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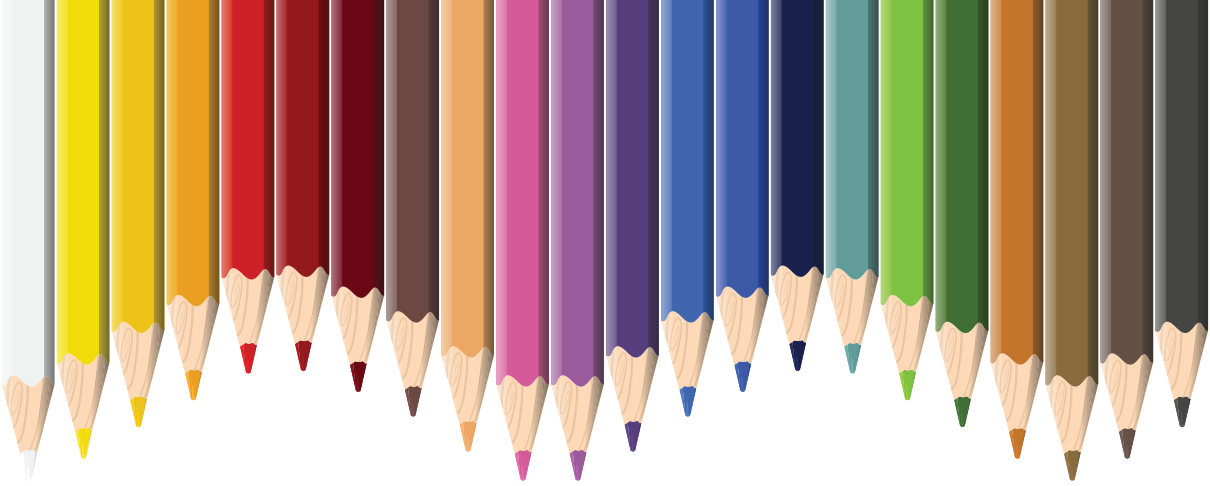

Chapter 1

NEW TECHNOLOGIES IN EVENTS

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1. Introduction

While the components of Industry 4.0 further popularize in the event industry, it is possible to obtain much more value than understanding how the enterprises adopt the new digital participation levels in order to interact with the audience (Heinze, 2016). The data sets in 4.0 network era could be used for both monitoring and assessing the events. Our smart telephones (when used together with the event applications) and wearable devices (such as smart badges and smart buttons) can collect live data by means of the internet of things, analyze the same and even make decisions on the basis of the same. The artificial intelligence decreases the processing errors and provides easier access (Sirius, 2013). Event administrators can combine the data of the internet of things and big data (particularly the extremely big data sets that could digitally analyze the patterns related to human behaviors and interactions, tendencies and relations in order to reveal them) and create competitive advantage (Ryan, 2020:7). Furthermore, digital technology transforms the focus of business processes from physical products into services based on data (Pflaum & Golzer, 2018). This is evident even in the presentation of the events as a mixture of virtual and live action by means of computer graphics and virtual reality in order to have a more fascinating experience and create a better brand connection (Colston, 2017).

In short, the event organizers could probably add value to their events or increase their events thanks to the technologies developed. The other things brought about by the technologies developed are completely new events, fairs and meetings based only on the new technology. For example, Silicon Valley VR fair attracts the experts and developers in this area in addition to hundreds of VR fans.

2.The Concept and Scope of Event

The history of events dates back to very ancient periods. The religious events were frequently observed in the era of Hittites who are one of the major civilizations of Anatolia and who lived from 2000 to 1500 B.C. (Yüksel, 1993). Event tourism is the intersection point of the concepts of tourism and event (Quinn, 2009). Those events may cover many activities from mega events including Olympiads, social festivals, fairs to small size events including small meetings, parties, various competitions (Saayman, 2012; Kömürcü & Günlü Küçükaltan, 2020:2723). Getz (1997:16) defines event tourism as; "*Planning, development and marketing of events as primary or secondary tourist attractions for the purpose of maximizing the number of tourists who participate in the events*". Goldblatt (2005:20) states that event organization depends on four fundamental factors which are time, finance, technology and human resources. According to Allen, O'toole, Harris and McDonnell (2011:12-16), events are classified on size and content basis. They are classified on size basis

as mega events, hallmark events, major events and local events (Timur et al., 2014:59; Atay & Altınışık, 2017:111) and on content basis as festivals, sport events and business events.

Table 1. Potential Benefits of the Events

Economic	-Small size festivals being able to produce profit -Expenses of the visitors and the relevant multiplier effects being able to increase the demand -Creating employment directly or indirectly
Tourism/Commercial	-Growth of the profile of the region as a consequence of increasing tourism and other operation activities -Extension of tourism season
Physical	-Construction of new facilities and infrastructure -Renewal and embellishment of old areas
Sociocultural	-Means of entertainment and social opportunities for the local people -Increase of the local interest level with respect to the activities related to the event -Opportunities for intercultural communication -Voluntariness
Psychological	-Development of the belonging and sharing sense of the society -Excitement, self-realization, pride and self-esteem
Political	-Development of certain opinions and ideologies -Opportunities of career development for certain political persons

Source: Yıldırım Saçılık & Çevik, 2017

Individuals want to participate in events for various reasons. Three groups of events are mentioned in the study conducted by Getz (2008:406). Getz (1997) divides the motivations of participating in events into three. The first group covers physical motivations including eating and drinking, exercise, relaxing, comfort. The second group consists of social and interpersonal motivations including socialization with the family and friends, being included in groups, connections with cultural and ethnical origins, manifestation of the feelings of collectivism and nationalism, the desire to gain status and being recognized. And the third group covers the personal motivations including searching new experiences, search for information, the desire to be understood, and realization of one's passions. For the local people, hosting the events may provide social benefits. These events contribute to creation of the sense of collectivity in the host community. The events create an environment of cultural exchange between the visitors and the local people and offers entertainment and leisure time means for the local people (Arcodia & Whitford, 2006). The events are organized by the local people for the purposes of exhibiting cultural diversities, popularizing the settlement, increasing the means of entertainment for the local people, attracting visitors to the region and thus improving the life quality in the living place and creating revenue (Yolal, 2017:36).

3.Events and Technology

The technology affects all domains of human life from communication to entertainment and continues to develop and change day by day depending on innovations and developments (Strom, 2012). The event industry is affected by these factors. While the new technologies are offered for use, the competitors in the sector have to adapt the changes or fall behind (Waring, 2014). Events are in the midst of the social and technological change. The sector progresses quickly through the various increasing technological tools and finds the ways of connecting with the consumers by means of technology, it is gradually offered to a more selective consumer market (Mitchell et al., 2016). Despite certain resistances, the digital technology continues to penetrate into the festivals and events in all over the world (Van Winkle et al., 2016).

The technology helps the meeting and event professionals in many places throughout the event planning life cycle. Research could be performed in the preliminary planning stage using the professional Information portals, perform the site audits virtually, send online proposal requests and maximize the efficiency through an integrated event management software (Causin & Scamacca, 2021). Its use is not limited merely to providing facility for the meeting professionals and participants. A research conducted by corporate event marketing found a 30% decrease in the costs attributed to event technology use and a 20% increase in the event participation (Eugenio, 2017). The technology further helps the process of strategic marketing and communication as well. A successful meeting and event marketing communicates by means of social media channels and determines the target markets through artificial intelligence and machine learning and through analyzing big data. When the meeting professional is in the field, he/she may decrease the cost, maximize efficiency and increase security using face recognition and badging. Furthermore, the professional may improve the audience response and participation by means of mass response systems, mobile applications and social media (Causin & Scamacca, 2021).

3.1.Virtual Reality

Virtual reality (VR) is an artificial medium created with software and it is shown to the users to allow them regarding it as a real medium and accepting the same . In the last decade, it was observed that virtual reality (VR) frequently defined as the method of transferring cognitively a user to a virtual medium through interactions and fascinating content had been offered for reuse (Wreford et al., 2019).

Individuals begin to understand that the virtual reality addresses a new medium, a new entertainment and a new and very strong art type (Bates, 1991:1). Virtual reality has four properties. These are (1) Going in, being inside namely leaving the real world mentally and going in the virtual world, (2)

Interaction; creating perceptional reactions in the user through reflection of the movements performed in the real medium to the virtual medium, (3) Three dimensional graphic world; an imaginary or real medium that the individual creates and shares with others and (4) Emotional feedback; the user being affected by the actions that the user realizes sensually in the medium (Piemental & Teixeira, 1995; Sherman & Craig, 2003). The virtual reality is a technology which allows being in the events experienced in a three dimensional medium as if they are real using devices such as headsets, screens, smart glasses, computer, smart gloves etc. and which gives the feeling of reality in the virtual medium. The virtual reality plunges individuals into virtual medium, attracts him/her to virtual media and has the real world be forgotten and allows being active and moving in the artificial world as if it is real (Demirezen, 2019:6).

The event industry has been increasingly interested in the VR and the corporations have started to incorporate this technology into planned events (Mintel, 2016). On the same basis, Banfield (2020) proposes using Virtual Reality (VR) as an interesting and innovative way for the participants to interact in the events. VR applications could successfully be incorporated both in the face to face and virtual events. A VR headset allows the participants to interact with 3D images and to attract them to the places and experiences that could not be accessed normally and that could be beyond the typical technology that the participant may experience at home or at work. The commercial fairs, hotels and Destination Management Companies use it for virtual tours and "visits" to exhibit their properties and make use of VR for interactive show of the products which are difficult to bring to the site. (Causin & Scamacca, 2021:12).

It allows the persons who participate in the event to dramatize the event and interact and connect the event. Furthermore, it offers for the participants the chance to develop virtual tours and guides (Cobanoglu et al., 2021). The events now create a sincere environment where the participants feel themselves incorporated and actively participate in and contribute to. Exit Reality is an example of a real life organization focusing on the convergence of meetings, events, hospitality and VR. Recently a partnership has been established with Vicerory Hotel Group, centered in Los Angeles in order to promote their luxurious branded products using VR (Heilman, 2017). This has allowed the potential consumers to experience a specific area or room virtually without physical concrete existence. This potentially creates a high amount of interest and a different and potentially unforgettable experience which could produce profit in the long term. This technology is widely used in the events, particularly in the sportive events. For example, a London centered travel agency which markets an eco-tourism river tour in the Amazon may desire to encourage the tour using a fully fascinating HMD which allows the potential customers to enjoy a virtual simulation of the tour (Guttentag, 2010:637).

3.2.Robots

A robot is an electro-mechanical device which is autonomous or could fulfill the pre-programmed missions. The robots are programmable devices consisting of electronic and mechanical units having the capacity of perception according to the actual definition. According to another definition, the robots are products of engineering which could imitate the functions and behaviors of living creatures, which have physical capacities and artificial intelligence and which contain interdisciplinary elements (Şişman, 2016). One of the recent exciting developments in technology is the spread of robot use in the tourism sector. It is observed that in addition to being employed in the health, medical drug, chemistry and agriculture industries like a worker, the robots started to be operated similarly in the tourism sector as well (Özgürel & Kılınç Şahin, 2021). The artificial intelligence and mobile robots can interact with humans in different forms and this capability turns them into social beings. Within this scope, service robots are used for many services in the foreground and production works of the hotels, restaurants, airports and event organizations (Cobanoglu et al., 2021). Hotel and restaurant industries discovered numerous fields of use of robots in their operations and the event industry followed this. The robotic applications in the event industry contain the previously explained examples for the restaurant industry. This is a requirement of the event industry and results from the fact that food and beverage is frequently a part of the events. For instance certain events used Makr Shakr robot for beverage service to the participants (Ivanov et al., 2017). Ogle and Lamb (2019) suggest that robots could contribute to the efforts for providing safety and security in the events using the capabilities of face recognition and body language and crowd screening for face tips. Recognition of emotional states could be useful for customer experience management and marketing of events. Another aspect of robot integration in the events is provision of entertainment service for the guests. For example, Abad et al. (2017) tried to integrate a robot in the dance performance in a festival. The robots could be booth officers and receivers in the events in addition to providing entertainment (Ivanov et al., 2017). Furthermore, robots could provide physical existence for the virtual participants of meetings and events and therefore could expand the access of an event and give the opportunity of participation to those who cannot travel (Ivanov et al., 2020). One of the fields where the robots are made use of in the events is welcoming the persons coming to the event and informing them about the event. For example, Junko Chihira, a robot produced by Toshiba works in a tourism information center in Tokyo. The full-time robot has many qualifications including welcoming the visitors, providing information on the actuality and speaking many languages including the sign language (Açıksözlü & Bozok, 2021). The robots could be programmed to various specifications and therefore could provide a clearly unique service for an event. Those robots, even

the simplest ones could be used to entertain the customers through communication relying on the ability of certain robots to communicate autonomously with humans. They can communicate through talking, interactive animations and shows and chat about thousands of different subjects. Although the robots could be amusing in this respect, it is important to understand that those robots could really have very practical usages in the events. The robots could be used to salute the customers and attract the attention at first sight. For example, Costa Cruises started to use Pepper in order to salute and guide the passengers in 2016. Those robots could be used during hosting to perform check-in for the guests or to collect the data related to your event such as the e-mail addresses and telephone numbers of the individuals and even issue questionnaires and make draws for the host. Furthermore, there are robots programmed for making speeches and announcements or checking and giving independently a power-point presentation on the stage throughout the event. The limits of the things that those robots could do are virtually endless and the best aspect is that only one robot could assume the roles of numerous humans and this renders them good event hosts (Robots of London, 2018).

3.3.Hologram

The term of Hologram is composed of the Greek word of "holos" meaning "whole image" and "gram" meaning "written" (Kalansooriya et al., 2015). Hologram was invented in 1947 by Dennis Gabor who was awarded with the Nobel Prize in Physics in 1971. The fundamental idea of this technology is that it consists of a three dimensional photograph executed with a laser ray passing through an object and thus a second ray is reflected to the reflection of the first ray and three dimensional optical images are obtained (Orcos & Magreñán, 2018). Dennis Gabor, the Hungarian Physicist is deemed to be the father of Hologram since he invented this technique while working to develop the electron microscope. The records indicate that the scientists both in the United States of America and in the Soviet Union developed 3D holographic technology until 1962. Today, the Holograms expand their limits from science fictions to the attractive methods of communication of the world. Live and realistic 3D hologram shows could interact with the distant audiences whether they are a group or artist performing on the stage, or a politician making an opening speech or commentator broadcasting a live program simultaneously from different places or a CEO holding an interactive meeting with his/her colleagues around him/her (Kalansooriya et al., 2015). Hologram has different sorts of absorption type or phase type such as Plane Hologram and Volume Hologram. The most important properties of Hologram are as follows (Ahmed Mohamed Hussein & Safy el Deen, 2020:661):

- It is possible to save several images on the same photograph panel using several reference rays in different directions. Each image is independent from one another.

- Dozens of images could be stored in a hologram and the color images of a 3D body could be taken in a single hologram using three laser rays with different colors.

- It offers the means of restoring any part of the image by exposing it to laser.

Hologram technology is observed to be used in many fields including education, recreation, film production, media and show world, sport and recreation, archeology and museology. One of the fields where the Hologram technology is used is events. The hologram technology was introduced to the entire world in Coachella festival which is one of those events and which was organized in USA in 2012. The hologram of Tupac Shakur, the famous singer who died in 1996 and Snoop Dog and Dr. Dre were shown rapping on the stage in the background in this event. Following this hologram show in question the holograms of many celebrities including Frank Zappa, Roy Orbison, Buddy Holly, Amy Winehouse, and Michael Jackson were shown on the stage as well. It is observed that usage of hologram in the events is in question not only in the concerts or music festivals but also in events such as e-sport competitions and circus shows (Cobanoglu et al., 2021).

2.4.Drones

Drones are the aircrafts known as Unmanned Aerial Vehicle (UAV) or Unmanned Aircraft System (UAS) or Remotely Piloted Aircraft (RPA) which could be directed autonomously or remotely without any human in the control. It is named after male honeybee (Garg, 2021). The principal drone types are the fixed wing systems and multi-rotor systems. The majority of the existing drones are classified within those two types (Vergouw et al., 2021). Unlike the radio controlled airplanes, the drones could fly autonomously and they may not be operated by humans necessarily. On the other hand, the drones are controlled by computers and used for catching images. For this reason, the drones allow taking video and photograph images which are not used traditionally in addition to allowing the users to freely fly airplanes in three dimensional (3D) areas. It is known that the country leading in drone technology in the world is Japan (Nonami, 2016). It is observed that the fields of use of the drones are widespread whether for military purposes in the army or by civil citizens for entertainment purposes, video and photograph taking, for film making in the production companies etc. It is observed that drones are frequently used in different types of events in recent years and even drone shows are organized. The drones which were previously used in sports events due to their capacity to take photographs and videos with wide angle and high resolution were subsequently used as show tools in galas and festivals. These include Wooden Boat Festival, The CCTV Spring Festival Gala (Cobanoglu et al., 2021).

Atatürk hologram was reflected at different points of the city in the cele-

brations organized in Turkey for 29th October Republic Day. Furthermore, Nutuk (the Speech) was read using Mustafa Kemal Atatürk's voice in the event organized in Haliç Congress Center with the theme of 'Republic is Atatürk'. The sun figure symbolizing 16 big Turkish states in the periphery and Republic of Turkey in the center reflected by 300 Drones dazzled. The show lasted approximately for 12 minutes. "30th August", "Victory Day" and "Victory of a Nation" were written using UAVs. Figures including Moon and Star motif, Kocatepe'de Gazi 'ün silhouette of Mustafa Kemal Atatürk in Kocatepe and Presidential Seal were created in the event (Sözcü, 2020).

Looking through the purpose of use of the drones in the events they are observed to be used not only for show or photograph/video taking but also communication (wireless internet provider), security, and collection of data related to event. For example, security is a huge source of concern for many event planners. Cameras that could correctly detect any potential security violations or disturbance indicators in the crowded areas are placed in the drones in order to monitor big size events. Thanks to this, the drones could catch the unrest before it becomes an exact problem. They also assist with continuous monitoring from the air during the events and efficient assignment of the security personnel in the case of any accident or security violation. Drones do not only assist with crowd security but they also assist with collecting advanced crowd analytics. The drones equipped with sensors can perform fast and correct area mapping and analyze pedestrian traffic, crowd distribution and periods of stay (Chab Events, 2021).

3.5.Wearable Technologies

The concept of wearable technology is the integration of the technology in the daily wearable garments or the accessories used. It has been created through combination of fashion and technology. These new products created with the perceivers integrated to the fabrics could collect and record the data permitted to be collected thanks to their perceivers and fulfill any mission assigned to them. The first examples of those products emerged in 1884. The product produced through addition of LED lamps in the ballerina tutus and named as Electric Girls is regarded to be the first wearable technology product (Çakır et al., 2018). Bonato (2009) divides the wearable technologies into two categories. These are in the forms of garments with embedded sensor and body sensor networks. Various elements are required for the wearable technologies Sensors, actuators and controllers (generally microcontrollers), a power supply and software (data collection, usage, transmission and storage) are regarded as the main components. Each component could be adapted according to a specific application based on the function. A single wearable device which could be worn as accessory emerges as a consequence of combining those components (Wilson & Laing, 2018). Looking through the wearable technology products, it is observed that these are the products including smart

watches, smart sport materials, smart health products, smart implants, smart jewelries and smart garments (Çakır et al., 2018). Wilson and Laing (2018) list the healthcare; sport, fitness and well-being, business place and fashion sectors as the sectors where wearable technologies are used. One of the sectors where wearable technologies are used is the tourism and travel sector. Egeli and Kurgun (2021) classified the uses of the wearable technologies in the tourism and travel sector as the ones used during travel, the ones used during accommodation, the ones used for tourist health and other fields of use (park, museum etc.). The examples of wearable technologies used in the tourism and travel sector could be listed as smart glasses, smart watches, quest bands, holo-lenses, smart screening helmets (Egeli & Kurgun (2021)). The wearable technologies have become an extremely important issue for the event organizers and started to be used in the events organized. The use of wearable technologies in the events provides benefits for all stakeholders of the event (organizers, participants and sponsors). It has benefits for event planners with respect to issues including access control, Engagement/interaction tracking, smart guidance, real-time improvements. The use of wearable technologies in the events has benefits not only for event planners but also the exhibitors and participants. The exhibitors make best use of the technologies during the events by offering interesting places and activations that make best use of the same. For example, Infinity, the automobile manufacturer used the biometric data collected by the wearable wrist bands in order to measure the feelings of the users occupied by the automobiles exhibited in 2016 Pebble Beach Automotive Week and those data were subsequently transformed into digital artworks on LED screens for social sharing and rendered the entire experience more interesting for the participants (Event Innovation Lab, 2019).

Looking through for the participants, the participants could receive suggestions related to the persons whom they would like to contact, the booths that they would like to visit and the conferences that they would like to participate in, relying on the behavioral data, thanks to the wearable technology products. Furthermore the wearable devices offer a way of exchanging the contact details with a single click without having to access their telephones at a moment when they should focus on connection, when the meet the other guests and participants (Event Innovation Lab, 2019).

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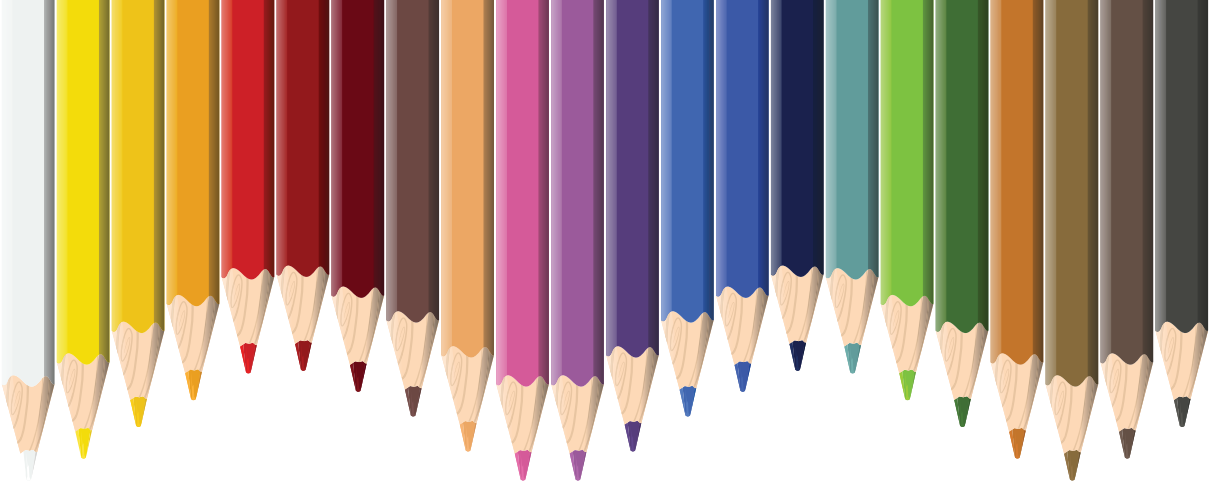

Chapter 2

NEW TECHNOLOGIES IN TRAVEL AND TRANSPORTATION

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1. Introduction

The phenomenon of travel, which dates back to the past as much as the history of humanity, is a concept that has existed for centuries. People have traveled for different reasons throughout history and still continue to do so. Some of these reasons stand out as health, visiting friends and relatives, education, work, tourism and recreation. Regardless of the reason, the effect of traveling from one place to another on the individual may differ depending on the distance of the destination, the speed limit, the comfort of the transportation vehicle and its technological features. The word "travail", which was used in ancient times to express the suffering and difficulty that visualized in people's minds when travel is mentioned, has left its place to the word travel today. Considering the first travels of people, it is seen that these were made for commercial reasons and thousands of years ago, Sumerians in Mesopotamia and Phoenicians in the Mediterranean made commercial travels. In addition, the world's oldest commercial road, Royal Road, built by the Persians, took its place in history. In the 8th century BC, people's travel to the city of Olympia to watch the Olympic games in Peloponnese / Greece and their stay in the inns there were the beginning of today's sports and tourism travels. The ViaAppia road, which was built by the Roman Empire for easy travel within the territory of the country, also has a special importance for the history of travel and transportation. After the Migration of Tribes, people's travels for religious purposes increased in the Middle Ages and the Crusades took place. With the emergence of new lands and therefore new trade routes after geographical discoveries, travels in the world increased with the renaissance and reform movements. With the Grand Tours that emerged in Europe, educational and political trips began to be made. After the industrial revolution, the foundations of today's transportation vehicles were laid and many people were transported by steamships and trains. At the point reached today, technology, which is developing more and more with each passing day, has taken its place in the travel and transportation sector as well as in many aspects of human life. Travels carried out in very difficult conditions by primitive cars pulled by pack animals or on passenger backs in ancient times have left their place to journeys made by comfortable transportation vehicles that can travel thousands of kilometers in a few hours in the 21st century. Travel technology can be defined as the interaction between people who use their technical skills and knowledge to learn about travel using technical devices such as computers. Such information can help individuals organize their physical movements between locations, arrange accommodation for their journeys, and plan leisure activities at the desired destination. Over the course of the 19th and 20th centuries, travel has been made easier for an increasing number of people, along with a number of important technological innovations. Technological progress has continuously accelerated traffic on land, sea and air (Ritter, 2017).

