking at Table 5, European participants would have been expected to be more sensitive than Turkish respondents. However, this can be explained by the younger average age of the European participants because young people have less income levels than other age groups. Considering that the average ticket price to travel from one point to another in Europe is 150 Euros, the difference between the amounts Turkish and European participants want to pay can be better understood. While 28 percent of Turkish passengers accept to pay between 5 TL and 15 TL, 43 percent of European passengers stated that they can pay between 0 Euros and 4 Euros.

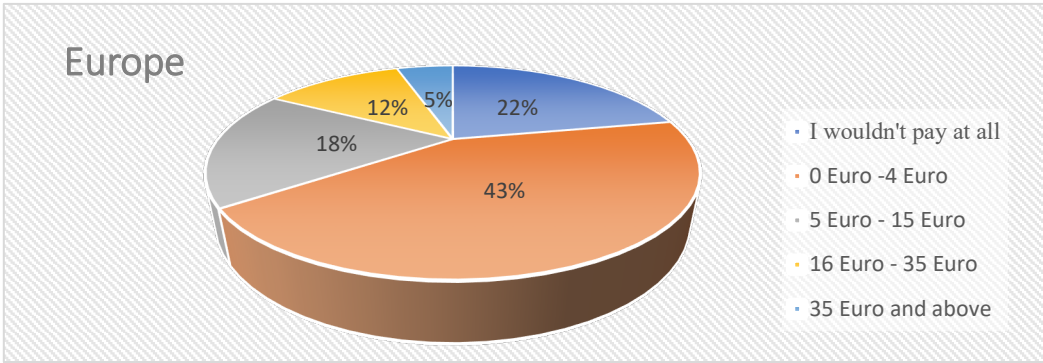


Besides, as the income level of the passengers' increases, it has been examined whether there is an increase in the price that they will be willing to pay, but no connection has been established. However, it has been observed that all high-income passengers are willing to pay

**Figure 2. How much extra money are passengers willing to pay to buy green products and services?**



**Figure 3. How much extra money are passengers willing to pay to buy green products and services?**



## CONCLUSION

Although consumers seem to appreciate the importance of living in a healthy and clean environment and they change their attitudes towards the environment positively, it is not enough yet. Because it is not easy to change their habits. in other words, even though the intention of consumers to buy green products emerges as a result of habits, they have some problems in converting them into behavior. (Jansson et al., 2010, 358). This situation is much more complicated, especially in the aviation industry because, in the aviation industry, consumers do not yet fully have green awareness. Therefore, the purpose of this study is to analyze the attitudes of airline passengers towards green activities of airlines in Europe and Turkey. Also, again in this study, the differences in environmental awareness of European and Turkish passengers were examined.

The majority of the respondents stated that they have purchased environmentally friendly products and services before. Participants preferred green products and services for reasons such as environmental protection, health, and quality. Most of the respondents in both surveys stated that they did not buy a green product or service because of their high price. Therefore, if the price of environmentally friendly products and services drops, more people will buy them. 26 percent of Turkish respondents and 17 percent of European respondents stated that they do not find green products and services in the market. This situation shows the inability of airline companies in promoting their green products and services. Also, 76% of Turkish and 81% of European passengers stated that were not aware of the green activities of the airlines. Thus, Airlines should make more effort to promote green products and inform their passengers that their services are less harmful to the environment.

According to research on the environment, women are more eager than men to protect the environment. Zelensky et al (2000) have proved in their research that women's perceptions of personal responsibility to protect the environment are higher than men. This result is consistent with literature Jacob & Joll (2012), Bord & O'Connor (1997), Çabuk et al (2008), and Onurlubaş et al (2017). In both surveys, although environmental awareness was higher among female passengers than male passengers, no significant difference was observed. If airlines want to increase men's interest in green products and services, they can

use some role models like a football player, or film star in their commercials. but these advertisements should be deployed in areas frequently followed by men such as men's magazines and sports channels.

When the studies in the literature were examined, it was observed that environmental awareness decreased as the age increased. According to studies conducted by different authors in different periods, young consumers are more environmentally friendly than middle and elderly consumers (Çabuk S., 2008). However, the participants in Generation Y, aged between 30 and 40, stand out as those with the highest environmental awareness. Both European and Turkish participants over the age of 40 are the passengers with the lowest environmental awareness. According to Ottman (2011), generation Z, born after 2000, is the first generation to grow up in an environmentally friendly world. Being sensitive to the environment is part of their daily life and education. However, generation Z has lower environmental awareness compared to generation Y. This situation can be explained by the fact that the purchasing power of the Y generation between the ages of 30 and 40 is higher than the z generation. To increase environmental awareness for airline companies, they can organize some consumer activities, education programs, and promotional campaigns through their websites and social media channels.

The price is an important indicator for passengers to book flights on green airlines. Therefore, it has been observed that passengers with high-income levels have higher environmental awareness. This result is consistent with previous studies in the literature. (Cabuk et all (2008), Onurbaş et all (2017)). In short, although the attitude of environmentally conscious passengers towards green airlines is more positive, passengers have a low interest to buy the services offered by Green airlines because of price. but if green airlines offer green products ads services for all income levels, more people can travel on green airways in Turkey and Europe.

Although large capital airlines operating in Europe carry out sustainable activities, the majority of both Turkish and European participants are unaware of the sustainable activities of the airline they are traveling to. Airline companies carry out a range of environmental activities such as reducing the amount of carbon emissions released into the atmosphere, increasing fuel productivity, reducing water consumption, and recycling waste.

However, they only broadcast these activities in their sustainability reports. Hence, most of the passengers don't have any idea about airlines' sustainable activities. Airlines need a stronger marketing strategy. They have to announce to consumers more effective ways that they do their sustainable activities not only because of legal responsibility, but also to contribute to the sustainability of our world. This way, if they can achieve this, airlines can create an environmental image and positively affect passengers' intention to buy green airline services.

In this study, sustainable marketing activities of airline companies operating in Europe are examined. And also, clues were given about the profile of Turkish and European passengers and their attitudes towards green airlines. Because, according to Han et al. (2011), airlines need to know green passenger profiles and attitudes to define the target market and develop market strategies within the scope of green marketing activities. According to this study, it has been observed that the environmental awareness of consumers has increased as a result of the global disasters. Most of the respondents have purchased a green product or service at least once before, for reasons such as environmental protection, health and quality. Also, price is the most important reason why passengers do not prefer to buy green airlines' products and services. In this context, airlines should make more accessible pricing for green products and services. On the other hand, it was observed that the demographic characteristics of the participants were effective in making purchasing decisions. Environmental awareness of the participants has varied according to their age. Participants between the ages of 30 and 40 are the ones with the highest environmental awareness. Besides, it has been watched that the higher the education level, the higher the environmental awareness. In addition, it was observed that as the income level of the participants increased, the money they spent to protect the environment increased.

Finally, a comparison was made between the Turkish and European passengers' environmental attitudes and found that they were similar. Passengers' environmental concerns are also similar in their attitudes towards green airlines' products, and services. Although airlines carry out many sustainable activities such as reducing carbon consumption, increasing fuel efficiency and recycling of waste, the majority of the participants in the study stated that they were unaware of the sustainable activities of the airlines. Therefore, it can be said that the efforts of airlines to announce their sustainable

activities are insufficient. And if airlines manage to announce these activities more effectively, they may experience a significant increase in the number of customers who prefer them. This study was carried out for airlines operating in Europe to better understand the green consumer profile and to make innovations in this direction.

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