When evaluated within the framework of the tourism sector, we see that in the pre-pandemic period, one-seventh of the world's population of 7 billion traveled for tourism purposes and that one out of every seven people in the world was a tourist. When we look at the proportional distribution of transportation types used by tourists around the world, it is seen that air transportation is 59%, land transportation is 35%, maritime transportation is 5% and railway transportation is 1% (UNWTO, 2020). It is estimated that technological developments in the field of transportation vehicles will allow passengers to travel more comfortably, safely and in shorter periods in the coming years. In this section, new technologies used in the travel and transportation sector have been tried to be conveyed in general terms and with current examples.

2. New Technologies in Travel and Transportation

Technology, which is developing in many areas, also continues its development in the travel and transportation sector. In this section, information about new technologies used in the travel and transportation sector will be given.

2.1. New Technologies in Air Transportation

2.1.1. Air taxi – Flying Cars

Expected to be operational in the near future, air taxi service (ATS) is an on-demand air transport for a single passenger or a small group of passengers that aims to change the way of daily commuting (Rajendran & Srinivas, 2020).Urban air taxi use, also known as urban air mobility or on-demand mobility applications, is provided with vertical take-off and landing (VTOL) capability; by using low disk loading rotors, power and energy requirements of the concept are minimized, and the fact that they are intended for short range use allows non-conventional drive concepts to be considered (Johnson et al.,2018). With this unexplored area in the developing world of transportation, it is expected that consumers will be able to overcome traffic congestion in urban road networks. Air taxis, in which the electric vertical takeoff and landing (eVTOL) concept is adopted, can operate from skyports installed on the roofs of buildings that have been renovated in terms of technology, thus gaining advantages in terms of practice (Rajendran & Srinivas, 2020). Aviation agencies and some companies operating in the logistics sector are trying to benefit from urban air mobility by using flying taxi services, an air travel concept expected to be introduced in the coming years (Garrow et al., 2018; Rajendran & Zack, 2019).According to a Morgan Stanley research study, the flying car market, now known as electric airtaxis, will continue to evolve this decade and will reach a global market volume of $1.5 trillion by 2040 (Hornyak, 2020). While designing these small electric aircraft, which are expected to carry passengers on demand in big cities, many different features are taken into consideration.

It is possible to list some of these features as follows (Johnson et al.,2018: 1):

1) Passenger capacity (with pilot): 1, 2, 4, 6, 15, 30

2) Range with full charge: 50, 100, 200, 400, 800 nm (as multiples of 50 nm divisions)

3) Market: Air taxis, scheduled suburban, mass transportation, air transportation

4) Type of Vehicle: Multicopter, collateral, tiltwing, tiltrotor, lift+sail, vectoral thrust, hybrid, helicopter

5) Main propulsion system: turbo shaft, turboelectric, electric, parallel hybrid, fuel cell, diesel.

Figure 1. Airtaxi Examples in Different Sizes (Capacities)

Source: Johnson et al.,2018: 2

In Figure 1, airtaxis with different numbers of people carrying capacity are given. The left-hand airtaxi features single-passenger (250 lb payload), electric driven 50 nm range quad rotors, flapping rotors, and a collective control system. Its design elements include rigid rotors, rotor speed control and reciprocating motors. The airtaxi in the middle has a six-passenger carrying capacity (1200 lb payload), hybrid-driven side-by-side helicopter wings with a range of 4x50=200 nm. The airtaxi on the right uses four propellers with turbo-electric propulsion tiltwing ball and cyclic control, with a capacity of fifteen passengers (3000 lb payload), 8x50 = 400 nm range. Design elements include tail propellers for pitch and directional control (Johnson et al.,2018: 2). With the use of all-electric vertical take-off and landing (eVTOL) vehicles, airtaxi service (ATS) can offer a faster and more reliable mode of transportation. In addition, the use of electric airtaxis is expected to be more energy efficient, safer and quieter than any modern helicopter. Today, airtaxi designs are made by many aviation companies, considering different factors such as carrying capacity, fuel type, number of propellers (Polaczyk et al., 2019). When all these designs turn into production and the use of airtaxis increases, the tourism sector, especially travel, will take its share from this new technology. Thus, tours that are currently made with conventional airplanes will be possible with environmentally friendly electric airtaxis.

2.1.2. Flying Cars

Due to the increasing population and urbanization in recent years, there are great pressures on cities in terms of public transport and freight traffic. This is a problem for local governments and hinders the development of the economy. Observing the seldom use of near groundspace (NGS), researchers and practitioners have begun to re-examine, recommend and develop flying cars, which are not a completely new idea, aiming to relieve the tension of the city (Pan & Alouini, 2004).Since depictions of flying cars are mostly found in science fiction movies, the concept of a true "Flying Car" has long seemed to be closer to science fiction than to science (Ahmed et al., 2020). The dream of unmanned aerial transportation is not new. Creating the futuristic cityscape for his groundbreaking 1927 film Metropolis, Fritz Lang filled the sky with dizzying towers and compact flying vehicles. Then, in the early 1960s, animation studio Hanna-Barbera produced The Jetsons, a cartoon series that followed the flights of a futuristic all-American family. During the opening credits, the family whizzes around Orbit City in a floating car that folds into a briefcase. In 1982, the science fiction blockbuster Blade Runner featured flying police cars called "spinners" (Ratti, 2017).

With the latest technological advances, these capabilities are slowly getting closer to reality. There are many anticipated advantages of the flying car network, because it effectively combines the ideal features of both airplanes and cars. Specifically, the flying car concept is much more maneuverable and will also be less susceptible to traffic jams when crossing three-dimensional airspace compared to two-dimensional land-based roads (Ahmed et al., 2020). Today, one version of such imaginary futures is tempting; in early 2017 Airbus launched the PopUp, a vertical take-off and landing concept vehicle for personal mobility. Also, in an initiative that promises to "fly for all", German start-up Volocopter has designed the 2X, a miniature 18-rotor helicopter that has begun test flights in Dubai (Ratti, 2017).

The flying car concept is completely different from traditional transportation systems, where cars and trains are subject to road restrictions. In addition, high altitude spaces (HAS) for long-distance transfer are different from air flights. Unlike traditional transportation systems, the flying car transportation system (FCTS), a new transportation system that uses flying cars to benefit from NGS, will be able to expand public/private transportation to reduce the traffic load and accelerate the movement of people and goods, especially in urban areas. It will also contribute to the reduction of traffic congestion and air pollution. FCTS flying cars are used to transfer people or goods from one place to another while operational in the NGS. As a result, some essential facilities for traditional ground-based transport systems, such as common infrastructure components (roads and tunnels), may be completely avoided (Pan & Alouini, 2004). Ahmed et al. (2020) stated that the use of flying cars will also

have profound effects on training, which will require new regulations for safe operating and maintenance procedures. They also add that the ongoing development of flying car technologies will enable a number of next-generation training methods. They foresee these will be in related technological areas including pilot training and certification, repair/service/upgrade procedures, advanced robotics, sensor fusion and machine learning and artificial intelligence (AI), connected/automated vehicles (Ahmed et al., 2020). Bogaisky (2018) emphasizes that modern technological developments have shown that flying cars can be put into commercial use by 2025. According to Ratti (2017), although drones were initially marketed purely as recreational devices, there are obvious advantages to the possibility that passenger aircraft will soon transport civilians in large cities and large rural areas. However, it is difficult to fully understand the far-reaching environmental impacts that flying cars and flying car-based ride-sharing services can cause. While it will likely be a form of human transport that uses clean energy (partial or full electric power), flying cars, a substantial fleet of such vehicles, could demand significant energy sources and significantly increase the number of people traveling. Besides the environment, safety, pilot training and certification, infrastructure facilities, logistics and sustainability, cyber security and human factors are the issues to be considered regarding the use of flying cars (Ahmed et al., 2020).

2.1.3. Autonomous Flying Vehicle

Vehicles that can make decisions and react to events without direct human intervention are vehicles that can be considered autonomous (Sebbane, 2015). There are some key features that are common to all autonomous vehicles. These features include the ability to sense and feel the environment, analyze sensated information, communicate, plan and make decisions, and act using control algorithms and actuators (Becerra, 2019).Although, some drones have become capable of increasingly complex autonomous maneuvers, the majority are not fully autonomous and are instead mostly operated remotely by humans (Grifantini, 2009). It can be predicted that autonomous flying vehicles, which are generally used for military and intelligence purposes today, will be used in civil and commercial travels in the near future. For example, Airbus company is working on autonomous flight projects. The Autonomous Taxi Take-off and Landing (ATTOL) project uses computer vision technologies and techniques to successfully complete fully autonomous tests (taxi, takeoff, approach and landing) using a commercial aircraft. Another project, fellofly, aims to demonstrate the technical, operational and commercial viability of two aircraft flying close to each other during long-haul flights. This collaborative activity is expected to have a significant impact on the environmental performance of commercial aircraft. The Wayfinder project is building scalable, certifiable autonomous systems across Airbus that power self-driving aircraft applications, from small urban aircraft to large commercial aircraft (Airbus, 2021).

2.1.4. Use of Space Rockets in International Passenger Transport

With the start of space tourism in the near future, the use of rockets to be used in these journeys in air travels within the world has begun to be discussed. Elon Musk, CEO of SpaceX, in a speech on the subject at a space industry conference in 2017, announced his revised plans to travel to the Moon and Mars, then ended his speech with an incredible promise. Musk stated that they want to use the rocket system used for interplanetary travel for long-distance travel on Earth. He also gave a presentation on the stage, claiming that it would be possible for passengers to make the longest-distance journeys in just 30 minutes, and to go anywhere in the world in less than an hour for the same price as an economy class flight ticket. Musk also proposes using SpaceX's soon-to-finish mega rocket (codenamed Big Fucking Rocket, or BFR for short) to launch a massive spaceship into orbit around Earth. Accordingly, the ship will then land on floating landing strips near major cities. Although Musk stated that he hopes to start the construction of the rocket in the next six to nine months, both the new rocket and spaceship are currently in the theory stage. In SpaceX's video of the idea, shown later, its passengers are transported by a large boat from a New York City pier to a floating launch pad. On this ramp, they board the rocket that Musk wants to use to send humans to Mars by 2024. However, instead of going to another planet when they exit the Earth's atmosphere, the ship leaves and heads to another city, Shanghai. After only 39 minutes and a distance of about 7,000 miles, the ship re-enters the atmosphere. It then settles on another floating platform, much like the way SpaceX Falcon 9 rockets land in the sea. Other routes suggested in the video include 22 minutes from Hong Kong to Singapore, 29 minutes from London to Dubai or New York, and 24 minutes from Los Angeles to Toronto (O'kane, 2017).

2.1.5. IoT and Big Data in Travel and Transportation

The acceleration of new technologies in the world started with the use of the internet since the early 1990s. From those times until today, developments in the field of technology have grown faster than any other development in the world. New technologies have opened up new insights and many opportunities in different industries. Due to the rapid growth of the travel industry and the fact that it is among the sectors that contribute to the economy, there is a synergy between new technologies and tourism businesses. In fact, the travel industry has invested heavily in internet technology to better serve customers (Bedard, 2005; Gharavi & Sor, 2006; Rejeb, 2017).

With the concepts of big data and internet of things (IoT), which increase their importance day by day in parallel with technological developments on a global scale, many opportunities are presented for the transportation sector. Big data is data that differs from standard data in terms of quantity, collection rate and diversity, and can be collected in many different ways, from global

positioning system (GPS) signals of smartphones to sensor readings, in line with today's technological possibilities. It is clear that big data can have an important contribution in all kinds of transportation planning studies of different scales. The Internet of Things, on the other hand, can be briefly defined as the ability of objects in our daily use to connect to the Internet and send and receive data. This technology also has an important place in studies related to unmanned vehicles (Speranza, 2018). The Internet of Things is generally defined as a network system in which devices, vehicles, machines, buildings and objects containing various electronic and/or mechanical hardware and/or software in the real world communicate with each other in order to collect, store and distribute data (Brown, 2016; Hendricks, 2015; Gillis, 2021).

Ordóñez et al. (2019) list Personal Control, Seamless Travel, Smart Energy Saving, Location Information, Maintenance and Repairs as examples of the most widely used IoT technologies in the travel industry. They also state that airports are the main entry points for tourism destinations, where the use of IoT is directly used for increasing efficiency and savings for buildings, as well as for users to obtain information, service improvement and product personalization. In addition, they underline that airports are hubs that connect the whole world, and that this has direct implications for safety and security.

IoT and big data technologies are probably the most important sources of innovation in the travel industry, as in many other industries. Smart objects and spaces, real-time data analytics and data science are at the center of many digital strategies and initiatives to make travel more efficient and secure. Monitoring and forecasting people flow, automation of security control, sanitation control in public places, etc. is possible with the use of sensor technology and big data tools. While the need for this technology has become greater with the Covid-19 pandemic, pandemic or not, the role of these technologies in the travel industry is thought to increase with the demand for more connected and smart experiences (Digiteum, 2021).

2.1.6. Contactless Tech

Contactless services have gained a completely different importance with the Covid-19 pandemic. Contactless services supported by a range of technologies (sensors, RFID and NFC tags, facial recognition and modern biometrics) have been adopted at airports and travel hubs to ensure better security and control over passenger traffic. Contactless technology has played a special role in the hospitality industry as well as in the travel industry. Before the epidemic, hotels invested in voice-controlled elevators, digital switches and smart hotel rooms to provide better and more comfortable service, increase efficiency and achieve sustainability goals. Today, contactless technology is also seen as a source of trust and safety for guests, staff and management (Digiteum, 2021).

2.1.7. Digital ID

The global pandemic has led to the emergence of new concepts in the field of travel (green zone, red zone, essential travel, immunity/vaccine passport, COVID-19 database). It is predicted that some of these concepts will disappear over time, while others will remain and shape the next travel technology trends (Nytimes, 2021). Immunity and vaccination passports are used all over the world. Along with many governments, digital identities are on the agenda of transportation giants such as Etihad Airways. IBM has recently released a blockchain-based Digital Health Transition that can be customized for a variety of use cases and used as a health passport or test result wallet (Digiteum, 2021).

2.1.8. Artificial Intelligence (AI) Robots

Munich Airport became the first airport in Germany to test JosiePepper, a humanoid robot equipped with artificial intelligence, in mid-February 2018. This English-speaking robotic assistant is well equipped to greet passengers and answer questions about directions to the duty-free shop or departure gate, flight operations, restaurants and shops. Robots are also used at UK airports. Glasgow airport is testing a robot called Gladys to provide passenger information. Robots are also known to be used at Indianapolis Airport in the USA, Edmonton Airport in Canada and Rome Fiumicino Airport in Italy (Goopti, 2021).

2.1.9. Machine Learning

Machine learning is the use of artificial intelligence in travel technology that has been adopted to improve facial recognition at airports. It is used to increase the reliability and ease of the authentication process by matching the faces of the passengers with the photos on their IDs. In 2017, Delta and US Customs and Border Protection initiated a test project at Hartsfield-Jackson Atlanta International Airport that allows passengers to use facial recognition machines. They just need to approach the camera while their photo is being taken, get the confirmation receipts and board the plane. Travel technology, which adopts machine learning principles, has also been introduced at Dubai airport, where smart gates are being used to automatically detect passengers based on face and retina recognition and reduce check-in time by up to 20 seconds. In this system, passengers must first save their biometric information (a one-time transaction) and after the recognition process is completed, the door opens automatically (Goopti, 2021).

With a new virtual queuing feature in the Fly Delta app, Delta Airlines customers are now informed about their seats as they board the plane. It is emphasized that this new feature will allow passengers to rest at the airport terminal, at nearby food and beverage outlets before their flight. New features

announced during Delta CEO Ed Bastian's keynote at CES were introduced as the latest step in transforming the Fly Delta application into a digital concierge that displays real-time TSA waiting times in certain cities, enables advance meal selection, and enables automatic check-in on international flights (Future Travel Experience, 2020).

2.1.10. Virtual Reality (VR)

According to Guttentag (2010), virtual reality is the use of a computer-generated 3D environment (virtual environment) that one can navigate, possibly interact with, resulting in a real-time simulation of one or more of the user's five senses. Virtual reality technology is also used in the travel industry. For example, airports use it to offer passengers the airport experience and help them to find information desks, check-in counters, security points, shops, lounges, boarding gates and transit gates. Airlines, on the other hand, use virtual reality to visualize aircraft cabins and Business Lounges. In 2015, Qantas Airways became the world's first airline to introduce virtual reality headsets in the first-class cabins of Airbus A380 flights. Since then, Qantas has created a mobile application that can be used on multiple platforms so that Australian destinations can be experienced by their guests on the plane, and has expanded the use of virtual reality in travel technologies. Lufthansa, on the other hand, has a dedicated mobile app on iOS or Android platforms with unique 360-degree content promoting the different cabin classes, aircraft and destinations offered by the Lufthansa Group. In addition, Singapore Airlines created a website with virtual reality tours of the flight cabins in 2016 (Goopti, 2021).

2.2. New Technologies in Road Transportation

Road transport, the world's oldest mode of transport, is in constant transformation through repairs and construction or continuous improvements. With the latest developments in smart technologies, companies and research groups are working hard to find ways to make roads safer and more driver-friendly, and to enable developments in the automotive industry to be used. In this section, new technologies used in road transportation have been explained.

2.2.1. Self-driving Cars

A self-driving car, also known as an autonomous vehicle (AV or automatic), driverless car, or robo-car is a type of vehicle that can sense its surroundings and move safely with little or no human intervention (Gehrig & Stein, 1999; Taeihagh & Lim, 2019). Self-driving cars combine various sensors such as radar, Lidar (Light Detection And Ranging), sonar, GPS, odometry and inertial measurement units in sensing their surroundings (Taeihagh & Lim, 2019; Hu et al., 2020).Looking at the past of autonomous cars, it is seen that the idea of self-driving cars goes back to the 1930s, and experiments have

been carried out on automatic driving systems (ADS) since the 1950s. The first semi-automatic car was developed by Japan's Tsukuba Mechanical Engineering Laboratory in 1977 and required specially marked streets interpreted by two cameras and an analog computer, reaching speeds of up to 30 kilometers per hour (19 mph) supported by an elevated track (Vanderblit, 2012; Weber, 2014). Since the first AV fleet was launched by Google in 2010, advances in AV technology have accelerated significantly. AVs are expected to occupy 25% of the global market by 2040. AVs are divided into different categories based on their characteristics. AVs are classified according to five automation levels by The Society of Automotive Engineers (SAE). At level 1 (assisted automation) and level 2 (partial automation), dynamic driving tasks such as operational and tactical aspects are performed by humans. All dynamic driving tasks from level 3 to 5 are handled by the automatic driving system. At level 3 (conditional automation), the human driver is expected to control the vehicle at regular intervals. A vehicle is classified as fully autonomous at levels 4 (high automation) and 5 (full automation). However, only at level 5 the vehicle is expected to perform self-driving tasks under all environmental conditions (Taeihagh & Lim, 2019). Many new entrants such as Google (Waymo) and Uber, as well as major automotive manufacturers, are working on AVs. Although their design concepts differ, all these vehicles use a set of sensors to sense the environment, advanced software to process the input and decide the vehicle's path, and a set of actuators to act on the decisions (Wevolver, 2020). The concept of an autonomous vehicle applies not only to passenger cars, but also to buses. The size of the global autonomous bus market was determined to be $6.81 billion in 2019. This market is expected to reach $74.52 billion by 2026, recording an annual growth rate of 40.5% from 2020 to 2026 (Katare et al., 2019). It seems likely that autonomous buses will replace today's tour buses in the future.

2.2.2. Smart Road Technologies

2.2.2.1. Roads That Honk System

Roads that honk system is a system that uses Smart Life poles just before sharp turns and sharp bends. These poles communicate with each other wirelessly and exchange data about incoming traffic. By measuring the speed of the vehicles, they honk and warn the drivers of the approaching traffic. The name of the product is Smart Life Pole. The first prototype of the system is currently being tested in India on highway NH1, which connects Jammu and Srinagar, which is known as one of the most dangerous roads in the world. As a result of the function of the system, the traffic coming from both directions of the sharp bend is monitored and if it is seen that there are vehicles approaching from both ends, the poles at both ends of the bend communicate with each other, then send horn-like signals to warn both vehicles. Thus, warn-

ing signals are sent to avoid a collision. The advantages of this system can be listed as follows:

- The fact that this system works with solar energy makes it very useful especially in hilly areas where this system is currently deployed.

- It is a simple and effective concept to warn drivers with familiar sounds and horns.

- This system is an innovative IoT application for road safety to save lives.

- The use of K-band ensures minimum interference and best signal to noise ratio. (Prescouter et al., 2019).

2.2.2.2. Glow in the Dark

Instead of spending a big budget for road lighting or other lighting options that cover thousands of kilometers, the idea of using glow on dark road signs is a better and more acceptable alternative. Such signs are already in use on the road on the N329 motorway in Oss Netherlands. The markings were made using paint containing photoluminescent powder that was stored throughout the day. These green glowing beacons are visible from 500m away and glow for up to 8 hours each night, transforming the Tron-like driving experience (Dzyre, 2021).

2.2.2.3. Interactive Light

Such lighting systems are road lights activated by motion sensors to illuminate a particular section of the road as cars approach. Turns off the lights after the car passes. Suitable for roads with less traffic, interactive lights provide night vision when needed and reduce energy wastage when there is no car. Another design developed in the Netherlands uses wind from passing vehicles for lights (Vrio Europe, 2020).

2.2.2.4. HIKOB instant: Road Weather and Traffic Management

HIKOB provides wireless data collection systems to collect road weather data, thereby creating an effective road weather information system (RWIS). The system includes wireless and low-power sensor knots embedded in the pavement to measure outside temperature and humidity as well as road surface temperatures. Sensor knots transmit real-time information over a wireless RF protocol to a gateway connected to an IP network (landline or cellular networks). Data can be accessed by remotely connecting to the gateway or through the HIKOB cloud computing infrastructure. Intelligent wireless and energy autonomous magnetometer sensors embedded in the pavement detect vehicles, measure traffic flows and help better understand the road network.

Applications such as vehicle counting and traffic flow monitoring, vehicle classification (light vehicles and heavy vehicles), speed and occupancy rate measurement, traffic jam length measurement are the applications made possible by this system. In addition, these road traffic counting and monitoring systems can be easily integrated with existing IT systems (Prescouter et al., 2019).

2.2.2.5. Electric Priority Lan Efor Charging Electric Vehicles

In this system, buried cables create magnetic fields that charge electric vehicles while driving. A receiver coil in the vehicle receives electromagnetic oscillations from a transmitter coil embedded in the road and converts them to AC, which can then power the vehicle. Inductive charging technology is already available for static cars. However, the wireless technology of the future could provide distance range solutions for charging batteries on the go and for longer journeys with electric vehicles (Vrio Europe, 2020). The energy required to run these systems is provided by a network of smart inverters, which are converters that exchange information with each other in real time. By transferring the energy to electric vehicles moving in the lane, the driving range of the vehicles can be extended and the time spent for charging the vehicles can be saved (Prescouter et al., 2019).

2.3. New Technologies in Maritime Transportation

2.3.1. Flying Water Taxi

The prevalence of the use of electric vertical take-off and landing (eVTOL) technologies is not as high in maritime transport as it is in aviation. However, the boating field is gradually adapting to electric vehicles, especially e-floating taxis (e-Water Taxi). A French company called SeaBubbles stands out as the leader in its field with an innovative and cool looking e-Water Taxi that works on hydrofoils. The flying taxi they designed operates with zero waves, emissions and noise as it glides over the water and lowers its passengers from berth to pier. It is stated that these e-Water taxis, called SeaBubbles, which have a take-off speed of 8 mph on their hull, will use special berths, their cruising speed will increase to 16 mph while rising on hydrofoils, and their maximum speed will be 20 mph. It is also stated that the boat in question will be powered by two 18 kW electric motors powered by a 41 kW/h Lithium-ion battery pack, have a carrying capacity of five passengers and a range of more than 40 miles. Weighing 2755 pounds and capable of lifting 1100-lb, the vehicle takes 35 minutes to recharge. The SeaBubbles service was first launched in Paris with a live demo. Later, it is planned to be made available to users in Lyon, Geneva and Zurich, Switzerland and the USA (Zart, 2020).

2.3.2. Smart Ship Technologies for the Maritime Industry

Today, we are witnessing that smart technologies used both in air transportation and airports, road transportation and roads are also used in sea transportation and maritime industry, which is another transportation sector. The first to stand out among these technologies is autonomous technologies. As the world moves towards a higher level of autonomous vehicle use, the maritime industry is adapting to this trend with smart ship technologies. Autonomous technology for ships, internet of things (IoT) and data analytics include modern features that companies and the entire shipping industry are trying to achieve. In addition to these, a new shipping technology is Digital Route Management of Ships. In general, ships follow predetermined routes based on various input data. The idea is that by examining ocean conditions, historical trends, and other factors, ship operators can plot an accurate course that will take the least amount of time. However, ships can have voyages that often take several months and it is not possible to accurately predict conditions in advance. Real-time route management can play an important role in increasing travel time and efficiency. When considering the ships' long stay on water and the possibility that ocean conditions can change drastically within a few hours, it can be concluded that an available real-time data is important for ship operators to use. This may include weather patterns, piracy alerts, port traffic and other variable parameters (Menon, 2021). Another ship technology product is Smart Maneuvring Control/Autonomous Control. The four operational system levels related to autonomous control systems used on autonomous merchant ships are clearly defined by the Norwegian Autonomous Ships Forum (NFAS). At the first level, there are all systems that use advanced decision support of today or tomorrow, starting with electronic map systems, autopilot or trail pilots. The human operator is fully responsible without system autonomy. The automatic level includes automatic challenging operations, such as automatic docking, selected without human interaction. Predefined sequences are applied for operations. However, in unexpected situations, human operators on board or at the shore control center are always ready to intervene directly or by remote control. The third level, limited autonomy, in most cases means fully automated operations. Human operators still constantly supervise the process. A ship is defined as fully autonomous if no inspection is performed on board or on land (Schubert et al.,2018). This technology reduces the possibility of human error and also allows immediate application of real-time route information. It also has a very wide area of use in port operations. These are usually restricted areas where ships are located, such as wharves, tugs. In order to berth safely without collision, smart ship technology can be used to help the captain steer the ship (Menon, 2021).

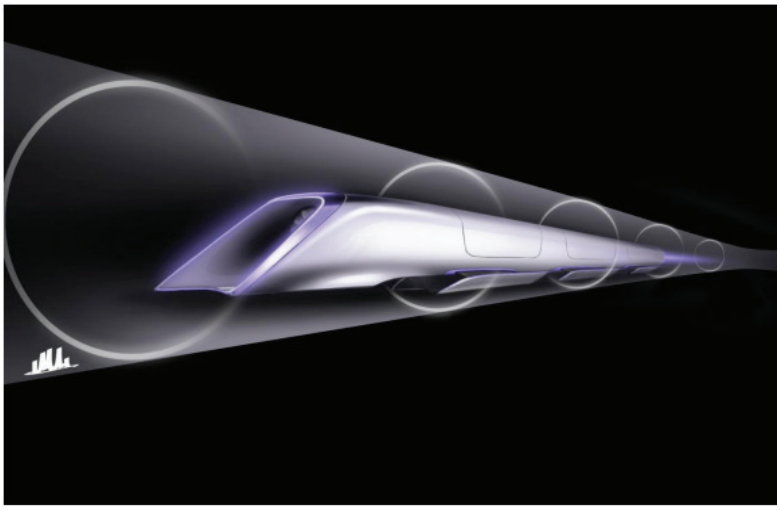
It is seen that new technologies, especially smart technologies, are also used in large cruise ships used in cruise tourism as well as large merchant ships. For

example, MSC Cruises has started using Zoe, the world's first digital personal navigational assistant, on its ships. It is stated that Zoe is ready to answer more than 800 questions in seven languages as an Alexa or Siri floating in the ocean. The fact that Zoe is available 24/7 and has interactive smart TV screens in the cabin as well as digital screens around the ship allows passengers to spend more time enjoying their holidays and less time at the passenger service desk. To help eliminate check-in queues, Royal Caribbean offers facial recognition technology to identify passengers when they arrive at port, and uses Virtual Reality (VR) and Augmented Reality (AR) to transform spaces on board their ships into virtual environments and interactive playgrounds. In addition, other cruise companies such as Holland America Line, Marella Cruises, Crystal Cruises, Carnival Cruise Line and Celebrity Cruises have developed their own applications that offer similar functionality (Macefield, 2021).

2.4. New Technologies in Railway Transportation

As in every field, technological developments for efficient use of energy continue in the transportation sector. Solar Bullet, of which R&D studies are carried out in the railways sector, is based on the principle of working with electrical energy supplied from solar panels as an environmentally friendly solution. The String Rail System, which consists of a steel-concrete rail between high towers and is expected to reach high speeds with minimum friction, is considered as a low-cost alternative. In addition, studies are underway to control signaling systems from satellite and to use magnetic levitation motion systems instead of electric or diesel engines. With the use of composite materials, it is aimed to reduce the weight of the wagons and thus to save energy while carrying more loads (Republic of Turkey Ministry of Development, 2018).

Figure 1.Hyperlooppassenger transport capsule conceptual design rendering



Source: Musk, 2013:14

Hyperloop technology, which has developed in recent years, has enabled rail transport to reach a different dimension. Hyperloop, which is one of the new technologies and consists of a capsule that can be moved by the pressure difference in a tube and can carry cargo and passengers, has reached the stage where it can be used in the world, albeit limited. Hyperloop is a high-end fast transportation vehicle being developed by Elon Musk with tapray (top level sur-railsystem) technology. The vehicle is defined as a top level sur-rail system (Garber, 2012; Musk, 2013). According to Doppelbauer (2018), the Hyperloop is a horizontal elevator that accelerates like a rocket but has no intermediate stops. The Hyperloop consists of a low-pressure tube with capsules transported along the length of the tube at both low and high speeds (approximately 1200 km/h). The capsules are supported on an air cushion with compressed air and aerodynamic lift. The capsules are accelerated by means of a magnetic linear accelerator fixed at various stations on the low pressure tube with rotors in each capsule. Passengers can enter and exit the Hyperloop at stations located at the ends of the tube or at stations branching out along the length of the tube (Musk, 2013). The size/capacity of a Hyperloop vehicle is in the range of 25 to 40 passengers per compartment (Doppelbauer, 2018).This system consists of capsules traveling between Los Angeles and San Francisco in California. Thanks to this technology, it is stated that the total one-way journey time from one city to another city will be 35 minutes. It is predicted that each of the capsules will carry 28 people, will depart from each terminal every 2 minutes on average (every 30 seconds during peak hours and less frequently at night), thus will carry a total of 7.4 million people per tube of Hyperloop each year (Musk, 2013).

2.5. New Technologies Used in Travel Agencies and Tour Operators

The use of information technologies by travel agencies has taken place as a three-stage technological development process that follows each other. The first phase is the introduction of computer reservation systems (CRS) in the 1970s. The second phase that follows is the introduction of global distribution systems (GDS) into the tourism industry in the 1980s. The third stage is the widespread use of the internet in the tourism industry in the 1990s (Buhalis, 2003: 79). Since the rise of the World Wide Web (www), there has been a transformation in the structure of service delivery in tourism, along with information and communication technologies (ICT). This transformation has occurred with the development of numerous websites and applications, including reservation systems, online travel agencies, tour operators, and interactive product review sites (Wang & Qualls, 2007). The travel industry has moved towards consolidation and integration, the development of more flexible products, and the use of the web as a distribution channel for tourism suppliers (Pearce, Tan, & Schott, 2004).

The development of virtual reality and augmented reality technologies in recent years has led to an interest in this technology in many areas. One of these areas is the hospitality and travel industry. Today, the information that an ordinary hotel guest will need before booking a hotel room has caused virtual reality to become important in the hospitality industry. With VR technology, customers have the chance to experience the hotel's rooms, restaurants, bars, etc., with VR glasses before making a reservation, and make a purchase decision based on this experience. One of the more interesting examples of the use of VR technology in recent times has been the creation of virtual reality reservation processes. This use case has been recently implemented by companies like Amadeus, allowing customers to search for flights, compare hotel rates, and book rooms via a virtual reality headset (Revfine, 2021). Besides the hospitality industry, VR technology is also used by travel agencies. Using VR makes travel enterprises stand out among their competitors and offers the user an unforgettable experience. VR technology has been adopted by many travel companies and is used to increase sales and gain brand awareness. One of the most common users of VR headsets in the tourism industry is the travel agencies themselves. Instead of showing brochures and computer screens to visitors, travel agencies offer a virtual experience to their customers. This approach is also used to create a great impact at trade fairs and events and is quickly gaining public attention. Agents thus offer potential customers in-store virtual travel experiences that completely change the meaning of visiting a travel agency. The use of VR technology in travel agencies has some benefits. These benefits are listed as enabling travel companies to stand out among their competitors, providing travel experiences to those who cannot travel, and contributing to reducing the impact of tourism on sensitive destinations (ImmersionVR, 2021).In addition to the use of VR technology, mobile applications that have developed significantly in recent years have also started to be used by tour operators and travel agencies. For example, TUI, one of the largest tour operators in Europe, can perform the marketing and sales of the tour packages they have prepared with the reservation applications that can be used on smart phones as well as their own websites.

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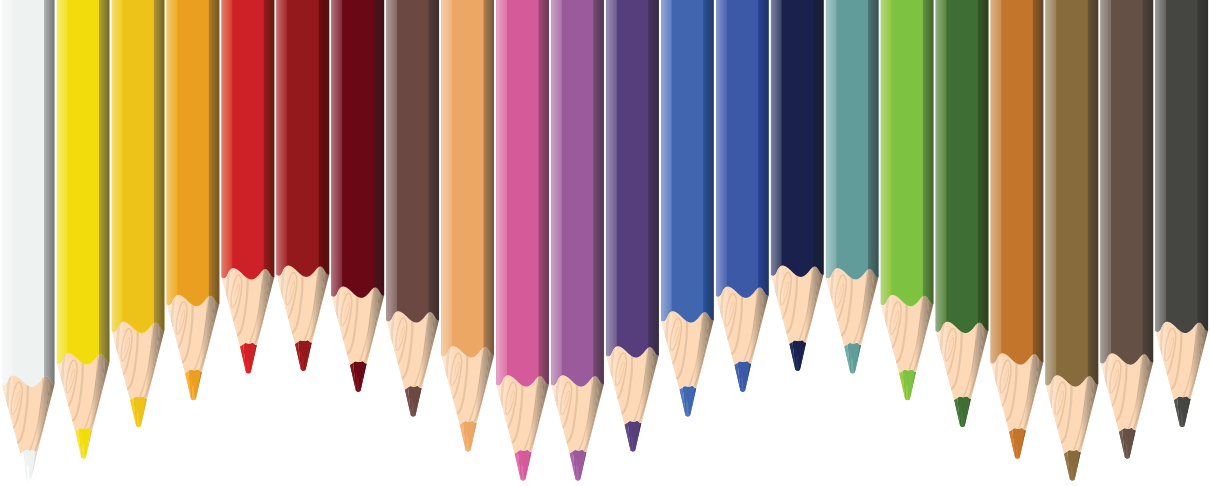

Chapter 3

INITIAL APPEARANCES AND URBAN AIR MOBILITY TRANSPORTATION SYSTEM NETWORK IN NORTHERN CYPRUS

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1. INTRODUCTION

Urban Air Mobility (UAM) industry growth evaluation is in progress over the next decade and will require the prioritization of community and stakeholders' involvement and commencing the transportation planning process today. The UAM concept is considered a new technological achievement that will discharge urban traffic congestion in the megalopolises (Reiche et al., 2018). There is an expectation that shortly different types of autonomous electric aircraft using vertical takeoff and landing (e-VTOL) capabilities, will be affordable to the general public as a fast mode of air transportation providing a way to ease road transportation congestion (Rimijha et al., 2021).

Despite unwanted expenses, nowadays, in major cities such as Sao Paulo, New York, and even Hong Kong hundreds of people use helicopter services, to avoid ground traffic congestion to and from work (Riedel and Sahdev, 2019). The challenges reported from big cities such as London, Paris, and Tokyo focused on economic losses associated with significant fuel consumption on the roads, vehicle maintenance costs (Ikeuchi et al., 2019), and the impacts on environmental loss, with excessive gas emissions, and air pollutions (Kelly and Fussell, 2015; Turok, 2017) causing a harming effect on the health of the human.

By 2050, 68% of the population is expected to move to megalopolises which in turn has resulted in growing urban transportation problems. Consequently, it's driving the demand for alternative modes of transportation, thus the development of UAM aircraft such as e-VTOL and VTOLs has emerged as an effective solution. In this regard, the UAM market is projected to grow from 2.6 B USD in 2022 to 28.3 B USD by 2030, at a CAGR of 34.3%, with significant investments in emerging nations (Markets and Markets, 2022).

The proposed concepts and paradigms of Urban Air Mobility (UAM) is a potential air transportation structure to change the current transportation system, adding the next ramifications to the aviation industry, and contributing to urban mobility and new infrastructure planning. Based on innovation, achievements in battery technologies and electric propulsion ensure the design of modern air vehicle types that are capable of Vertical Take-off and Landing (VTOL). Leading manufacturers such as Airbus, Lilium, Vertical Aerospace, Volocopter, Wisk, and many others, advanced VTOL technologies and started production of various types of e-VTOL aircraft therefore enhancing the development of UAM services (Pons-Prats et al., 2022). Besides, the EHang, Airbus, Volocopter, and Joby Aviation companies demonstrated successful test flights of their innovations in different geographical emplacements across the world (Rajendran and Zack, 2019).

Currently, many major e-VTOL companies are developing their UAM vehicles, and nowadays about 130 models for testing and implementation

(Bacchini and Cestino, 2019). While technology is already available, there are still several technical issues and regulatory limitations that might slow down a successful application. The urban air mobility (UAM) concept presents a combination of air and ground transportation systems together, utilizing airspace at low altitudes and application of absolutely innovative infrastructure. This concept includes Air Traffic Management (ATM), Ground operation Infrastructure, Development and delivery of air vehicles (Manufacturer), Safety (Security), and Community Integration controlled by State and Local authorities.

This analysis does not focus on technical problems and economic aspects of UAM operation. Taking into account the Urban Air Mobility concept and the Traditional Air Transportation system, the current study focused on the adaptation and feasibility of autonomous e-VTOLs operation in the UAM ecosystem within Northern Cyprus urban areas, offering various transportation options.

2. LITERATURE REVIEW

Recently published literature contains many studies covering UAM's general concept regarding aircraft design technology, air traffic management, infrastructure implementation, and society adaptation to UAM operation.

Bacchini and Cestino (2019) addressed their study's main objectives focusing on the problem of the best VTOL aircraft configuration and introducing their advantages and disadvantages. The study by Rajendran and Srinivas (2020) considered client requirement forecast and arrangement of urban air taxi networks taking into account e-VTOL configuration and performances, as well as analysis of price policy and scheduled maintenance strategies. Similar research was performed by (Balac et al., 2019) and Ploetner et al., (2020) who modeled potential demand for UAM and defined several aspects of their application, including; extended social-demographic variability, implementation of a new airport access model, vulnerability of ticket fare for customer, aircraft performance, passenger service process at vertiports, and different network availability for Urban Air Mobility at Munich Metropolitan and Zurich region.

The recent document published by Wisk Aero-Advanced Air Mobility (AAM) manufacturer and Skyports-leading vertiports designer and operator, outlines the development of procedures for the safe operation of UAM aircraft and identifies the integration of autonomous e-VTOL vehicles using agnostic infrastructure with vertiports, and introduces a comprehensive concept of operations (Wisk and Skyport, 2022). Jordan, (2019) states that keeping the whole air traffic movement safe and efficient is a challenge. As UAM Traffic Management (UTM) technology is still in the development stage, the UTM system will work in combination with existing air traffic control, provided by

the local ATC team, according to state aviation authority regulations. Another problem with UAM is the safe integration of Unmanned Aircraft Systems (UAS) in the urban airspace for positioning most air and ground vehicles.

In this regard, Bijjahalli et al (2019) conducted a detailed analysis of GNSS performance for UAS applications focused on Sense-and-Avoid (SAA) systems and failure modes in urban airspace. The study by Bauranov and Rakas (2021) identified the structural factors in the point of view size and geometry of urban airspace and found that they directly impact the level of safety operation, efficiency, and capacity of airspace. In the less limited airspace, air vehicles have more maneuvering, and easily select position, altitude, speed, and heading, which provides more airspace capacity, while reducing operational cost. The proposed UAM airspace design concept requires extensive availability of ground infrastructures including enough vertiports, communication network facilities, and navigation-surveillance equipment installation, with an emphasis on maximizing safety. The security issue is a very important topic for UAM aircraft and other operational structures supporting the whole flight path from the dispatch and landing stage in low-altitude airspace.

The study carried out by Maxa et al. (2019) describes possible threat scenarios and a detailed survey of the modern intrusion detection system (IDS) and provides a list of assumed attacks on UAM aircraft. Some international researchers and UAM vehicle manufacturers focused on various aspects trying to find optimal solutions for the future application of UAM with the proper infrastructures. Significant studies are dedicated to Airport Shuttle service, air taxi concept inter and intra cities use cases, another researcher concentrated on technical aspects such as battery usage, propulsion technology, applied technology, navigation, ATC Management, ground support infrastructure development, and assessment of regulatory documentation for upcoming certification (Asmer et al., 2021).

Finally, social perception and level of public acceptance are equally vital for the entry to service of UAM operation in megalopolises. Several identical efforts were attempted to investigate the human factor influencing the integration of UAM into the traditional transportation system. Al Haddad et al. (2020) used the preference survey method among clients who wish to fly on UAM aircraft and found that trusted concerns, safety automation, social attitude, and socio-demographic status of the population are affected factors in the acceptance of UAM. The same studies performed by Eker et al. (2019) and Behme and Planing, (2020) consist of statistically analyzed data collected through an online survey and qualitative analysis to study customer acceptance of UAM using individual interviews. Both of them found that UAM perception would become more actual upon intensive utilization of UAM operation when the concept is comprehensively known to the population.

3. STUDY AREA

Northern Cyprus, is a country located in the eastern part of the Mediterranean Sea and comprises a northeastern portion of the island. The total area consists of 3.355 km. sq with a population of 382.230 by 2021 (Sozcu, 2022). The people of Northern Cyprus are distributed in six provincial areas called Lefkosa (Capital), Famagusta, Guzelyurt, Lefke, Iskele (Bafra touristic region), and Girne (Kyrenia-touristic region). Ercan International Airport serves over 4 million passengers every year, and most of the passengers are tourist travelers. The Kyrenia (Five Finger) mountains run about 160 km with a long narrow range along the northern coast of the island of Cyprus and its peak is reached at 1024 meters, that is the point named Selvili (Cypress). Taking into account the growing economic and demographic potential of the island, it has been decided to carry out this analysis to assess the feasibility of setting up a general concept and infrastructure of Urban Air Mobility.

Nowadays the entire country faces continuous congestion on the roads in each provincial city and suburb area and the peak hours commuters and drivers have lost lots of time in traffic overloads. In this context, UAM might be an affordable vehicle for the Northern Cyprus community to solve the current situation of congestion on roads. One of the important elements of UAM realization daily and during the night, while ensuring flight safety, is the weather condition. The weather in Northern Cyprus is an additional benefit for UAM operators and is completely compliant with favorable conditions for operation over the year, excluding some inclement weather conditions in the winter period. The average annual temperature during the day is 24 ˚C, and 13 ˚C at night. The warm season, generally starting from April, lasts about 8 months. Winter temperature remains mild around 20 ˚C during the day and has zero days of snow. The average rainfall is nearly 375 mm per year, which consists of about 30 mm per month (Cyprus-Weather, 2022). Stability of the workplace, increasing trend population, busiest service sector, and generally, favorable weather conditions make it attractive to support the idea of implementation of UAM in Northern Cyprus.

4. METHODOLOGY

The Methodology, used in this paper is based on UAM's organizational structure and operational concept, to introduce the entire system for the future with involved stakeholders (Cizeriogullari, 2022), Figure 1. UAM is considered next generation air transportation ramification that offers environmentally free GHG emission, effective, safe, and sustainable transportation mode, based on electric Vertical Takeoff and Landing (eVTOL) aircraft in an urban environment.

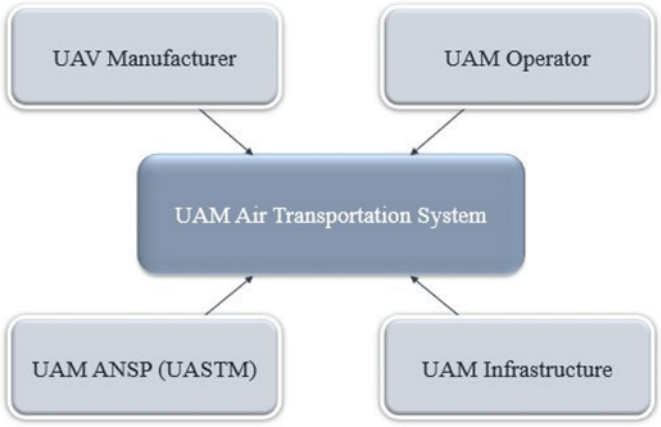

Figure 1. *Proposed UAM Transportation System*

Referring to the proposed methodology four key elements will be considered for understanding the current status of the UAM operation concept to suggest future development plans for successful implementation. The selected topics in this paper will be analyzed in the areas that concern the manufacturer (in point of technology), UAM Operator, Infrastructure, and Air Traffic Management ((ATM-navigation service provider), and can be accepted as stakeholders. With the Regulatory Policy and Certification procedures that belong to the responsibility of the Civil Aviation Authorities, preferable to study separately.

To achieve the goals nowadays requires certain capabilities that do not exist yet, for UAM aircraft; airspace access, the operational infrastructure necessary for new mode of air transportation, regulations and defined procedures to ensure airworthiness, and mainly adequately trained personnel to provide flight operation intent throughout urban airspace and ensuring ground handling customer services. The material used in this study consists of scientific articles and conference papers, relevant research reports issued by involved companies, regulatory policy documents, and open sources.

4.1 Technology Achievement in UAM Vehicle Manufacturer

The technology advancement significantly set on the development of electrical propulsion and reliable battery storage capabilities which contributed to the growth of various design configurations of UAM vehicles (Rezende and Barros, 2018). Thanks to advanced technologies it became a reality to operate a new concept aircraft called e-VTOL, designed on electric motors which allows to exclude complex flight control actuators, mechanical transmission, and use of fossil fuel. Its main purpose is to provide urban air transportation in the largest megalopolises. Despite the final design process and performance

development, its first stage of operation is expected by 2025. (Uber, 2016). There are many manufacturers such as Boeing, that recently developed a Personal Air Vehicle (PAV), a flying prototype, Airbus with huge capital has developed A3 Vahana and CityAirbus, and BELL Aerospace, introduced a new Nexus-4EX version with autonomous flight features for passenger transportation purposes. Several leading companies Volocopter (VC200), Wisk (Cora), Former Kitty Hawk and Ehang (Ehang 216), and many others, after successful test procedures of their product to discover advantages and disadvantages, are preparing for certification.

Overall, each eVTOL has the same purposes but differs in passenger seat configuration, cruise speed, dimensions, flight distance, and performance. The presented list of UAM aircraft has many types, including multi-copter, multi-rotor, tilt-rotor, trusted vector, hybrid lift+cruise, and flying car, and their prototypes. Table 1 provides currently available data, although the names of companies and introduced prototypes can be changed upon new types. The e-VTOL Insider, WEB PAGE is an excellent and primary source of information, permanently providing updated news about UAM developments, current status, and progress of VTOL companies. Referring to the last issued publications of the page that include UAM specifications and technical performances, those three main characteristics of UAM aircraft are important for future UAM operators to define the objectives of established companies to predict their area of activity. Altitude and battery capacity can be considered upon purchasing according to Northern Cyprus's geographic location and range of flights.

Table 1. *Characteristics of e-VTOL (Source: Evtol, 2022)*

e-VTOL types	Seats	Speed, km/h	Range, km
Lilium Jet	2-5	300	300
Airbus A3 Vahana	1	190	50
Bell Nexus 4EX	4+1	240	97
Joby S4	4+1	322	240
Aurora-Pegasus PAV	2	180	80
Embraer X Eve 3	4+1	241	96
Wisk Cora 4-Gen	1+1	180	100
Volocopter VC200	2	80-100	30
EHang 216	2	100	35
Lift Aircraft Hexa	1	72	20-25

Notably, the flight range of e-VTOL aircraft is dependent on battery storage capacity and the battery is the main component in the definition of specific flight distance in UAM operation. (Peris, 2021). There is a different e-VTOL design philosophy which varies technical performance, aerodynamic charac-

teristics, dimensions, and complexity, as a wingless multi-copter, hybrid lift + cruise model, tilt-rotor, tilt rotor+wing, and trust vector design (Vieira et al., 2019), Figure2. Flight dynamics and detailed operation description of the above-mentioned eVTOLs are not stated in this study. The above-mentioned shortlist is considered to be high-level propulsion technologies for today's design concept of UAM vehicles. The continued development process will reach to required safety reliability and percipient level by passengers in the future daily operation of UAM vehicles (Pons-Prats et al., 2022).

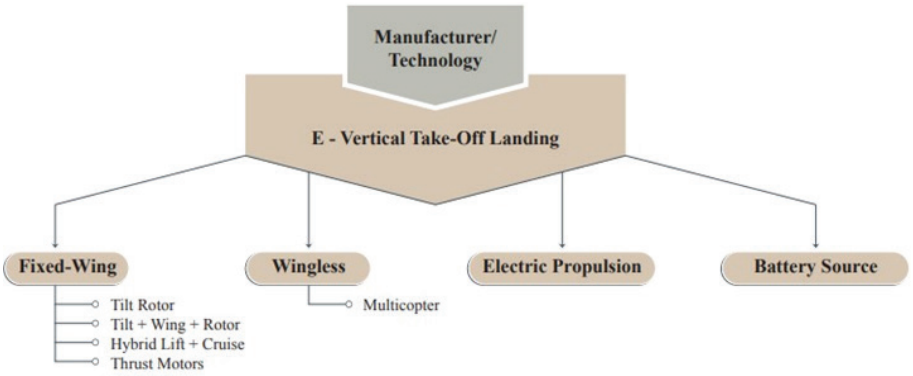

Figure 2. *The Implemented technology for UAM vehicle designing*

The novel aircraft operated by an electric propulsion system demand highly productive batteries which impact UAM aircraft performance (Fredericks et al., 2018) and the efficiency of an electrical propulsion system (Brelje and Martins, 2019). This is conditioned that, at higher storage capacity (low discharge velocity) internal cell resistance is significantly sustainable for a long period, while output power will be lower, and vice versa higher discharge rate leads to insufficient beneficial energy (Vratny et al., 2013).

4.2 UAM Operator Function

Previous studies on UAM implementation and current publications on the same matter are based on the investigation of operation concepts. Yet, it does not mention who the UAM owner or operator is that is always responsible for the airworthiness of aircraft and in this case UAM vehicles. For effective operation of the UAM system and qualitative coordination of relevant departments to ensure flight safety, the Operator plays a vital role in supporting organizational processes and all involved structures. It is important to define the role and responsibility of future UAM Operators to identify their actions. Authors of the project prepared by "NASA Urban Air Mobility Sub-Project" Mogford et.al. (2019) argue that the UAM ground operator role is not determined at this time and for now, it can be considered as a UAM dispatcher (or Fleet Manag-

er) with its workstation. Li et al., (2020) state that the UAM ecosystem can be future divided into systems Managing Operator fleet which is responsible for coordination between various stakeholders, consequently will arrange UAM business model operation.

Nevertheless, because of the long-term technological development process period and state regulation (KPMG, 2022), the implementation of the UAM business models is still uncertain (Al Haddaet al., 2020) which depends on governmental and private sector actors which is necessary to set up a new forms of relationship agreement and its realization. To contribute to the future UAM development to establish a variety of business models, vehicle owners, and involved service providers, who are the primary actors of operation, are necessary to set ownership structure for the effective level of partnership (Nneji et al., 2017). There are various proposed business models for the future UAM market segment. The air-taxi passenger UAM market will be the prevailing urban transportation with five different modes including scheduled, unscheduled, personal aircraft, on-demand, and lease (Cohen and Shaheen, 2021). Reiche et al. (2018) argue that only three use cases for UAM expected to grow, such as Air-Taxi, Air-Metro, and Last-Mile delivery, and Baur et al. (2018) have suggested a similar three main use cases for UAM operation that will efficiently be applying Air-Taxi, Airport Shuttle, and Inter-City flight models depending of aircraft characteristics and operational capacity.

The other business model is focused on a VIP customer with high income and vehicle owners offer luxurious air transportation service for business and leisure purposes. Entire UAM ecosystem stakeholders attempt to take advantage of new emerging markets while offering a variety of client-oriented business models for the successful application proposed by the UAM operation concept. In this context, future UAM operators in different areas of the flight services will offer their Service Segmentation and business model application (Figure 3) option depending on geographical location, density of the population, and purpose of the operation.

- Passenger segmentation considers a safe, sustainable, and affordable air transportation system a new concept for people to travel within metropolitan areas using automated vehicles.
- Cargo segmentation is the type of air transportation that envisions delivery of cargo packages around cities and rural areas using air vehicles, equipped with special devices made by novel technologies.
- Emergency segmentation is an on-demand service model proposed for emergency management such as air ambulance needs, accident and fire response, assessment of disaster level, and search-rescue operations which are considered threatening human life.

By implementing the tools of access into UAM operation with various business models, the new industry will be potentially the largest and profitable market segment in the future and the sector's players can be winners to have a lot to gain. Referring to the business model of current traditional commercial aviation and studying the opportunities of the newest UAM passenger air transportation using vertical take-off and landing (e-VTOL) and associated use cases are also expected to grow significantly. The proper direction allocation and planning of flights by the destination ensures confidence that the potential will be successfully realized.

- Intra-City: The route defined by UAM operator carrying scheduled flights provided air taxi services for any commuters, within urban areas and suburbs covering distances up to 50 km with the most congesting ground transportation.
- Intra-City (Regional): Operates between big cities in the region at flight range within a radius of 50-1500 km, and the transportation for short distances within a certain city and suburb that is not suitable for scheduled flight and operates on a case-by-case-by-passenger demand.
- Airport Shuttle: The envisaged use of both scheduled and on-demand air taxi services between the airport and any urban destination with available vertiport, promoted to avoid traffic congestion.
- On-demand: The suggested point-to-point service reserved by the passengers that determines times, flight origin, and destination.
- VIP: The type of services rendered for government employees, and business travelers with high-income values wishing to pay for exclusive and individual care.
- Leisure: the service offered to leisure and tourist travelers to provide sightseeing around the region at the bird's eye view of natural beauty and urban landscape.

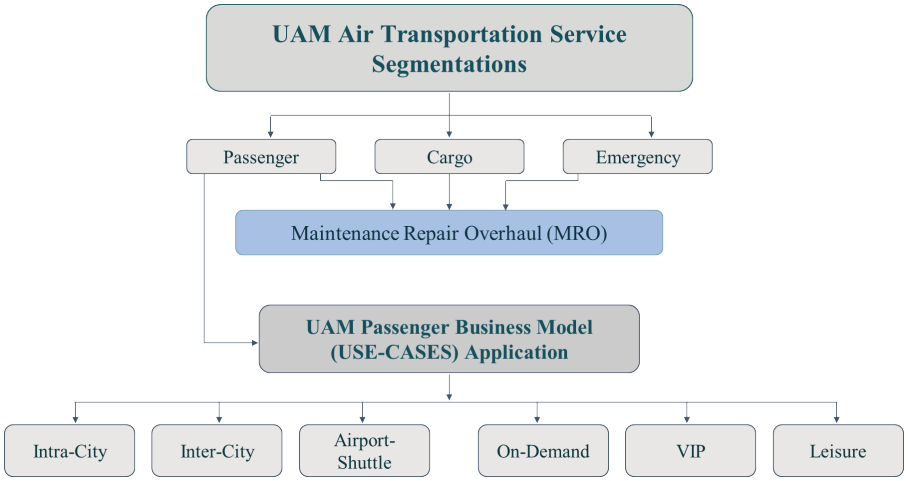

Figure 3. *UAM service segmentation and operational business model*

The idea of passenger urban air mobility is gradually proxy to the final stage of its application with technological advances driven by large investment and financial feasibility, to overcome urban congestion in the huge megalopolise0s (KPMG, 2022). Focusing on studies, concerning passenger air transportation, notable that, UAM vehicle configuration and performance impact to formation of the business models for each market use case, and the numerous operational models raise the complexity of air traffic and airspace management (Pons-Prats et al., 2022)

4.3 Urban Air Traffic Control (UATC) Management

Now, Urban Air Vehicles operation does not require mandatory interaction with the current ATM system, therefore worldwide civil aviation authorities, including the USA (FAA) and the European Aviation Association (SESAR), focused on the implementation of the UAM regulations and operation rules for efficient use of controlled and uncontrolled Class B, G airspace access for all type of the aircraft operators (Shrestha et al., 2021). Today's approach to UAM operation requires a sustainable developed Air Traffic Control (ATC) Management system. The effort initiated by the FAA led to collaboration with NASA to address these issues through the Air Traffic Management eXploration (ATM-X) project (Chan et al., 2018; Conors, 2020).

The investigated framework for UAM operations includes the strategic components for congestion management with airspace separation and departure-arrival network scheduling management at vertiports (Thipphawong et al., 2018). The European Union Aviation Safety Agency (EASA) and the USA Federal Aviation Administration (FAA) will regulate Air Traffic Management (ATM) guidelines of e-VTOL aircraft while developing standards that can

manage high-density e-VTOL traffic for passenger and cargo-carrying aircraft at low altitudes at congested airspace of urban environments.

Proper ATC management depends on the integration of a large number of UAM vehicles into national airspace with improved Communication, Navigation, and Surveillance (CNS) capabilities. NASA and FAA have published a Concept of Operation (ConOps) for the UAM systems with a Low Altitude Authorization and Notification Capability (LAANC), where proposed the class G airspace limitations below 400 feet (122 m) Above Ground Level (AGL) and future expectation is that the operation level will be permitted at the altitude up to 5000 ft (1524 m) AGL (FAA, 2017; 2021).

To ensure e-VTOL safety in urban areas UAM flights will be performed at under 1500 ft (457 m). However, there is expected an increase of commercial UAM operators and flights within Class G airspace, therefore the operation of these aircraft at a low altitude creates some problems and threats for ATC across uncontrolled and controlled airspaces within metropolitan areas. In this case, these new vehicles will be allowed to operate within 3000 ft (915 m) of the AGL (Shrestha et al., 2021; Conors, 2020; Vascik et al., 2018).

The International Civil Aviation Organization (ICAO) classifies seven airspace classes (A-G) based on separation, clearance, traffic information, and flight rules, dividing into two, controlled and uncontrolled areas defined as instrument flight rules (IFR), and visual flight rules (VFR) (ICAO, 2018).

Class A Airspace - Class A airspace is defined starting from 18,000 feet Mean Sea Level (MSL), up to and including flight level, FL 600

Class B Airspace - Class B airspace is the height between the ground level and 10,000 feet of Mean Sea Level (MSL) around the busiest airports of the country.

Class C Airspace - Class C is the airspace defined between the ground surface and up to 4,000 feet above airport elevation in the flight regions around airports with an operational control tower and radar approach control. Class C airspace covers a five-nautical mile (NM) radius around the airport that extends from the ground level up to 1,200 feet and an outer radius of ten NM between 1,200 feet and 4,000 feet.

Class D Airspace - Class D airspace is a height between the ground level and 2,500 feet above airport elevation with operational control towers at the airport.

Class E airspace - Class E airspace begins from 1,200 feet AGL and extends up to 18000 feet MSL, however, it can start at 700 feet AGL or even at the surface with extensions to 18000 feet at MSL.

Class G airspace - The class G airspace is an uncontrolled area, which

depends on the class E definition. Class G starts from above Ground Level (AGL) up to 700- or 1200-feet ceiling which consists of the floor of the E class airspace, Figure 4.

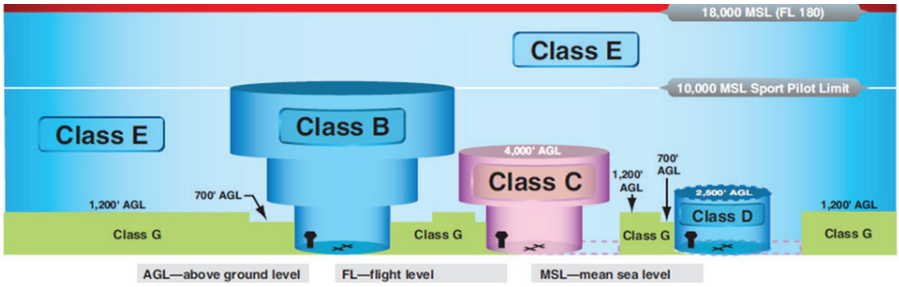

Figure 4. *ICAO airspace classification (A-G)*

Several studies proposed the use of the FL up to 5000 ft with the defined path and zones, while others suppose that airspace for UAV flight is preferrable unlimited and open for fully autonomous aircraft because high traffic densities of urban flights will performed in all airspace classes, excluding Class A (Bauranov and Rakas, 2021; Thipphavong et al., 2018). However, the use of the traditional ATC concept for UAM operation needs to completely change all airspace policy which is an expensive and time-consuming process. It is evident that the air traffic management concept for UAM operations will be conducted separately, according to the newly issued set of ATC standards and regulations (Jang et al., 2017), nearly confirming our hypotheses. Despite many studies and discussions with aviation authorities, common coherence to set up the optimized structure of the ATC management for UAM operation has failed.

4.4 Urban Air Mobility Infrastructure

Practicability Urban Air Mobility development relies on specially founded infrastructure to ensure safe take-off and landing of vertically operated aircraft. The feasibility requirements are possible thanks to the design of a new concept of ultra-compact vertiport facility allowing efficient operations of e-VTOLs, unlike traditional airports which do not need a setting of runways (Birrell et al., 2022), Figure 5.

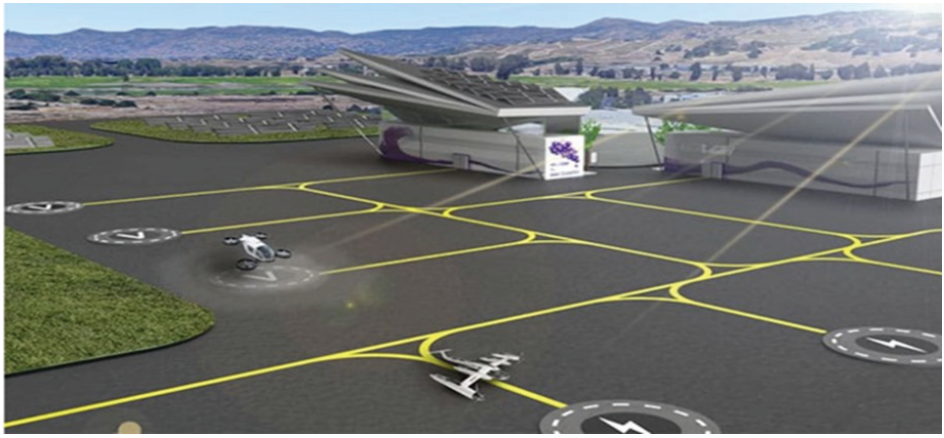

Figure 5. *Typical Veriport design and vertihub. Source: (Meadhunt, 2023)*

One of the first steps to perform assuming flight UAM operations is the physical infrastructure necessary to evaluate and identify appropriate area urban vertiport placement for each takeoff and landing of aircraft. A significant requirement for vertiport design and construction concerns the impact on flight safety and operational safety of this infrastructure, moreover, passenger comfort considerations are important to arrange procedures for check-in, security check, and boarding that can influence vertiport operations (Macias et al., 2023). Deployment of the UAM business model will demand widening vertiport infrastructure, on-site installation of charging stations enough for every landed air vehicle, IT infrastructure for permanent communication, parking area, and landing pads. Depending on population size, flight growth pace, passenger demand, nearby buildings settlement, and a variety of different dimension facilities, infrastructure can be classified, vertihubs, veriports, vertipads, rooftop landing areas. Islands and countries with water resources can design their new infrastructure near the seafront or baseline to arrange above-sea territorial flights (Choen et al., 2021).

It is important to note that worldwide consideration around vertiport design has various approaches that play an important role in drafting the first vertiport design guidelines in the current situation. Initially, the common term UAM aerodrome (vertiport) was introduced in 1st version of the UAM Concept of Operation (ConOps) published by FAA (2020), describing basic conceptual principles, responsibilities, and roles, in which UAM flight operations are conducted. Following the FAA publication, NASA (2020) has issued the UAM Vision Concept of Operation (ConOps) where it stated its understanding of designing vertiports. The Manual under reference Doc 9261-AN/903 in the fifth edition released by ICAO (2021) as the last reissued version. Recently released a preprint option of a new edition vertiport design guidelines, by FAA

(2022), updating the previous version.

In the document SC-VTOL-01 issued by EASA (2019) "Special Condition Vertical Take-Off and Landing (VTOL) Aircraft'', introduced the term vertiport in the first draft transferring to European UAM applications.

The document contains an initial description of the vertiport, as a plot of land or water, as well as an equipped structure intended to be used for the landing and take-off of e-VTOL aircraft. However, the document did not attach any specific requirements addressing the propulsion unit and battery, passenger handling, and service facilities providing either charging, refueling, and maintenance. Extending the generic definition of the vertiport was developed by EASA (2022) named "Prototype Technical Specification (PTS-VPT-DSN) for VFR Vertiports". Finally, the report presented by the Organisation for Economic Co-operation and Development (OECD) mentioned the question of integrating drones into the transport system (ITF, 2021), considering both cargo and passenger air vehicles. Noise features and the environmental impact of low-altitude flying devices are identified as the main problems, which are necessary while designing future vertiport projects.

5. Urban Air Mobility Passenger Network Design

At the commencement stage, Urban Air Mobility passenger operations in Northern Cyprus mainly can be differentiated in three ways between cities, inside of the city with associated sub-urban connections, and Airport Shuttle services. According to the selected starting point across regions and vertiport locations by size and resource provisions can be defined mobility needs of the population. Upon evaluation of the needs and potential demands of clients, a suitable frequency of flight and vertiport network management will be arranged between selected destinations, which will be conveniently reachable. Developing theoretically a vertiport network in Northern Cyprus may consider large cities with higher populations such as, capital Lefkosa, Bay areas Gazimagusa, Gozelyurt, Lefke, Iskele (Bafra), and the most popular region with touristic capabilities and attractive activities Kyrenia (Girne).

The UAM market potential covering the mentioned cities can be analyzed by applying a multi-modal transportation network, which UAM will provide servicing single point-to-point leg or multiple destinations designed for commuting, business, or private trips (Bulusu et al., 2021), respectively. Further analysis defines sub-urban air mobility vertiport networks based on personal needs (Venkatesh et al., 2020) from core cities. Based on data-sets preferable to establish an eight-line vertiport network focusing on site selections next to frequently used commuting routes affordable for users and places where traffic congestion is faced.

Table 2. *Use-Case specification for UAM operation*

Journey Features	Intra-City UAM	Inter-City UAM	Airport Shuttle
Route	Intra and sub-urban	City to City	Town Centers
Range	Up to 50 km	50-150 km	Up to 150 km
Average Speed	80-100 km/h	150 km/h	100-150/km/h
Frequency	Daily	Daily	24 hours
Network Type	Point-to-Point	Point-to-Point	Hub and Spoke
Demand Estimation	Low	Low	High
Payload (PAX)	4-5	4-5	4-7

In order to manage the UAM network and its effective operation it's important to define a prevalent business model for passenger transportation, meanwhile taking into consideration e-VTOLs technological aspect with suitable performances for the intended region as well as economic feasibility of operations (Ernest et al., 2023). Three selected use cases are acceptable, especially for Northern Cyprus that may be applied in the near future, Table 2.

These three use cases are aimed at serving locals and business passengers in a more time-efficient manner than current transportation modes to avoid congestion problems to ensure time-saving transportation. In the context of UAM operation in Northern Cyprus, different city network applications are considered to define which destinations are feasible in point view design of vertiports and the economic ability of the future project. The project focused on eight different destinations and one use case carrying passengers between regional cities. Taking into account population density, size of the city, and high-rise buildings height the designed network map shows that the most intensive UAM operation is expected to cover Lefkosa, Kyrenia, Famagusta, Lefke, Guzelyurt, and Iskele regions (Bafra), Table 3**.** Mission profiles for all destinations are similar and consist of five flight segments. The requirements to the mission profile for proposed use cases typical for a one-way flight, start from standard procedures of vertical take-off with short hover, climb, transition on cruise phase, descent with short hover again, and finally the landing. In point of view, the small territory of Northern Cyprus itself and its cities to perform air taxi functions within urban areas seems impossible within 5-7 years.

Table 3. *Route destination for UAM operation using the business model*

Inter-City Routes	Distance	Airport Shuttle	Distance
Lefkosa-Gazimagusa	55.2 km	To Lefkosa	14.1 km
Lefkosa-Bafra	65.6 km	To Kyrenia	25.6 km
Lefkosa-Kyrenia	17 km	To Guzelyurt	46.2 km
Kyrenia-Guzelyurt	31.9 km	To Gzimagusa	39.0 km
Kyrenia-Gazimagusa	64.5 km	To Bafra	56.6 km
Kyrenia-Bafra	69.3 km	To Lefke	60.2 km
Gazimagusa-Bafra	32.5 km		
Lefke-Bafra	115 km		

The Intra-City use case covers the flights conducted within the periphery of the city and suburbs of North Cyprus are not feasible economically because of the very close locations of residential areas. These flights can be carried without a specific scheduled time, which is based on a particular request, because the UAM service relies on-demand calls. Connections between two cities in terms of Urban Air mobility referred to an Inter-City use case which measures the distance over 100 km in large megapolises (Asmer et al., 2021), however, Northern Cyprus does not compliance with the proposed criteria, because of its territorial belonging, because the maximum distance between large cities Lefke-Bafra consists of 115 km. Therefore, to fulfill the transportation obligations a specific e-VTOL-capable vehicle is necessary with optimum performance. Inter-City use case focused on Northern Cyprus cities, the Lefkosa is the largest city with a high population. To provide efficiency of Inter-City air-taxi service in Northern Cyprus, the air vehicle must cover a transportation range of not less than 30 km for short distances and an average of 150 km for long distances.

The Girne-Lefkosa line, which consists of 17 km, is excluded due to intensive mutual travel relations, despite the very short distance. Because of relatively short flight distance ranges on a UAM network within Northern Cyprus, suitable average cruise speed options are taken at around 100 km per hour. The air vehicle with lower energy consumption and use of multirotor configurations capable of carrying up to four people is most appropriate for Northern Cyprus, Figure 6.

Figure 6. *Northern Cyprus UAM Operation Network Mapping*

Furthermore, the rising of many high buildings in core areas of cities belonging to Northern Cyprus regions might be a source of problems first, airspace management and air traffic control as well as by ensuring communication and navigation systems as an example distortion of radio waves and determination of wind speed and direction. Climate change and large amounts of fossil fuel consumption, which generate carbon dioxide (CO2) emissions, have challenged the community to create a zero-fuel concept in the aviation industry. Airport areas near residential locations are most affected by pollution by using aircraft engines, Auxiliary Power Unit, electrical power, and ground transportation which is contributing to increasing emission levels (Okten et al., 2023). Airports having a suitable infrastructure are rapidly adapted to manage UAM operations and may easily form the Airport Shuttle service interface with regions to fully prepare vertiports. Management of UAM operation across the existing airport significantly impacts on reducing CO2 emissions thanks to zero-emission e-VTOL aircraft.

Enhancing airport connectivity by implementing UAM services with the regional centers is one of the best possible measures to decrease travel time on congested roads. The advantages and problems of Airport Shuttle service using e-VTOL aircraft have not been analyzed yet in Northern Cyprus, and any reports have not been introduced to the public. The Airport Shuttle service includes flight connections between the airport and city centers providing arriving passengers to carry in selected routes as well as vice versa. Most probably this service considers scheduled bases to proper management of flight consequently as well as to provide back trips with the same punctuality.

As per the analysis of involved experts, the Airport Shuttle service is considered to be less than 30 km (Volocopter, 2019), however, the majority of flights are set by the routes between airports and city centers and sub-urban

which in most cases is more than 30 km and reaches about 100 km. In this context Northern Cyprus has good potential to organize Airport Shuttles as the priority within the island, Figure 7.

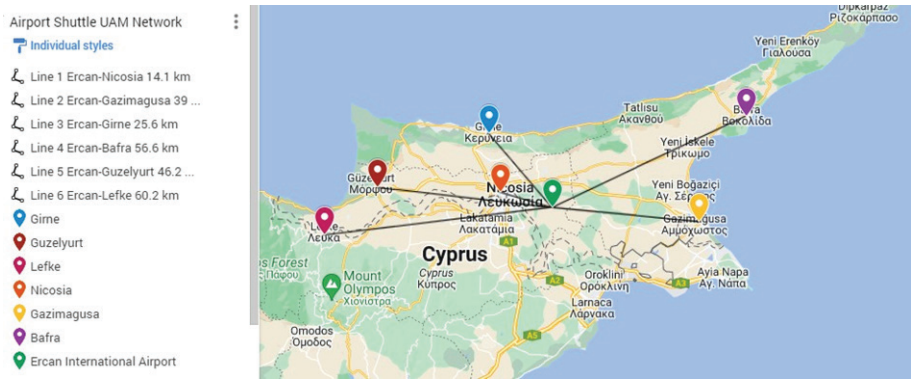

Figure 7. *Ercan-Airport Shuttle UAM Operation Network*

Tourist areas in Girne, Bafra, and Lefke will be the most popular destinations to apply UAM operations, which can be expected as an economically feasible route. Probably, requirements to use Airport Shuttle UAM services that will cover all regions will be very high taking into account local population attractivity.

Particularly, the integration of common structures at the commenced stage of UAM operation is one of the challenges that is immediately important, in the way of development of business models. Inter-collaborative actions of airport systems with Urban Air Traffic Management (UATM) and infrastructures such as vertiport and digital supply significantly impact to ensure flight safety and effective operation throughout the concept.

6. Social Acceptance and Policy Implementation

Entry to service and expansion of the UAM project is an important factor for society as a real alternative transportation mode opposite to all the available ground and air transportation systems. Depending on public acceptance it could face direct opposition from people and put much pressure on the stakeholders and politicians. Safety issues, noise requirements, carbon emission, privacy, use of land areas as well and a daily visual disruption with the beginnings of UAM operations are the most crucial sociological challenges in the context of public acceptance (Pons-Prats et al., 2022). The recent public survey conducted by EASA (2021) validates the social concern of the population in this matter and to decide the implementation of a special program to fulfill the societal demand and to prepare the future regulatory framework.

Activation of UAM operation in the near future calls for establishing new regulations and certification standards. The Federal Aviation Authority (FAA), the European Aviation Safety Agency (EASA), and the Civil Aviation Authority of China (CAAC) are centers OEM for e-VTOL aircraft and all three organizations are responsible for establishing regulations for certification including airworthiness, operator certification, and infrastructure standards to provide aviation safety. However, states intending to apply e-VTOL operations are responsible for introducing the proposal of airworthiness standards for certification of e-VTOL aircraft as well as ground infrastructure according to compliance with international standards. The object of these actions is to demonstrate assistance in developing the regulatory bases to ensure the flight safety and operation of e-VTOL aircraft providing a successful business model of UAM mode transportation across Northern Cyprus is not excluded.

7. Conclusion

The project associated with Urban Air Mobility implementation is subject to discussion at every level: from the air vehicle manufacturing processes, vertiport and network design, policy development, and social acceptance. UAM-based passenger transportation concept needs to establish a successful nexus with other infrastructure for airspace management at low altitude flight over urban areas, and ground facility management as a vertiport operation. The integration of air vehicles with different sizes and performances as well as operation modes assumed to provide different business model activities. The passenger transportation modes which contain several business models include mainly three directions; Intra-City, Inter-City, and Airport Shuttle. To evaluate the future of UAM development in Northern Cyprus is very hard to predict because of the different forms of uncertainty applicable to the current situation. However, focusing on our case of interest, namely passenger transportation mode, trying to define the e-VTOL configuration ensures urban air transportation in Northern Cyprus.

Furthermore, properly defined air vehicle configuration impacts on selection of business models enabling huge opportunities among stakeholders, willing to collaborate in order to grow the UAM concept in Northern Cyprus. The study analysis shows that the distance between regional city locations covered in Northern Cyprus is a maximum of 115 km and 17 km minimum acceptable for UAM operation. Thus, air vehicles with average cruise speed and flight range are more suitable to perform flight operations of the intended business model within Northern Cyprus airspace usage. UAM is not yet a blowout and presents a comprehensive solution to the congestion problems in urban areas. However, the successful operation of UAM depends on the capability of e-VTOLs to offer technological performance in battery capacity and to provide enough passenger seats per flight to become an efficient

transport mode. Further research should be conducted to study price policy, estimated infrastructure cost including vertiport and its sub-parts, operational assessment, and maintenance cost, to define feasibility application of UAM in Northern Cyprus.

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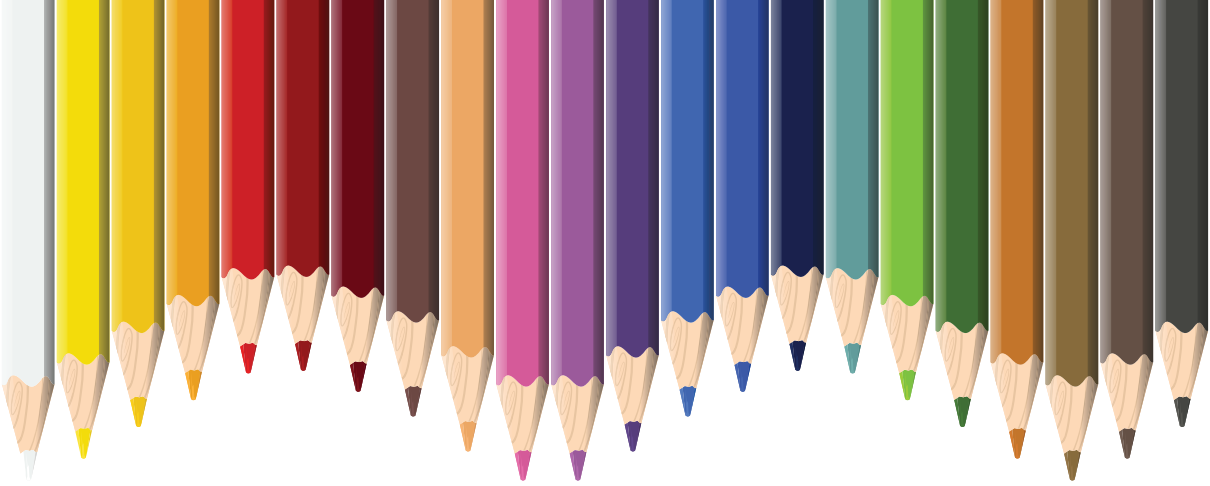

Chapter 4

POLITICAL STABILITY AND ECONOMIC GROWTH

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I. INTRODUCTION

It is seen that one of the issues that have gained importance recently is the fields of economics and political macroeconomics. Many studies have examined the impact of politics that shape the future of the country on macroeconomic performance. It has been argued that sometimes the political formations that have the power to govern the country reflect their ideologies to the economic policies, and sometimes they affect the country's economy due to the populist policies they implement with their efforts to increase their votes. Fluctuations arising from political inconsistency and instability increase the possibility of affecting the country's economy at the macro level. The Organization of the Petroleum Exporting Countries, which controls a large part of the oil reserves that have a high share in world energy consumption, is an important stakeholder in globalizing economies where energy needs are increasing day by day.

It is accepted that the current political structure and system stability in countries have important effects on growth. Stability means continuity in a certain order. Depending on this definition, the concept of political stability can also mean that existing governments remain in office without change. However, this situation is in contradiction with the examples of North Korea today and Germany after the First World War, the Soviet Union, and more recent examples such as Libya, Iraq, and Afghanistan. Although the leaders in these countries remained in power for a long time, they became the most unstable countries in the world.

The concept of political stability differs to a certain extent from the content of the concept of stability. Although there is no definite definition of the concept of political stability. The concept can be understood more clearly when the causes of political stability/instability are examined. In this context, situations such as regime change, frequent government changes through legitimate and illegitimate ways, social violence, protests, terrorism, military coups, civil war, political assassinations, economic and financial crises, political polarization, corruption, ethnic division are the causes of political instability forms.

Political stability is seen as necessary for growth and prosperity. When individuals feel more secure in the future, they may be more willing to consume and invest. Exceptionally, in some cases, political stability and economic growth should be considered together. However, in such a situation, it is not correct to accept political instability as the main reason for growth. Considering the relationship between political stability and economic growth, it is a generally accepted approach that there is a close relationship between the two concepts and that political stability provides economic growth.

The role of oil is a very important energy source in the energy markets.

The general economy has caused it to become a topic that does not fall off the agenda in the world economy. The oil price movements affect not only the energy markets but also the overall performance of the economy. Since the world oil crisis in 1970, the volatility of oil prices has been taking great attention from politicians and employees. In those years, economies around the world faced high inflation rates after the rapid rise in international crude oil prices.

The oil prices, which felt the effects on the country's economies at the macroeconomic level due to the supply fluctuations after the Second World War, were determined externally with the establishment of the Organization of Petroleum Exporting Countries (OPEC) and its destructive effects gradually increased (Akinci, Aktürk, & Yilmaz, 2013). In 1973, with the oil embargo of OPEC member countries and the first oil crisis that affected the whole world, the price of a barrel rose from 3.4 dollars to 13.4 dollars. The rise in oil prices affects both oil-importing and oil-exporting countries. Inflation, current account deficits, and budget deficits are caused by the rise in the price of oil in oil-importing countries. On the other hand, the rise in oil prices causes to expansion in income levels in oil-exporting countries (Alagöz, Alacahan, & Akarsu, 2017). The increase in oil prices caused increases in production costs in many sectors, resulting in a decrease in production resulting in inflation and an increase in unemployment (Doğrul & Soytas, 2010).

While making political stability a must-have feature in all political regimes from advanced democracy to absolute autocracy, it also suggests that political stability/instability can be an important factor in explaining the differences in economic growth and growth development (Carmignani, 2003).

The concept of economic growth has had an important place in the evolution of economic thought in each of the successive schools of economics. In this direction, economic growth theories that have been put forward one after another in the historical process have tried to explain the differences in economic growth and development/income levels between countries in the conditions of the current period. Economic growth takes place mainly with two factors, such as an increase in the physical amount of production factors per capita and/or an increase in average productivity (Yalçinkaya & Vedat, 2017).

II. OPEC COUNTRIES

The purpose of the OPEC organization can be said to be to safely coordinate and stabilize the profitable and sustainable oil supply, as well as to maintain the order of the market. Additionally, the union aims to unify the oil policies of the member states and to ensure a common act. It can be defined as providing oil for consumers, a regular return for producers, and a return on capital for those who put capital into the industry and invest.

The OPEC can be characterized as the first international organization in the Southern part of the global world. This union consists of oil-exporting countries. This union was founded by five founding members at the Baghdad (Iraq) Conference in 1960. OPEC was founded by Kuwait, Venezuela, Iran, Saudi Arabia, and Iraq. The founding purpose of this organization was to join forces against the hegemony of Western multinational oil companies, which control the international oil market, in determining both the oil price and payments. The primary objective of the union is to act together to protect the interests of oil-exporting countries and to focus on the economic difference between North and South. Establishing a new mechanism to regulate the trade relations of Global South producers with the North was among the primary objectives.

The OPEC organization, which holds nearly 80% of the world's oil reserves is of great importance in terms of being the only organization that determines the amount of production and oil prices in its member countries.

As a group of oil exporting countries, they used their power to manipulate their oil as a sanction to cut the support of Western countries to Israel during the Arab-Israeli war in 1973, namely the first oil crisis. The first oil crises arose from the reduction in oil production and rise in oil prices by oil-exporting countries, which leads to a shortage of oil supplies, as well as caused panic and uncertainty.

The international economic crisis, known as the 1973 Oil Crisis, emerged as a result of oil-importing countries borrowing from banks and industrializing countries increasing interest rates to control inflation. While this crisis pointed out the importance of issues such as energy policy apart from security in terms of the economy and relations of countries in international relations, it also showed the existence of organizations that are not under government control such as OPEC, and that states, although strong in protecting and ensuring their borders, are also fragile.

The global economy represented the main risk for the oil market in 2010, as the international macroeconomic uncertainties and the financial system were putting pressure on the economies due to the increasing risks. The rapidly increasing social unrest all over the world affected both supply and demand, although the oil market remained partially stable. The oil market was stable between 2011 and mid-2014. However, the upward trend, especially in the Asian region, continued to change with the oil demand. One of the results of the multilateral focus of the world's global powers on environmental issues was the Paris Agreement, which was signed by all OPEC Member States in 2015. The United Nations Framework Convention on Climate Change Conference of the Parties continued to attend meetings of OPEC member countries to consult and exchange views. State of the markets and economic conditions,

at the end of 2016, OPEC and non-OPEC oil-producing countries had to sign the Declaration of Cooperation to rebalance the market and support oil market stability. Between 2010 and 2020, OPEC's efforts to stabilize the global oil market in the interests of both producers and consumers were appreciated.

By the 2020s, the COVID-19 pandemic, which emerged in Wuhan, the capital of China's Hubei region on November 17, 2019, had an unprecedented impact on OPEC member countries as it affected almost every aspect of daily life. The pandemic has had a detrimental impact on almost all sectors of the global world economy. Like all organizations, OPEC had to take necessary and robust measures to slow the spread of the Pandemic virus and counteract its effects. Curfews caused a rapid decline in oil demand and the filling of global reserves. These developments have forced OPEC and its collaborating partners to increase their collaborative efforts to restore stability. As a result of these developments, the largest and longest voluntary production arrangement in the history of the oil market was made.

OPEC draws attention as it symbolizes the international conflict of interest between the North and South regarding the sovereignty over natural resources, in which it is at the center, and especially the effort to play a more active role in global issues related to their interests. OPEC, which has 13 members as of 2020, continues to be the subject of international relations, being at the center of the global economy, global politics, climate change, energy, and security policies, with the environmental problems caused by oil in the uncertainties of the global economy and carbon emissions.

Saudi Arabia was the country with the largest oil reserves in the world until 2012, with the new resources discovered in Venezuela. The country with the largest oil reserves in the world become Venezuela. With a reserve of 300 billion barrels, 18% of the world's reserves are located in Venezuela. After Chavez's presidency, Venezuela started to comply with OPEC decisions. Venezuela convinced other OPEC countries to comply with these decisions, and OPEC has achieved stability in its policy of controlling oil quantities and oil prices. The increase in oil prices has caused the reaction of many countries, especially the United States (Emrah, 2014). King Salman Bin Abdulaziz Al-Saud is the King of Saudi Arabia, one of the founding member countries of OPEC. The brief information of OPEC member countries;

Algeria is OPEC's largest regional country. The country declared its political independence in 1962. The largest income items of the country's economy are oil and gas. Algeria became a member of OPEC in 1969.

Angola is Africa's second-largest oil producer. The country's economy shows rapid economic growth with its oil reserves. Angola joined OPEC in 2007.

The Republic of the Congo is a producer and exporter of crude oil. Besides oil production in Congo, handicrafts, agriculture, and industry are other sectors of the country's economy. The Republic of the Congo gained full member status of OPEC in 2018.

The Republic of Equatorial Guinea is a producer and net exporter of crude oil, as well as a producer and exporter of natural gas. The country became a full member of OPEC in 2017.

Agriculture and tourism sectors are other important pillars of the economy in Gabon, which is an oil producer and net exporter. Gabon became a full member of OPEC in 1975 but left in 1995. Gabon rejoined the Organization in 2016.

The Islamic Republic of Iran is one of the oldest civilizations in the world. It is among the founding countries of OPEC. Although Iran has the fourth largest oil reserve in the world with 158 billion barrels of oil reserves, its production is low due to sanctions. In 1958, it was transformed from a monarchy to a republican form of government. In addition to oil, natural gas, and sulfur are among the underground riches in the country. It is one of the Founding Members of OPEC.

Kuwait is one of the most populous founding members of OPEC which is located on the Arabia Peninsula. The country has a comfortable economy.

The most important source of the economy of Libya is oil which become a member in 1962, is oil. Because of the income generated from energy, Libya is one of the African countries with the highest GDP.

Nigeria, which gained membership in 1971, is the most populous country in the organization. Nigeria's other underground riches include coal, tin, and natural gas.

The United Arab Emirates, which became a member of OPEC in 1967, consists of seven emirates. After the discovery of oil in the country, it turned into a modern and developed country.

Venezuelan President Nicolas Maduro is one of the founding countries of the OPEC. In addition to oil, natural gas, gold, and diamond reserves are also found as underground riches in the country.

III.ENERGY CRISIS

The need for oil has accelerated with the industrial revolution and mechanization. As a result of this situation, crude oil has maintained its position as the world's most strategic energy source since the middle of the 19th century. The oil crises experienced by the world economy since the 1970s have had significant effects on the economics literature. Every fluctuation in oil prices

affects the macroeconomic variables of almost all countries in the world (Kakişim, 2019).

The energy needs of growing and developing countries are increasing day by day. This energy need is increasing due to the growth of industry, population growth, and many other factors. Due to the increasing tendency of this need, it pushes countries to produce or find alternative energy sources. The tendency to make energy cheaper is seen as a common desire of all countries. The desire to achieve this goal with the right strategy and appropriate policies in energy is present in all countries. Although countries that benefit from the underground richness of their geography are in a lucky position in terms of energy. The countries that do not have the same underground resources are constantly searching for cheaper energy alternatives. These increasing energy demands are reflected in the country's macroeconomic indicators as a foreign trade deficit and constitute a large part of their imports.

While oil was an imported energy raw material source for many countries in the past, today natural gas constitutes a large part of the energy need. There have been nine major oil crises in the last fifty years.

During the Arab-Israeli war, the aid of the United States of America to Israel was met with a reaction from oil exporting countries. In 1973, OPEC reduced oil production. The oil price, which was at the level of 1.8 dollars, went up to 12 dollars. OPEC limited production and increased oil prices. The New York Stock Exchange lost billions of dollars. The economic difficulty in European countries causes changes in the governments and the USA rationing oil production and sales. These events take place in the literature as the 1973 Arab-Israeli war oil crisis.

The second major oil crisis emerged with the events in Iran and its transition to the Islamic Republic. The war between Iraq and Iran in 1980 caused the crisis to escalate. The war between these two oil-producing and exporting countries caused them to reduce their oil production by 85%. The decrease in production all over the world by 10% caused oil prices to reach the level of 35 dollars. These developments and their effects took their place in history as the 1979 Iranian Islamic Revolution and the oil crisis.

The oil crises experienced led to the search for new basins outside the known oil regions. While these efforts caused a decrease in oil revenues in Saudi Arabia, they pushed the country to increase production. These developments caused a decline in oil prices below 10 dollars. These developments took their place in history as the 1986 new resources crisis.

The developments in the Gulf War, which started with Iraq's invasion of Kuwait in 1990, caused volatility in oil prices. Uncertainty in production with Saddam Hussein's invasion of Kuwait worried the markets. As a result of

these developments, oil prices rose to the level of 40 dollars. This period was named the 1990 invasion of Kuwait and the Gulf War Oil Crisis.

The problems experienced by Asian countries such as Thailand, Indonesia, and Malaysia, which grew unevenly, also negatively affected the world markets. The crisis decreased demand in countries such as Indonesia, South Korea, and Malaysia, especially Thailand, which grew uncontrollably. The decrease in demand, along with the period when OPEC increased production, caused a decrease in oil prices. The oil prices dropped from $25 to $10. These developments are called the 1997 Asian economic crisis.

With Russia's increase in oil production and the 'dot.com' crisis, the shrinking United States economy was added to the September 11 attack, and OPEC tried to prevent the decline in oil prices by reducing production. However, these efforts could not prevent the 35 percent decrease in prices. These events were called the crisis caused by the September 11, 2001 attacks.

With the 2003 Iraq War, oil production was stopped in Iraq, which was attacked by the USA. In 2002, the oil production of 6 million barrels per day in Iraq decreased by 70% and fell below 2 million barrels per day in 2003. During the wars and conflicts, production tended to decrease. Due to these developments, oil prices rose to over $70 after a 20 percent increase. This crisis was caused by the 2003 Iraq War.

The US threats to Iran, the decline in the US dollar, the rapid increase in demand for oil from China and India, and the geopolitical tensions in Pakistan, Algeria, and Kenya have skyrocketed the oil price. Prices hit $147 per barrel in June 2008. Then the 2008 global economic crisis shook the whole world. At the end of 2008, oil prices fell to 36 dollars, the fastest decline of all time. After the global economic crisis in 2012, the price of crude oil, which started to rise, reached 128 dollars per barrel. These developments took their place in the literature as the 2008 crisis.

The US doubled its oil production to 10 million barrels a day in 2014. On the other hand, as OPEC members did not reduce their production, excess production emerged in the oil market. These developments brought crude oil prices down from $115 to less than $30 in June 2014. Many energy companies in the USA went bankrupt one after another. OPEC has decided to cut 1.8 million barrels per day. These events are known as the 2016 oversupply crisis.

Due to the turbulence of the world economies because of the coronavirus, the oil prices started to decline and the conflict between Saudi Arabia and Russia reached the lowest levels in history. As a result, Russia and Saudi Arabia agree to reduce oil production. The oil prices dropped to 31 dollars, as the Saudis supplied more oil to the market. While these events are described as the 2020 Oil Crisis, they are known as the last oil crisis.

International agreements on energy will be a factor that delays the possible economic crises that we may encounter in the coming years. Political power has come to a crossroads. It is urgent to develop a radical strategy that aims to use national resources on a large scale for the benefit of society. The international laws of formation in the 21st century are like the secret rulers of the stage. Uncertainty has no place in the energy that affects every aspect of all life (Kaynak, 2003).

The presence of oil in the Middle East region has made the region a center of attention. However, the richness of these underground resources has also led to major problems and threats for both regional and global actors. For this reason, the Middle East region, as an energy crisis vortex, is a region where many crises have been experienced in the historical process. However, it is seen that many international actors cannot move away from this region (Özcan & Cihan, 2022).

IV. POLITICAL STABILITY IN OPEC COUNTRIES

To define the concept of political stability, political behavior, and policy definitions must be clarified. Political behavior is the act of distributing power in any way by any person in the community to make decisions for the community. These behaviors find the chance to pour themselves into daily practices through different channels. The first of these is the elections. If any disruption occurs in the distribution of power and the rule of law is violated, political authority begins to atrophy and leads to abuse of power (Ake, 1975).

Political stability has been agreed upon in the literature, and although there is no definite definition, today it is focused on three options. The definition of political stability has been defined mainly through political instability. These options are social disorganization, myopia-polarization, and weak government approaches. Among the different views, the one that gains the most weight is the view that measures stability with government/administration changes.

In the medium and long term, political instability leads to the nonfunctional of ruling parties, heads of state or institutions, ineffective investment decisions, arbitrary practices, and authoritarianism. Therefore, determining factors such as the quality of institutions, human capital expenditures and openness of the country can have significant effects on economic growth in such countries.

Ineffective policies implemented in countries with significant natural resources trigger factors such as pressure and corruption that make it difficult to transition to a competitive industry. Therefore, economic growth and development are not reached the desired level. Even some countries that are rich in natural resources do not have the desired level of inflation due to the inability

to use these resources effectively and not to provide a sufficient contribution to the country's economy.

As stated by many researchers, the main point of the Curse of Resources hypothesis is that the medium and long-term growth rate of natural resources in many countries rich in minerals, oil, and other natural resources is negative or slower than in countries that are less equipped in terms of natural resources. Karamelikli, Akalin, & Arslan, (2017) used World Bank data from 2010, the per capita GDP in Nigeria in the early 2000s was lower than when independence was declared in the 1960s. Nigeria is not alone in this regard. Between 1965 and 1998, this ratio was -1 in Iran and Venezuela, -2 in Libya, -3 in Iraq and Kuwait, and -6 in Qatar. All of these countries are OPEC members and are very rich in oil and are the main oil exporting countries. For all of OPEC, this ratio averaged 1.3 over the same period, which is below the average of 2.2 for all low-middle-income countries (Karamelikli, Akalin, & Arslan, 2017).

In countries with political stability and predominantly single-source and sector-oriented economic models, it is necessary to focus on variables such as civil and political freedoms through the effective use of natural resources. When country groups are analyzed and compared, countries that implement effective natural resource management have higher welfare indicators such as per capita income, average life expectancy, environmental issues, higher education, and health expenditures.

Algeria was a French colony and gained its independence in 1962 at the end of the liberation war that started in 1954. Algeria was ruled by the National Liberation Front until 1989. The transition to the multi-party regime started with the Constitution adopted in 1988. Thus, the process of political and economic liberalization began. This liberalization process was interrupted by internal turmoil between 1992-99. Abdelaziz Bouteflika, who was elected to the Presidency in 1999, continued his duty by winning the elections held on April 9, 2009, and April 17, 2014. Despite his discomfort, Bouteflika resigned on April 2, 2019, as a result of the popular movement (Hirak) that started after the announcement of his candidacy for the Presidency for the fifth time. In the elections held in 2019, Abdelmadjid Tebboune was elected President with 58.13% of the votes. The constitutional amendment, which is among the main promises of President Tebboune, was submitted to a referendum on 1 November 2020 and accepted. Early general elections were held in Algeria on 12 June 2021. As a result of the elections with 23% turnout, the National Liberation Front (FLN) won 98 seats, the independents 84, the Social Peace Movement (MSP) 65, the National Democratic Union (RND) 58, the Future Front 48, and the Homeland Building Movement 39 seats. The cabinet of Aimene Benabderrahmane, who was assigned to form the government, was determined on 7 July 2021.

Immediately after Angola gained its independence from Portugal in 1975, it went through a 27-year civil war with short pauses. The civil war on the fronts of the "People's Movement Party for the Independence of Angola" (MPLA) and the "Party of National Unity for the Complete Independence of Angola" (UNITA) ended with the agreement signed in 2002. Angola started to live in peace and to focus on domestic issues in 2002. The MPLA has been in power since 1975. After the death of founding President Neto in 1979, President Jose Eduardo Dos Santos ruled the country for 38 years until August 2017. In the August 2017 elections, Dos Santos withdrew from his candidacy, and Joao Manuel Gonçalves Lourenço, the then Minister of Defense, was elected as the third President. The current President Lourenço and his party MPLA won the general elections held on August 24, 2022. Angola is one of the important countries in Africa with its internal stability. Administrative and economic reforms initiated by President Lourenço are followed by the international community. The government focuses on structural issues such as the population registration system, education, and health. Angola, which has a political weight in its region and throughout Africa, is still one of the largest military powers in Central and Southern Africa. Angola prioritizes the peaceful resolution of wars in Africa and strengthening cooperation in the continent in its foreign policy.

The Republic of Congo, which was under French colony, gained its independence in 1960. In 1963, it turned to the one-party regime, and the socialist tendency has strengthened since 1968, the Congo Labor Party, which is still in power today, was established and the country was renamed the People's Republic of Congo in 1970. With the disappearance of the bipolar world order, a "National Conference" was convened in Congo, as in many African countries, in 1991, the name of the Republic of Congo was returned and a new Constitution was adopted in 1992. In the same year, the multi-party system was passed, and elections were held for the first time in the multi-party system. After the first multi-party election, political conflicts increased and conflicts that turned into civil war took place. Internal turmoil ended in 1997 and the Constitution was abolished, but ethnic-based conflicts continued until 2003 in the Pool area, close to the capital Brazzaville. A new Constitution was adopted in 2002. In the following years, the office of the Presidency was strengthened in the country, the term of office was determined as 7+7 years, and the office of the Prime Minister was abolished. Presidential elections were held in 2002 and 2009, again as multi-party and multi-candidate. The Constitution was amended with the referendum held on 25 October 2015. Subsequently, an election was held on March 20, 2016, to determine the President, this time for 5 years, within the framework of the new Constitution, and the office of the Prime Minister was re-established. The last presidential elections were held in 2021 and the last parliamentary elections were held in 2022.

Ecuador is a constitutional democracy governed by a Presidential system. The legislative body is the unicameral National Assembly, which consists of 137 members. The head of the executive branch is the Head of State. The President and the Vice President are elected for a period of four years, on the same ballot. In the elections held on February 7, 2021, in the country, Guillermo Lasso, the candidate of the Christian Opportunities Creation Movement and the Social Christian Party right-wing alliance, was elected President.

Gabon is a unitary republic. The characteristics of the state are defined as secular, democratic, and social. Administratively, it is divided into 9 main provinces. The executive consists of the President, who is the head of state, the Prime Minister, who is the head of the government, and the members of the Council of Ministers appointed by the Prime Minister. The death of President Omar Bongo, who had been in power for 41 years, in June 2009 marked the beginning of a new era in Gabon's political life. In the Presidential elections held in August 2009, Omar Bongo's son, Ali Bongo Ondimba, the leader of the ruling party PDG (Gabon Democratic Party), was elected and was re-elected for a second term of 7 years in the elections held in August 2016.

The Islamic Republic of Iran was established in 1979. It has its unique management style. It is stated in the Constitution that sovereignty will be exercised by the legislative, executive, and judicial organs on the axis of the Revolution Guide. Although the President is the head of the executive, the authority of domestic and foreign policy or military forces is connected to the Revolution Guide. The President is elected by the people among the candidates approved by the Constitutional Protection Council. The last Presidential elections were held in 2021.

Kuwait is governed by the Al Sabah family as a constitutional monarchy. The National Assembly has been given legislative power. The laws made by the Assembly, which consists of 50 members elected by the people, come into force after they are approved by the Emir. Ministers appointed to the cabinet from outside the parliament also take part in the Parliament and vote like elected deputies. The Crown Prince is also appointed by the Emir, but this appointment must be approved by Parliament. Executive power was vested in the Emir as Head of State with the 1962 Constitution. The Council of Ministers is appointed by the Emir. The Prime Minister and the Council of Ministers are responsible to the Emir and have no responsibilities to the Parliament. The government, by the Constitution, consists of no more than 15 members, excluding the Prime Minister. At least one member of the Cabinet must be a member of parliament.

Libya gained its independence in 1951. In 1969, Muammar Gaddafi seized power in Libya, which was ruled by the Kingdom until 1969. The Libyan Political Agreement was signed in 2015 as a result of the political dialogue

process carried out with the participation of all segments of the Libyan society under the supervision of the United Nations in the period of 2014-15. The oil blockade on the country ended in 2022.

Nigeria's form of government is the Federal Republic. The country consists of a total of 36 states and the Federal Capital Territory and is governed by a presidential system. Executive power is vested in the President, who is directly elected by the people for a four-year term. Candidates for Ministers proposed by the President to the Senate, which is the upper house of the Assembly, are first examined by the Senate and then appointed by the President as Ministers after their approval. There is no reading of the government program and no vote of confidence in the parliament. All Progressives Congress (APC) candidate Muhammadu Buhari, who won the Presidential and National Parliamentary Elections held on 28 and 29 March 2015, successfully emerged from the Presidential elections held on 23 February 2019 for the second time.

Saudi Arabia was founded by King Abdulaziz in 1932, and its form of government is the monarchy. There is a system in which the king is also the head of the government. As there is no political party in the country, general elections are not held. The members of the shura council are appointed by the king. King Salman bin Abdulaziz, who ascended the throne in 2015, is the seventh king of Saudi Arabia. The King is also the Commander-in-Chief of the army.

The United Arab Emirates was formed in 1971 with the merger of 6 Emirates, consisting of Abu Dhabi, Dubai, Sharjah, Fujairah, Umm Al Quwain, and Ajman Emirates. In 1972, Ras Al Khaimah joined the federation, becoming a federation of 7 Emirates. 84% of UAE territory is in the Emirate of Abu Dhabi. Foreign policy, security, and military matters are under the control of the Emirate of Abu Dhabi. The Supreme Council made up of Emirs of the seven emirates, is the decision-making body in the UAE. The President of the Supreme Council is the President of the UAE.

Venezuela is a federal Republic governed by a Presidential system. Nicolas Maduro, leader of the United Socialist Party of Venezuela, won the Presidential elections held in 2013, following the death of Hugo Chavez, who held the presidency in the 1999-2013 period, on March 5, 2013. As a result of the elections held in 2018, President Maduro, who received approximately 68% of the votes, was re-elected to the Presidency. On the other hand, a significant part of the opposition boycotted both elections. After the 2018 Presidential elections, the USA and EU countries impose sanctions on Venezuela. Dialogue talks between the government and the opposition continue in Mexico City. In this framework, in the fourth round of negotiations held in 2022, an agreement was reached on the release of the Venezuelan resource, which was frozen abroad, amounting to approximately three billion USD, to be used in humanitarian matters.

V. POLITICAL STABILITY AND ECONOMIC GROWTH

Although economic growth is affected by many factors such as population/workforce growth, capital accumulation, and technological advances, it is known that such factors are among the most important factors of growth. When the main reasons for growth are examined, institutional factors, geographical factors, and cultural factors have to be considered as well. It is a fact that it is accepted that the facts come to the fore today.

It is important to determine the main factors of economic growth correctly and to realize the distribution of resources correctly in terms of realizing the long-term growth targets, which are among the economic issues of the whole country. As a well-known fact, ineffective future planning may lead to economic and social erosion.

The concept of political stability has a different content from the concept of stability. Political stability includes factors such as regime change, democratic and non-democratic government changes, social violence, assassinations, protests and actions, terrorist incidents, military coups, civil war, economic and financial crises, political polarization, corruption, and ethnic division.

It is expected that economic growth will also be positively affected, as political stability will positively affect the decisions of domestic and foreign economic factors such as consumption, investment, and foreign direct investment by reducing the uncertainty that foreign investors see as the biggest obstacle to investing. However, in some countries, the opposite situation can be encountered. Political instability may enhance economic growth by activating bribery and corruption in its institutions.

Political stability depends on a functioning democratic culture. Functioning democracy, on the other hand, depends on ensuring harmony between civil and institutional authorities (Şanlisoy & Recep, 2013). The study titled political stability as the Cornerstone of economic performance by Karahan and Karagöl (2014) stated that political instability is defined as a serious problem that undermines the economic performance of countries.

An empirical analysis was conducted to answer the question of whether uncertainty may affect economic growth or not, prepared by Lensink, Bo & Sterken (1999). For this research, the econometric analysis was conducted to examine the relationship between economic growth and export, policy, and price uncertainty. The empirical findings prove the evidence that uncertainty affects economic growth. In this study, it is emphasized that policy reliability has a great impact on exports.

Political freedom has a weak effect on growth, according to the results of the study conducted by Barro (1996). At the same time, it was concluded that

the low level of political rights and the expansion of these rights promote economic growth. Contrary to the little effect of democracy on economic growth, it was underlined that the standard of living of the citizens had a strong positive effect on the tendency of that country to experience democracy in real terms.

Şanlısoy and Kök (2013) tried to explain the relationship between political instability and economic growth in Turkey. According to the findings of the study, an inverse relationship between economic growth and political instability was determined.

The study investigating the effect of political stability on economic growth in developing countries was analyzed by Gür and Akbulut (2012). The effect of political stability on economic growth in developing countries has been tried to be found by using panel data analysis. The results of the analysis confirm that political stability has a positive effect on economic growth and macroeconomic performance.

The study conducted by Turan, Demez, and Kızılkaya (2019) examined the relationship between political stability and economic growth in NIC countries with the bootstrap panel causality test for newly industrialized countries in the 2002-2017 period. The results show that there is unidirectional causality from growth to political stability in Indonesia and Turkey. The change of government, social events, violence-terrorist events, and coups are important variables that explain political instability. Countries with low political stability have to increase domestic and foreign investments to reach the targeted growth figures (Turan, Demez, & Kizilkaya, 2019).

Kalay and Çetin (2016) examined the relationship between political stability and economic growth in African countries. In their paper, it has been concluded that political instability affects economic growth indirectly, not directly. They concluded that political instability not only disrupted income distribution, but also directly affected the growth in military spending. It has been proven as a result of the findings obtained with the results of the analysis that the disproportionate increase in military expenditures or unpredictable military developments affects economic growth negatively. Political instability affects economic growth through military spending. There is a relationship between economic growth and political instability that unidirectional causality runs from economic growth to political instability. While political instability affects economic growth through military expenditures, economic growth directly affects political instability (Kalay & Çetin, 2016).

VI. CONCLUSION

OPEC is an organization established to develop cooperation between oil-producing countries. This organization aims to provide some kind of regulation by cooperating in the oil market. OPEC leads decisions on global oil production and price. The power of these countries to manipulate oil prices should not be underestimated. It can be said that Iran, Iraq, and Libya, which are the active countries of OPEC, cannot be classified as reliable oil producers due to sanctions and political instability, and therefore OPEC has lost its former market power due to political instability in Libya and Iraq. They are not a reliable producer for the buyers' markets, and their crude oil production is declining. In addition, the difficulty in finding customers to deliver its oil to the world market due to Venezuela and Iran sanctions caused OPEC to lose power.

In recent years, OPEC has begun to decline due to the loss of production flexibility in Iran, Iraq, and Venezuela, and political and economic instability in Libya and other countries. In addition, Venezuela and Iran have difficulties in finding customers to deliver their oil to the world market due to sanctions. Crude oil production in the Latin American country has decreased below one million barrels/day. Although Iran's oil production is still significant, the country cannot export oil to the countries it targets due to sanctions.

The country with the largest crude oil reserves of OPEC is Venezuela. Although the country has more oil reserves than Saudi Arabia, its total production is less than 1/10 of Saudi Arabia's production due to the political crises that it has experienced. This may be due to not adopting the right production strategies for national companies and/or their geopolitical position. Venezuela's biggest problems are due to its high production and operating costs because its oil has low API gravity and high viscosity (low viscosity oil) compared to that of the Gulf countries. This complicates production and therefore exploration activities. In addition, the country is also affected by the recent sanctions imposed by the United States. On the other hand, production and efficiency are decreasing in Libya, Venezuela, Iran, and Iraq due to the influence of the political instability experienced in these countries and the sanctions imposed on these countries.

Economists and politicians aim to increase the welfare level of society by trying to increase economic growth. In general, political stability reduces uncertainty and in this case, especially increases investment activities. Along with the increase in investment activities, it positively affects the market functioning in the economy, increases productivity has a positive effect on growth.

Many scientific studies by researchers have revealed that there is a relationship between political stability and economic growth. Various methods have been employed to prove that political stability has a positive effect on

economic growth. At the same time, many researchers concluded that political instability negatively affects economic growth. Economics literature provides evidence of political instability hinders economic success in the long term. This relationship was generally handled within the framework of certain indicators such as investment-based GDP growth and per capita GDP, public finance, and inflation, and it was determined that political uncertainty and turmoil adversely affected all these factors (Karahan, Karagöl, İstikrarsizlik, & Düşmani, 2014). It is worth mentioning that political stability is a vital element for economic growth. Authorities must allocate a stable political environment to ensure economic growth.

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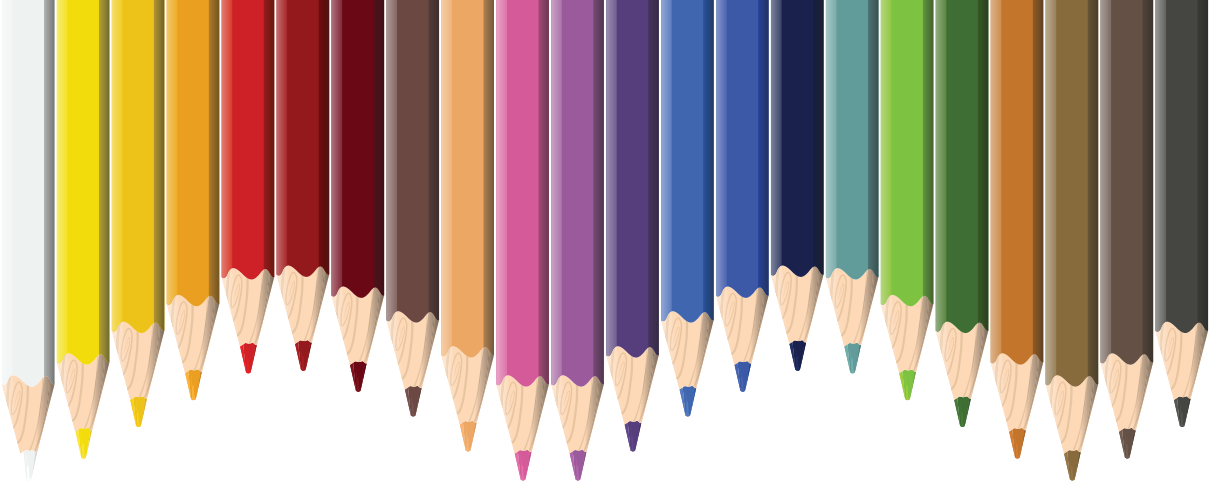

Chapter 5

THE QUESTION OF ALIENATION FROM CHEKHOV TO NURİ BİLGE CEYLAN

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Nuri Bilge Ceylan in Turkish Cinema

One of Turkey's leading directors, Nuri Bilge Ceylan's films often focus on social and cultural factors in Turkey. In the films he has made after the 2000s, he has generally dealt with issues such as urbanization problems, provincial culture, steppe, family relations, bureaucratic relations, as well as conflicts in the modernization process. Although the films in question consist of long shots, they deal with reality down to the finest details, from power relations to concrete manifestations of subordinate-superior positioning, from masculinity to attitudes towards routine. By dealing with the inner worlds, psychological states and communication problems of people as well as social indicators, the director has presented a new perspective for Turkish cinema and contributed to the field in question. The social factors in Ceylan's films are in line with the general social factors of Turkish cinema. However, Ceylan does not only focus on the problems of Turkey. He also includes universal problems of human beings in his films. Themes such as human loneliness, miscommunication, and the struggle for self-discovery are frequently depicted in Ceylan's films. By bringing a different perspective to Turkish cinema, Ceylan has achieved success in the international arena. This has helped Turkish cinema reach a wider audience. His films generally focus on the existential states of human beings, their thoughts on the meaning of life and social problems. In this context, various issues on relationships between people, communication problems, love and marriage are addressed. In films such as "Three Monkeys", "Climates", and "Once Upon a Time in Anatolia", these themes are frequently included. At the same time, Ceylan continues his narratives through nature and deals with the relationship of human beings with nature, sometimes their harmony and sometimes their conflicts. Of course, this approach is not only about climate, geographical features or spatial conditions, but also about the human condition in harmony or disharmony with nature, emotional expression and certain psychological states. The film "Winter Sleep" has a multi-layered narrative that includes all the dilemmas of the Turkish intellectual and presents a picture of all the actors involved in the process of Turkish modernization. It has an impressive richness of expression by touching on Turkey's cultural and social states. Again, we can evaluate the films "Climates" and "Three Monkeys" in this respect. At the same time, the notion of time and memories appear as important elements in Ceylan's cinema. For example, "Once Upon a Time in Anatolia" is a movie about the long journey of the murder suspect, the prosecutor, the doctor, the doctor, the police commissioner, the police officer and the people accompanying them in various positions to find the burial place of the deceased. Although this journey may seem like a search for a corpse, it becomes an existential journey of those left behind who suffer from the pain of their losses. Through sociological analysis, the film in question, while searching for an unknown loss, makes the searchers question their unknown

losses. This is a movie of questioning. It is a search and a journey that begins with Once Upon a Time in Anatolia.

Ceylan's films, which have a slow pace and in-depth narrative, frequently allow for character analysis. In this context, the narratives often contain themes of alienation. The inner worlds, loneliness and alienation of the characters are handled together with social exclusion. Many Ceylan films deal with the alienation of their characters. In "Uzak", the alienation between Yusuf, who lives in Istanbul, and his cousin Mahmut, who lives in the countryside, is explored. In the same film, Mahmut is a lonely man, but when Yusuf comes to his house, his beloved solitude is disturbed and restlessness arises. It should be noted that in the production where alienation is a particular theme, the rural-urban tension is felt and the distant is treated as a dream to be chased after. Also in "Winter Sleep", we can say that the characters' inability to communicate and understand each other allows for a foreign, cold and distant human relationship. Ceylan's films deal with themes of alienation in depth and offer the audience the opportunity to explore the inner worlds of the characters. In general, alienation is combined with themes such as the meaning of life, love, death, provincialism and loneliness.

Nuri Bilge Ceylan's films, in general, offer the opportunity to draw conclusions on the consequences of modernization through the differences between the provinces and the city, and to analyze the lives of the characters through the contradictions between the city and the provinces. In this respect, Istanbul has an important symbolic place. In general terms, Istanbul is the name of modernity and the place to be reached. For example, Ceylan's last film "Kuru Otlar Üstüne" is read through the longing and expectation of a teacher in the provinces for a transfer to Istanbul. In the film, the character Samet is a teacher who feels that he belongs to nothing and no one, and only wants to go to Istanbul. However, Samet is afraid of facing his loneliness, which will not change even if he goes to Istanbul. Again in the movie "Once Upon a Time in Anatolia", the stuckness, monotony, routine of the countryside, the tension of the hierarchical structure are presented through conflict and differences. In this context, the countryside is represented as a geography where repetitive movements are lined up rather than a place where events take place. "Once Upon a Time in Anatolia" takes a photograph of Anatolia within the framework of a murder analysis by referring to the behavior of all the main characters (men). The ambiguous quality of time, which begins as "once upon a time", acquires a spatial identity as Anatolia. However, although Anatolia has the appearance of a large geographical area, it reveals deformed modern-traditional relations through realities such as bureaucracy, states of masculinity, authority relations, injustice, inertia, murder and provincialism, and presents a postmodern Anatolian image with clear boundaries. Set in an unnamed province of Anatolia, the search for a corpse conveys relationships

with an accentuated resonance of otherness through representations such as various crises of masculinity, subordinate-superior relations, locality and urbanity.

In “Uzak”, the loneliness and alienation of Yusuf, who lives in the city, is linked to the troubles of modern life. In “Climates”, the stress and loneliness brought about by the modern lifestyle affect the relationship of a couple living in Istanbul. In Ceylan’s films, the countryside is usually depicted as a symbol of natural life. In “Once Upon a Time in Anatolia”, the characters’ search for dead bodies in Anatolia during a long night emphasizes the beauty of nature and the need for people to live in harmony with nature. In “Winter Sleep”, in a corner of Cappadocia, the differences between the countryside and the city, the challenges of modernization and their contrasting relationships are explored in depth. These lives clearly emphasize contradictions by highlighting loneliness and alienation. The contradictions between the city and the countryside, combined with the personal experiences of the characters, offer a deep understanding of how people live in the modern world.

In Nuri Bilge Ceylan’s films, concepts such as the city, modernity and the countryside are frequently discussed. Ceylan’s films often deal with the loneliness and emptiness of modern urban life and the alienation of people from each other. These concepts are also reflected in the existential questioning and psychological states of the characters in his films. Ceylan’s “Uzak” focuses on the loneliness of people living in modern Istanbul. The film deals with the characters’ relationships with their surroundings, their troubles and emptiness in their professional lives. “Kasaba”, on the other hand, deals with provincial life and culture. The movie is about a teacher living in a town and his relationships with the people of the town and himself. In “Once Upon a Time in Anatolia”, provincial life and nature accompany the existential questioning of the characters. Defined through spatial, temporal, cultural and power relations, the countryside is generally perceived through the existence of the concept of the center. In this context, the province, which is a spatial exclusion, has a relationship with the center through distance (Özarslan, 2016). The movie Once Upon a Time in Anatolia allows for different perspectives. In particular, the stuckness, monotony, routine, and tension of the hierarchical structure of the provinces are presented through conflict and differences. In this context, the countryside is represented as a geography of repetitive movements rather than a place where events take place. Set in an unnamed province of Anatolia, the search for a corpse conveys relationships that contain an accentuated resonance of otherness through representations such as various crises of masculinity, subordinate-superior relations, locality and urbanity. Because while in many societies the concept of the provinces forms an organic unity with the metropolis, in Turkey it describes tense relations involving a strong hierarchy (Laçiner, 2016).

In Ceylan's films, the concepts of city, modernity and province are used as backgrounds reflecting the inner worlds of the characters. While these concepts provide information about the lives of the characters, they also constitute the main theme and body of the movie. Nuri Bilge Ceylan's films also deal with the themes of loneliness and migration.

Ceylan uses these themes to reflect the inner worlds, loneliness and social exclusion of his characters. Therefore, in many Ceylan films, themes of loneliness and migration are frequently used. For example, "Uzak" deals with the loneliness between Yusuf, who lives in Istanbul, and his cousin Mahmut, who lives in the countryside. In "Three Monkeys", a man runs away and becomes lonely after he finds himself guilty. In "Winter Sleep", the loneliness between the characters arises from their inability to communicate and get along with each other. Ceylan's films also frequently deal with the theme of migration. In "Three Monkeys", a man flees in the face of accusations and moves to another place. "Climates" deals with the conflicts in a couple's relationship and their subsequent departure to different places. The themes of loneliness and migration in Ceylan's films offer the opportunity to explore the inner worlds of the characters and reflect the weakness of people's social bonds. These themes form the basis of the existential questioning of the characters in Ceylan's films.

As a result, while Ceylan's cinema emerges as a unique style, its narrative language has the same originality. This is because the films in question endeavor to explore the inner worlds of the characters and focus on their psychological states through existential questioning. Perhaps this is why Nuri Bilge Ceylan's films are slower paced and more character-driven. The dialogues are very realistic, prioritizing naturalness and realism. Silences in the films sometimes become powerful voices to reflect the inner worlds of the characters. In addition, this slowness or lack of pace gives the audience time to understand the emotions of the characters. Considering the films in general, the use of natural light stands out. This is interpreted as an important effort to reflect nature and present naturalness. In conclusion, Nuri Bilge Ceylan's films frequently deal with themes such as the city, modernity, provincialism, loneliness and alienation. Ceylan's films also deal with issues such as social structure, human nature, moral values and death. The characters in Ceylan's films often conflict with each other and affect each other's lives. These conflicts point to the inner conflicts of the characters and the themes of the films. For example, in "Once Upon a Time in Anatolia", in a narrative in which timelessness as a time comes to the fore, the search for a corpse allows the searchers to confront their own losses, to have an internal reckoning and an examination of conscience. At the same time, the same narrative declares that the institutional power (prosecutor, doctor, commissar, police and soldier) searching for the body is caught in the cycle of endless repetition in the uncanny country-

side. In Ceylan's Anatolia, it is understood that the masculine structure, the male-dominated discourse and the situation of women enable a crisis of masculinity and a struggle for power. First and foremost, in the countryside, which finds meaning in the cycle of endless repetition, there is a structure in which the man is at the center from the very beginning of the murder investigation and the woman is positioned on the periphery, even if she has not yet found a place. In fact, in this male-centered narrative form, the woman to some extent exists as the province of the masculine world.

Ceylan generally uses a simplistic narrative language in his films. For this reason, his films focus on the inner worlds of the characters instead of elaborate sets and effects. Ceylan's films often have a minimalist style for this reason. As a result, Nuri Bilge Ceylan's cinema has a character-driven, slow-paced and unique style. The use of natural light, realistic dialogues and minimalist narrative language in his films distinguish Ceylan's cinema from others. Nuri Bilge Ceylan's cinema has a unique style that often deals with themes such as loneliness, miscommunication, time and man's relationship with nature. He is also an important representative of Turkish cinema, which focuses mainly on the cultural, social and economic conditions of Turkey. Ceylan often uses long scenes and plans in his films. He prefers to give his characters time to explore their inner worlds and existential questioning. These long shots, often combined with silent scenes, reflect the emotional states of the characters more effectively. Ceylan also adopts a minimalist approach in his dialogues, preferring to tell more through what the characters do not say and their facial expressions rather than what they say. This approach allows for an in-depth examination of the characters' inner worlds. Ceylan's films often deal with themes such as loneliness, emptiness and the alienation of people from each other. At the same time, he also gives an important place to human nature and man's relationship with nature. Finally, Ceylan's films are characterized by their strong visual narrative and atmosphere. These features increase the emotional impact of the films and lead the viewer into the inner worlds of the characters.

Alienation and Chekhov

Nuri Bilge Ceylan is a director inspired by the works of the famous Russian writer Anton Chekhov. Ceylan has been inspired many times by Chekhov's stories. For this reason, it is possible to find traces of Chekhov's characters and stories in his films. While Chekhov was thinking about Russian villages, rural life, human stories and alienation, it is possible to say that Ceylan also deals with Anatolian people, provincial life and the issue of alienation. Ceylan defined Chekhov's influence in her own words and talked about the content of this interaction. *"A person who has once been under the influence of Chekhov, who has known Dimov and Astrov, can no longer look at the world independently of this influence. He is a great writer who feels*

the tragic dimension of life most deeply and explains what is thought to be inexpressible with great ease. "I am grateful to him for enriching my life so much." (Aktuğ, 1999). Therefore, as Ceylan stated, some motifs that emerge in the narratives are common to Ceylan and Chekhov. For example, he stated that the movie "Winter Sleep" was inspired by Chekhov's stories; The story "My wife" was a story that had been floating around in my head for 10-15 years. Since it contained a lot of internal thoughts and descriptions, it did not seem easy to adapt it to the cinema. When these came out, you were left with a dry series of events. But the story had an indescribable spirit that somehow made it impossible for me to give up on it, and the thought of whether it was possible to portray this spirit in the cinema created a strange attraction mixed with fear. "Perhaps the fact that we were intensely involved with Chekhov's stories in Once Upon a Time in Anatolia may have given both Ebru and me a certain kind of confidence." Likewise, we can say that in the movie "Distant" there are quotes from Chekhov while reflecting the emotions of the characters, and the same emotional state is also included in Chekhov's works. Ceylan deals with human existential questions and loneliness by focusing on the inner worlds of the characters in Chekhov's works. Again, in the movie "Climates", we can often see the issues of human inner world, loneliness and alienation. Based on the dialogues of both characters, the discourses of the characters and the structure of their current situation are clearly revealed. Inspired by Chekhov's works, Ceylan tells the story of man's inner world, loneliness and search for the meaning of life. Therefore, there is a strong connection between Ceylan's cinema and Chekhov's literature.

Anton Chekhov's works reveal many situations in which characters feel like outsiders. It particularly focuses on Russia's social and economic structure and the effects of this structure on society. Changes in the social structure allow people to question themselves and also to analyze the resistance situations that arise when they cannot keep up with these changes. In this context, the characters in Chekhov's stories feel isolated from the society they live in and the life they live. Of course, this kind of loneliness causes the characters to feel a sense of alienation. Anton Chekhov's works often deal with the theme of alienation. Chekhov has a deep understanding of the effects of alienation on human psychology by depicting the loneliness, meaninglessness and existential questioning of his characters. In both Chekhov and Ceylan, the state of alienation affects the characters' communication and emotional states, giving them the opportunity to reach the feeling of loneliness. This theme of alienation is also frequently seen in Nuri Bilge Ceylan's films. By focusing on the inner worlds of the characters, Ceylan deals with issues such as loneliness, lack of communication and disconnection from society. Therefore, there is a similarity between the works of Chekhov and Ceylan in terms of the theme of alienation.

Chekhov's characters are alienated from their environment and people, and experience the loneliness and meaninglessness they experience in their inner world, disconnected from the outside world. For example, in his play "Uncle Vanya", it is seen that the characters lose themselves in emptiness and meaninglessness. *"I sat on the chair, closed my eyes, and thought deeply: Will the people for whom we worked hard to pave the way, who will live a hundred or two centuries after us, remember us and remember us with kindness? "No, I don't think so, nanny." (Chekhov,2013).* Or again, in Chekhov's story "Death of Government Clerk", the theme of alienation is frequently discussed. "Do you see anything other than pain and suffering? Theft, robbery, looting, fraud, all kinds of evil have surrounded our world! Everyone turned to alcohol out of despair! Bullying all the way! To those who can afford it!.. After all, there are a lot of tearful, suffering people! Here we are, crying for them (the speaker's eyes were teary) and drinking our glasses... At this moment, the door opened and someone slipped in silently. When we turned our heads and looked, we saw a small man with a wide bald head and a fatherly smile on his lips. This was someone we knew very well. The man stopped and listened to the conversation… (Chekhov, 2010).

Both Anton Chekhov's works and Nuri Bilge Ceylan's films frequently deal with the theme of alienation. By focusing on the inner worlds of their characters, both artists deal with themes related to alienation such as loneliness, meaninglessness, feeling of incompleteness and existential questions. For example, Chekhov's play "Three Sisters" deals with themes of alienation, such as the alienation of the characters from their environment, the meaninglessness of life and their existential questions. Similarly, in Ceylan's movie "Uzak", themes of alienation such as the loneliness of the characters, lack of communication, and the feeling of emptiness and meaninglessness are discussed. "Three Sisters" emerges as the story of people drowning in the countryside, succumbing to their barren dreams and dreams that will never come true. "Our city has a history of two hundred years, a hundred thousand people live today, but just like in the past, all those living today are similar to each other... There is not a single person among them who has devoted himself to a great country! You know, there is not an artist or a scientist who would attract even a little attention or be even a little bit talented... Isn't there even a single person in this huge city who can be envied? They only eat, drink and sleep, then they die... Then new ones are born, they also eat, drink and sleep; In order not to explode from boredom, they try to spice up their lives with those damn disgusting gossips, vodka, gambling, and taking each other to court…" (Chekhov, 2019). Again, in Nuri Bilge Ceylan's movie "Uzak", Mahmut, who opens his house to Yusuf, earns his living by taking photographs and is far from embracing photography as an art. He is a lonely man who lives a quiet life in Istanbul. However, when Yusuf came home, his beloved state of solitude was disrupted and caused unrest.

Chekhov, one of Russia's most important writers, produced works in many genres such as plays, stories and novels, and in his works, he examined human relations, family structure and human nature, based on the stories of ordinary people. He also saw corruption and alienation as important issues and touched on social change. His stories are considered guiding works in world literature and highlight the feelings of poverty, love, disappointment, family life, family relationships and loneliness. From human nature to social change, ordinary human stories are considered important topics. In his works, he focuses on the inner worlds of the characters, using a minimalist language. He also made social criticism by addressing the problems created by social change. Chekhov's works have influenced many writers throughout literary history. He had a significant influence on many writers and artists, both in Russian and world literature. Chekhov's works deal with themes such as human psychology, social class differences, love, loneliness, poverty and various social problems. Chekhov's short stories are some of the best examples of Russian literature and served as a bridge between classical storytelling and modern storytelling. In his short stories, he presented sections from the lives of ordinary people, examined their inner worlds, and drew readers into the emotional worlds of the characters. In his plays, he deals with the inner worlds of the characters and social problems by presenting sections from the lives of ordinary people. Among the most famous theater plays are such works as "The Cherry Orchard", "Three Sisters", "Through Dreams" and "The Seagull". Chekhov reflected the chaos in the inner worlds of the characters to the readers by using a simple, simplistic narrative style. In his works, he questions the conflicts in the inner worlds of the characters, social problems and human psychology, making him one of the pioneers of modern literature.

The Concept of Alienation from a Sociological Perspective

When the Enlightenment period began to define reality according to the human mind, the circle of holiness moved from divinity to a secular area. In a sense, with the attempt to kill God, the individual began to become divine. One of the characteristics of God is that all his wishes are fulfilled and there are no limits to his wishes. With the enlightenment and the divinization of the individual, human ambitions were no longer hindered. With modernity after the Enlightenment, the western person or society in question began to alienate himself and society, even though he achieved a financially comfortable life. Therefore, a person who is purified from ideals and values is surrounded by feelings of meaninglessness and alienation. Some scientific discussions have criticized the instrumental reason of enlightenment and stated that it created a great illusion and that enlightenment swallowed people. As a result, the issue of alienation has become the most discussed and examined issue in the scientific world. One of the most important names in addressing these discussions as an issue is Hegel. Hegel defines alienation as a person's moving away from

himself and his nature. He claims that it causes people to perceive themselves as another being, especially when they move away from themselves or their self-consciousness. According to Hegel, the entire history of alienation and the entire restoration of this alienation is nothing but the history of production of abstract, absolute, fictional and logical thought (Marx, 1976). In fact, this kind of expression is about the human being thinking of himself as an entity outside of nature. This exactly coincides with the etymological origin of alienation. Because alienation, in a way, means being out of society and untamed (Eyüboğlu, 1995). This situation is also related to the fact that humans see themselves as a separate entity and think that they are outside of nature. Hegel argued that the most fundamental cause of alienation lies in the production relations of modern capitalist society.

As labor becomes a commodity in the capitalist production process, the worker is separated from the production process and the product and enters into a feeling of alienation. This situation also causes the person to lose his connection with his nature and see himself as an alien being. In this context, alienation in Hegel is explained especially as the process of alienation of man from himself, other people and nature. As a result, it causes people to feel a deep and irreparable sense of alienation from their own process of existence. At the same time, for Hegel, alienation manifests itself as three types of alienation: to oneself, to the world, and to nature.

When a person begins to alienate himself, he loses his true self. People who must be in organic unity with nature or who have been in such a relationship for many years are increasingly forced to specialize. Specialization is a phenomenon that emerged with modernity. Since the same person creates himself within social relations, he has to interact with other people. However, with the process of modernity, people are increasingly pushed towards alienation and individualism in the social structure. Naturally, they begin to be unable to establish organic bonds with other people. As a result, people of the traditional world are heading towards loneliness and alienation. According to Hegel, this alienation is related to the relationship with other people and is another type of alienation. Again, it is seen that humans, who are in the natural world and have even established an organic bond, are alienated from nature with the process and products of modernity, and alienated from the industrialized and technology-dominated world. Because in the modern world, people move away from nature and find themselves in an industrialized world. This is explained as alienation from nature. In Hegel, alienation means dissolution and is expressed as the process of a simple composition disintegrating and becoming a more complex composition (Inwood, 1992). According to him, existence, like thought, is a process that develops and progresses longitudinally in accordance with the dialectical method. At the basis of this development is a principle that directs itself towards a certain goal. (Bozkurt, 2009) This

truly existing principle is the Absolute, Mind, Spirit or Geist.

As a result, Hegel focuses on the types of alienation from oneself to oneself, to others, and to nature. In order to end this alienation, humans need to establish an organic bond with themselves, others and nature. In a situation where a person is alienated from himself, his own nature and self, he is under the pressure of society instead of realizing his own potential. And this situation ends with individual alienation. Instead of harmonizing with one's own thoughts and feelings, people try to conform to society's expectations. With individual alienation, people lose their sense of freedom. And the same person begins to lose his connections with society. In capitalist societies, it becomes possible for people to become alienated from each other as they compete with each other for goods and services. This is alienation on a social level. People begin to act in line with their own interests and see each other as objects. A person who loses contact with his own self and others, that is, socially, also begins to lose contact with his natural environment. In modern society, people are increasingly distant from the natural world and, with the development of technology, they begin to consume natural resources. Alienation from human nature prevents people from living in harmony with the natural environment and causes ecological problems.

Feurbach, who was influenced by Hegel, was interested in the religious aspect of alienation. According to him, religion is nothing but the reflection of man's basic desires and powers. Since those attributed to God are actually man's own qualities, man has become distant from himself and eventually alienated (Arvon, 1957). Because people can be free and happy because of their own characteristics, abilities and desires. Naturally, a person's alienation from himself and his nature again emerges as a form of alienation.

However, in capitalist society, people are alienated due to their roles in the production process. People work in a way that cannot control what they produce, cannot realize their potential in the production process, and moves away from the purpose of the production process. Therefore, according to Feuerbach, alienation is the alienation of man from himself, his nature and the production process. According to Feuerbach, alienation (Entfremdung) is the alienation of man from himself and his nature. Feuerbach argued that the true nature of man is in human qualities, but there are many social, economic and cultural factors that distance man from his creativity, freedom and nature. While Hegel confined the subject to the world of thought by talking about the alienation in man's self-consciousness, Feuerbach, in his philosophy criticizing religion, talked about the alienation of an abstract person without history and above classes. Feuerbach gave a different perspective to the situation by opposing Hegel's view that nature is the self-alienated form of the absolute spirit and arguing that man is not God alienated from himself, but God is man alienated from himself (Marx, 2010). According to Feuerbach, the source of

alienation is religion and God is the real cause of alienation. The problem of alienation arises as a result of the isolation of human consciousness between God and the material world (Horowitz, 1966). Feuerbach, He interpreted the system put forward by Hegel by reversing it. "Hegel's 'Absolute Spirit', that is, God, is, for Feuerbach, man 'alienated from himself'. According to Feuerbach, alienation is man's alienation from himself. It is the separation of a person from his own potential, abilities, desires and emotions. According to Feuerbach, it is not possible for the individual to go beyond the boundaries of his own nature. According to Feuerbach, alienation is a person's alienation from himself, his nature and other people. This alienation hinders man's freedom, creativity and potential and leads him to unhappiness and dissatisfaction.

According to another classic name, Durkheim, alienation is the state of people feeling and behaving disconnected from society and, of course, from themselves. He explains this situation with the concept of anomie. Anomie is the state of lawlessness and means irregularity and inappropriateness. Anomie is a concept that, in a sense, causes individuals to feel alienated from society. According to Durkheim; Over time, the individual begins to perceive that the social rules that exist in society disappear. In this aspect, the theory becomes very closely related to the concept of anomie. In case of rulelessness, the individual comes to believe that in order to achieve his goals, he must only ignore social acceptance. According to Durkheim, people are connected to each other through their social relationships, and these connections determine their existence. However, the increase in individualism and competition in modern society alienates people from each other and causes them to become alienated. He explains this situation with the concept of division of labor. According to Durkheim, the division of labor emerged in the transition from mechanical solidarity to organic solidarity, and thus from traditional society to modern society. What happens with the division of labor is that the common beliefs and values in society lose their effectiveness, resulting in a state of anomie (Durkheim, 2006). Georg Simmel defines the concept of alienation as a situation in which the individual alienates himself and his environment. This state of alienation can cause the individual to feel isolated and alone from other people, nature and culture. According to Simmel, this state of tension between objective culture and subjective culture is based on the development of the division of labor in society and the benefits of the money economy. According to Simmel, this state of tension and alienation is the result of a unique historical culture created by man's own hands (Kılıç, 2009). Simmel defines culture as 'refined spiritual forms of life as a result of internal and external labor' and says that cultural phenomena include three categories. Georg Simmel defines alienation as the alienation and estrangement of the individual from the society and culture that surrounds him. This alienation causes the individual to feel distant from other people, nature and social relations. According to Sim-

mel, alienation is increasing in modern society and causes the bonds between individuals to weaken, social relations to become superficial, and personal relationships to decrease. This may cause individuals to interact less with each other and feel lonely.

Mills, on the other hand, focuses mostly on the conditions of alienation of wage earners, whose numbers are increasing in the services sector, but who are not aware of social power. Mills argues that this new class cannot perceive the conditions it finds itself in because it does not feel safe. “In politics and economics, in family life and religious life, and in all areas and parts of our lives, the unshakable realities of the 18th and 19th centuries have either collapsed or dissolved, while the new social values that characterize the customs that frame contemporary life are not seen. Thus we have neither the possibility of accepting nor rejecting; We have no enthusiasm or excitement left for either rebellion or hope. Our life lacks a guiding line” (Tolan, 1980). According to Mills, alienation lies at the root of many psychological and sociological problems in modern societies, and the feeling of disconnection in the individual’s relationship with himself, other people and society has become the essence of modern life. Bureaucracy can cause alienation by restricting the individual’s freedom to manage his or her own affairs, killing individual initiative, and reducing the individual’s autonomy to meet organizational goals.

Walter Benjamin also discussed the concept of alienation based on Marxist thought. According to him, alienation means the separation of the individual from the work he produces and the breaking of his connection with it. According to Benjamin, the production process in the modern world causes the alienation of productive individuals.

According to Walter Benjamin, alienation is a fundamental feature of modern capitalist society and is the loss of people’s ties with the natural world and social life. Benjamin drew attention to the alienation in people’s work due to the privatization of the means of production and the concentration of ownership in modern society. People no longer own the things they produce, they no longer have control over the production process, and they no longer participate in determining the purposes of the things they produce. This situation can cause people to become alienated from themselves, decrease their personal satisfaction, and experience disconnection in their social relationships.

One of the ideas that focuses a lot on the issue of alienation is Marxism. Marxism has been considered and evaluated as an economic doctrine for many years. It was thought that Marx’s main aim was to lay the foundations of a new economic order instead of the capitalist economic order. In reality, the economic doctrine section constitutes only one part of Marx’s works and thought. It would not be right to accept Marxism only as a political program. Marxism gives itself a much broader goal. Focusing on the problems of man,

history, state, society, nature and God, Marxism is a worldview that aims to analyze these problems and reach a synthesis both in theory and practice. Marxism emerged as the worldview of the modern age, the heavy industry era. Indeed, the era in which Marx lived was an era in which great advances were made in the technical field, humans managed to dominate the forces of nature in many areas, and societies became rich. However, it was soon seen that these positive developments had some negative consequences for the individual, and the working masses became poorer and lost their freedom day by day. Marxism, which emerged with the birth of the heavy industry proletariat within the liberal state order, emerged as a worldview that expressed the problems and contradictions of this age and found a solution to them.

Marxism focuses on issues of capitalism and class struggle and is based on analysis and criticism of social, political and economic systems. Marxism is built on a basic thesis that society is divided into classes and economic relations are decisive. According to this thesis, it is claimed that in the capitalist system, workers, the productive class, are exploited and the profits of the capital owners are obtained through the labor of the workers. Marxism criticizes this situation and advocates the strengthening of the working class and the provision of social justice. Marxist thought aims for a social transformation based on class struggle. It is envisaged to establish a socialist society in order to eliminate the dominance of capital owners, strengthen the working class and ensure social equality. Marxism is an effective system of thought in many fields such as economy, politics, culture and ideology.

According to Marxist thought, the economic and social structure of a society determines the political order of that society; in this respect, political democracy is far from being a real democracy in a capitalist society and is doomed to remain a formal democracy. It is seen that in a social order divided into classes, people become alienated from themselves and move away from themselves. Marxism explains this with the term “alieration”, alienation or corruption. This alienation from oneself comes in favor of external forces that deprive man of his humanity. The “alien” person is the person who has lost the power to see himself as a free person who has the power to create and can dominate nature. Marxism finds the source of this alienation of humans in the basic economic structure that determines the capitalist economic order. According to Karl Marx, alienation is the alienation of a person from himself, human nature and other people, and becoming an alien being. Marx argues that humans are productive and creative by nature, but are alienated from the products of their labor due to capitalist relations of production. Marx claims that as a result of the combination of the worker’s labor with the tools under the control of the capitalist in the production process, the worker becomes alienated from what he produces and from himself. The worker is seen not only as a worker in the production process, but also as a tool, and has no con-

nection with the thing he produces. Therefore, the worker becomes alienated from himself, the product he creates, and the production process. According to Marx, alienation is not limited to economic relations only. Under capitalism, relationships between people also lead to alienation. By focusing on their own interests, individuals instrumentalize others and become alienated from them. This situation causes social ties to break down and relationships between people to weaken. Marx argues that in order to eliminate alienation, a society should be established that will eliminate instrumentalization in social relations, along with the collectivization of the means of production and a production process under the control of workers. According to Karl Marx, the concept of alienation is a fundamental feature of capitalism. According to Marx, the capitalist mode of production strips workers of control over the products of their labor and severs individuals' ties with nature, themselves, other people, and the things they produce. This situation causes individuals to feel alienated.

Conclusion

Modernity is the name of the process of social, economic, cultural and political change that emerged in Western Europe from the 17th century to the 19th century. Modernity is a rebellion and has a radical identity in the name of social transformations. With modernization, many economic and political changes and transformations have occurred, and human nature, human relations, family structure and daily life have been affected by this situation. After the change process in question, the phenomena of specialization, sense of self, individualism, bureaucracy, alienation and loneliness came to the fore. The issue of alienation has become an important issue in social sciences and has been included in many classical discussions. At the same time, it has become one of the most discussed topics in many fields from art to literature. In particular, Chekhov emerges as a name that produces important works focusing on the issue of alienation. In his works, Chekhov particularly touched on the subjects of loneliness, family relations, routine, bureaucracy or alienation, and chose to explain them in a simple language. Nuri Bilge Ceylan, who was influenced by Chekhov and where this influence is frequently seen in his films, also focused on the issues of bureaucracy, alienation, masculinity and femininity, and touched upon the situation of people reflecting their own inner worlds. For example, in Ceylan's narrative, Once Upon a Time in Anatolia, it is understood that the characters suffering from provincialism are trapped in their own provinces. However, it is obvious that in general terms, rural-urban, center-periphery dichotomies create an important area of struggle. In this context, it is understood from the relationship between discourse and power that the prosecutor and the doctor represent the center and the city, and the commissioner, headman and other officials represent the provinces. At the same time, the monotonous, routine and monotonous life style of the countryside

reaches an identity with the cycle of endless repetition. In fact, in the film, while the act of killing is expected to disrupt the monotonous fluidity of life, it reproduces the routine for the countryside. Death is natural and acceptable within its limits. In this context, the murderer's act of killing maintains monotony and ordinariness until the manner of killing is understood. However, the murderer burying the victim with his hands and feet tied causes a serious crisis. Because in the countryside, death does not disrupt the fluidity, but there is a ritual in death. While the countryside in question deals with phenomena such as death, murder, ordinariness, power relations and masculinity crisis, it represents the integrity in which there is no absolute good and evil, but they coexist. The same countryside allows for a structure in which masculine language is possible through characters haunted by a buried corpse. As a result, the journey, which started with the motivation of searching for a corpse, turned into a narrative that provides information about masculinity-femininity, hegemony, power relations, the handover of power, the functioning of the bureaucracy and the structure of the provinces in general. While values, morality and ethical understanding are reflected through the language used, the discursive character of power relations has emerged. In this context, critical discourse analysis has undertaken an important task in reflecting various explicit or implicit forms of dominance that emerge in language use. Behavioral, cognitive and emotional dimensions led to the coding of sentences and the emergence of the discourse itself. The journey that started with "once upon a time" seems to have ended with the autopsy of the body. It is understood that the masculine structure, male-dominated discourse and the situation of women in Ceylan's Anatolia enable the crisis of masculinity and the struggle for power. First of all, in the countryside, which finds meaning through the cycle of endless repetition, there is a structure in which the man is positioned at the center from the first moment the murder investigation begins, and the woman is positioned at the periphery, even if she has not yet found a place. In fact, in this male-centered form of expression, women exist to some extent as the province of the masculine world. It is noticed that all the sequences, from the first scene of the film to the last scene, are built on a masculine image and discourse. Almost all the characters are male, female, do not speak, are invisible or vaguely present as objects. The essential elements of this eerie countryside are men, and the struggle for power between these men until the last moment is produced through various functions. This power struggle, which especially affects every layer of the society in question, continues until the last moment through various discourses, power, labor and cathexis relations. Kenan, who was understood to be a murderer, killed and buried his friend along with his brother. The struggle that begins between three men generally ends with a period dominated by one man.

As a result, alienation is the issue that both Chekhov and Ceylan are interested in. At the same time, alienation is one of the most discussed topics in the field of social sciences. Especially classical names have discussed the issue in detail. Hegel defines alienation as a person's moving away from himself and his nature. He claims that it causes people to perceive themselves as another being, especially when they move away from themselves or their self-consciousness. According to Hegel, the entire history of alienation and the entire restoration of this alienation is nothing but the history of the production of abstract, absolute, fictional and logical thought. As labor becomes a commodity in the capitalist production process, the worker is separated from the production process and the product and enters into a feeling of alienation. Hegel focuses on the types of alienation from oneself, from others, and from nature. In order to end this alienation, humans need to establish an organic bond with themselves, others and nature. In a situation where a person is alienated from himself, his own nature and self, he is under the pressure of society instead of realizing his own potential. Feurbach, on the other hand, was interested in the religious aspect of alienation. According to him, religion is nothing but the reflection of man's basic desires and powers. Since those attributed to God are actually man's own qualities, man has become distant from himself and eventually alienated. He interpreted the system put forward by Hegel by reversing it. "Hegel's 'Absolute Spirit', that is, God, is, for Feuerbach, man 'alienated from himself'. According to Feuerbach, alienation is man's alienation from himself. It is the separation of a person from his own potential, abilities, desires and emotions. According to Durkheim, alienation is the state of people feeling and behaving disconnected from society and, of course, from themselves. He explains this situation with the concept of anomie. Anomie is the state of lawlessness and means irregularity and inappropriateness. Anomie is a concept that, in a sense, causes individuals to feel alienated from society. Simmel defines the concept of alienation as a situation in which the individual alienates himself and his environment. Mills, on the other hand, focuses mostly on the conditions of alienation of wage earners, whose numbers are increasing in the services sector, but who are not aware of social power. Mills argues that this new class cannot perceive the conditions it finds itself in because it does not feel safe. Walter Benjamin also discussed the concept of alienation based on Marxist thought. According to him, alienation means the separation of the individual from the work he produces and the breaking of his connection with it. According to Benjamin, the production process in the modern world causes the alienation of productive individuals. According to Marxist thought, the economic and social structure of a society determines the political order of that society; in this respect, political democracy is far from being a real democracy in a capitalist society and is doomed to remain a formal democracy. It is seen that in a social order divided into classes, people become alienated from themselves and move away from themselves. Marxism explains this with the term "alieration", alienation

or corruption. This alienation from oneself comes in favor of external forces that deprive man of his humanity. The "alien" person is the person who has lost the power to see himself as a free person who has the power to create and can dominate nature. Marxism finds the source of this alienation of humans in the basic economic structure that determines the capitalist economic order.

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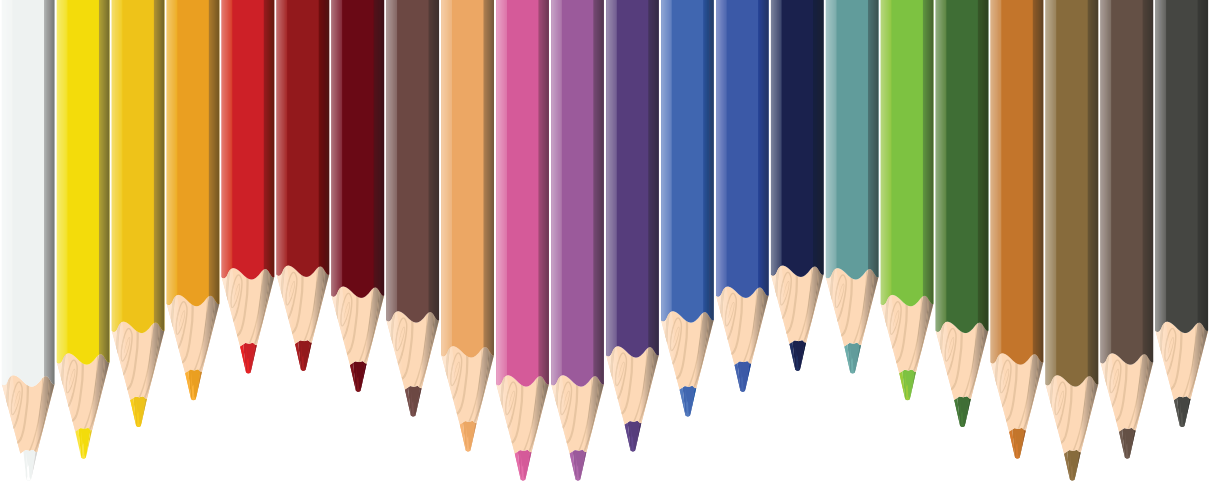

Chapter 6

INVESTIGATION OF CONSUMER ATTITUDES TOWARDS MOBILE MARKETING WITH DEMOGRAPHIC DYNAMICS

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1. INTRODUCTION

With globalization, commercial borders have disappeared and the dimensions of competition for businesses have expanded. Businesses now have a dynamic ground where they need to compete continuously with both local and international competitors in market conditions. In addition, as a result of the development of technology, the widespread use of the internet and the increase in mobile penetration, the concept of market has lost its meaning and trade can now take place at any point and at any time, regardless of country and border. Therefore, businesses need to sustain their existence in a tighter and tougher competitive environment.

In order for businesses to be successful in these tough competitive conditions with the appreciation of new concepts and approaches such as speed, standardization, and joint competition, they need to manage their sales and marketing activities effectively, as well as continue their activities in a continuous development and keep up with the developing technology. In order to increase their profitability and market shares, businesses must be able to keep up with this rapid and seemingly unlimited change in the commercial world (Bulut, 2004).

Technological developments have also affected the marketing sector, creating new marketing methods and a fierce competitive environment. In particular, the use of mobile phones with the ability to connect to the internet in all areas of life has provided consumers with easy access to their needs anytime and anywhere, and businesses with the opportunity to offer their products anytime and anywhere (Armağan & Gider, 2014).

With the recent developments in mobile technology, the rapid proliferation of mobile devices and their features, mobile channels have emerged as a new and potential tool for marketing activities. The technical benefits of the mobile environment offer a market environment in which businesses must participate to survive and thrive (Gedik, 2020). In addition, mobile phones provide businesses with unique opportunities in customer relationship management, while the popularity of SMS is catching up with e-mails (Smutkupt et al., 2010). Mobile devices have overtaken desktops and laptops as consumers' primary means of accessing the Internet. More than half of all searches on Google are now conducted on mobile sites and the majority of retailers consider mobile marketing their highest priority (Berman, 2016).

In this research, the topic of Sales and Marketing on the Mobile Marketing Platform Google Play will be examined. For the research, first the concepts of sales and marketing will be explained and then the differences between these two will be mentioned. Then, depending on the development of technology, changes in trade and mobile marketing will be mentioned. Google play, which continues to develop rapidly within the framework of mobile marketing, will

be examined and sales and marketing activities carried out in this channel will be discussed.

In the last part of the research, as an application study, people's tendency to use mobile technology and the factors affecting this will be analyzed based on the survey conducted. In the findings and conclusion section, the results obtained will be discussed.

2. SALES AND MARKETING ACTIVITIES IN BUSINESSES

In this section, the relationship between sales and marketing, the importance of sales and marketing activities for businesses and technology and businesses are examined respectively.

2.1 Sales and Marketing Relationship

The period in world trade until the mid-1900s, when consumers had to be content with the product quality and capacity offered to them within the scope of production, ended with the global environment created as a result of the development and integration of the world economy. In this period, the emergence of international businesses with the wind of globalization has increased the number of players in the market, the dimensions of competition have intensified and competition areas have started to change drastically (Tek, 1999).

As a result of the diversification of competition, businesses have tended to carry out their production activities by taking into account consumer demands and expectations in order to gain superiority over their competitors and to reveal their differences. However, rapid developments have led to the awareness of consumers and the destruction of known consumer patterns. It has become an important and strategic advantage for businesses to offer goods and services in line with differentiated customer demands by continuously monitoring the change and diversity in customer demands and expectations.

As a result, businesses faced with fast and variable customer demands, shortening product life cycles and increasing costs have had to change their marketing strategies in order to survive and see their future. The loss of the effectiveness of classical promotion policies and the difficulty of reaching and influencing customers have started to necessitate the differentiation of marketing activities.

Modern marketing understanding has ceased to be the application of the classical marketing mix today, and it has become necessary not only to develop a good product, to price it and to offer it to buyers in appropriate places, but also to establish an appropriate communication with customers. In this respect, it has become important for businesses to reach and persuade their customers.

The sales process, which takes place when the seller and the potential buyer meet, continues to expand its scope by increasing its importance due to increasing competitive pressure, similarity of product qualities, changing customer expectations and the development of technology. Sales is essentially the realization of marketing services of a product or service as a persuasive communication and promotion activity to individuals or institutions. In the sales process, the salesperson and customers establish a connection and the sale of the product is realized within the framework of this communication (Tek, 1999).

Researches reveal the necessity of developing sales and marketing strategies in order for businesses to gain the power to compete against their competitors and to make their activities sustainable (Korkmaz et al., 2012). Sales activities are not a spontaneous process for businesses. Marketing activities are critical for sales activities to be successful.

Businesses build their sales strategies within the framework of their marketing policies. The sales process takes place in five steps. The first step is the realization of planning for the sales activity, that is, the preliminary stage. At this stage, preparations for sales, customer expectations and the elements that make the product or service stand out are determined. The second stage of sales is the approach. At this stage, the foundations of the appointment or information process necessary for the approach to the customer during the sale and for the potential customer to perform purchasing behavior are established. The third stage of sales is the presentation stage. At this stage, the sales staff will prepare an incentive visual to learn the expectations of the customer and to meet these expectations. The fourth stage of the sale involves meeting objections from the consumer. This stage acts as a balance and plays a supportive role for the realization of the sale in the face of the customer's objections. The realization of the sale is the last stage of the process and the sales activity is closed (Bilginer et al., 2006).

In order for businesses to survive in the rapidly developing technological universe, it is important for businesses to develop competitive strategies and become flexible by quickly adapting the strategies they have determined to the current conditions. In order to achieve this goal, businesses need to focus on the elements of "sales, marketing and information" and produce strategies for their companies by working on these concepts (Korkmaz et al., 2012).

There are many variables that can affect the successful realization of sales activities. At this stage, in addition to the characteristics of the product and service, the sales representative may have important duties. Since the sales representative is the person who communicates directly with the customer, he/she is responsible for reaching the customer, informing the customer, realizing the sale and managing all kinds of pre-sales processes and eliminating

the variables that may prevent the realization of the sale (Varinli & Kurtoğlu, 2005; Ecer, 2007).

2.2 Importance of Sales and Marketing Activities for Businesses

As a result of the increasing competitive pressure in the market, changes in consumer behavior, decreasing differences between products, increasing number of alternative products, increasing prevalence of large shopping malls and the development of e-commerce, retail trade has reached a point of lock-down. The resulting diversity and variability has also become a challenge for the consumer's decision-making process. With the promotion activities not having the expected effect, the importance of the sales process and management has reasserted itself for businesses.

Sales and marketing are often confused concepts because their boundaries are not well defined in professional life. However, sales and marketing activities complement each other. The sales process should be evaluated together with the beginning of the demand trend for a product for businesses. In this process, it is also possible to say that the sale starts from the point where the order arrives and ends with delivery and payment. On the other hand, customers do not always turn to sales when they are left alone. At this point, the concept of marketing comes into play and it manifests itself with strategies to support sales in order for businesses to make more sales and to achieve organizational goals (Gülçubuk, 2007).

Although the purpose of marketing activities is to meet the wishes and expectations of customers by making a profit, it can also be considered as activities to provide products and services that consumers will willingly buy rather than providing products produced for customers. While marketing activities create new customers by meeting the expectations of customers, they also create value and increase loyalty. With this feature, marketing activities start to serve as an important argument that enables businesses to make a profit by supporting sales.

2.3 Technology and Businesses

Technological developments, which have become a part of our lives, have become an indispensable element of business activities. Technology has been the most fundamental stimulant of changes and developments in many fields and has been the main source of the level of economic and social welfare achieved with the driving force of science and technology (Tekin & Zerenler, 2000). These innovations, which are also the cornerstones of the idea of unmanned technologies and factories, have intensified the competition between countries. In such an environment, it has become inevitable for businesses that want to gain competitive advantage to turn to high technology. Therefore,

businesses have the opportunity to meet the demands of consumers with faster and higher quality products and have a high share in the markets.

Businesses that want to survive and survive in global competition have no alternative but to use technology effectively. As a matter of fact, the developments in the economic, social and technological fields have led to the globalization of markets and changed the dimensions of international competition, and businesses have started to actively fight for existence not only in real markets but also in virtual trade environments that have become mobilized. Businesses that want to achieve success in these constantly developing and changing market conditions will be able to meet the demands of consumers, first of all, by adapting themselves to technological infrastructures.

It is seen as inevitable that technological developments that enable creativity, innovation and efficiency cover all processes of businesses from production to organizational activities. The effects of the reflections of technological developments on the business world have started to affect businesses by shaping not only production processes but also thought patterns.

While the acceleration of technology and information exchange was first realized with the invention of computers and the spread of the internet network system, the increase in computer program software with the introduction of computers into homes has increased this speed even more (Kuşat, 2011). Especially considering the opportunities provided by internet technologies to the business world since 1990 until today, the change that has taken place indicates that we are actually at the beginning of technological developments. The mobilization opportunity provided by the Internet to businesses and the mind-boggling developments in mobile technologies have begun to offer alternative market opportunities for businesses.

While the development of Internet technology has created attractive commercial opportunities for many entrepreneurs over the Internet, consumers have also started to shop online, saving time and energy (Bulut et al., 2006). This new situation has started to affect retailers negatively. While all of these are the effects of technology on marketing, marketing activities also affect and are shaped by technology in the form of a cycle. Because new products and technologies also need marketing. It is not enough to innovate and develop new products, they need to be announced and delivered to the consumer. If this cannot be achieved, it will not be possible to be commercially successful, even if products that are accepted in terms of production and engineering are produced.

The accessibility of the Internet and, in recent years, of the whole world with the developments in mobile technologies has been one of the biggest weapons in the field of marketing. Therefore, businesses have started to find new platforms such as online shopping sites and mobile applications to reach

customers. With the development of social media and the increasing number of people using blogs, marketers have started to create a separate budget for social media and invest in these areas (Gündebahar & Khalilov, 2013).

As a result of the current situation, traditional marketing activities have moved to the internet environment in a short time, and global businesses have started to realize their sales based on the internet by creating infrastructures that can reach every point of the world. Especially with the ubiquitous use of smartphones, sales activities have started to shift to the mobile marketing axis based on iOS and Android processors (Ström et al., 2014). The increase in the capacity of companies in terms of quality and quantity, especially due to the developments in the production capacity of enterprises, has led to an increase in the importance of sales and promotion activities of the goods produced. Because the necessity of new markets for the products produced has started to increase rapidly. In this case, it will not be possible for only classical retail shops to be sufficient in accelerating living conditions.

As a result of this new situation, businesses have started to shift from traditional media channels to digital and mobile channels where they can realize sales and promotion and reach more people in order to reach their target customers (Altındal, 2013). These applications have come to the forefront with their features that are both more economical and easier to use for businesses.

Sales and marketing activities first started to shift to e-commerce. Thus, while marketing activities were initially carried out through tools such as television, radio and newspapers, new channels have started to focus on interactive marketing tools such as the internet, mobile platforms, social media and sharing networks, depending on technological advances.

For marketers, these new sales and marketing channels have led to significant changes in marketing trends. Marketing activities have started to make significant progress in terms of creativity with new technologies. Especially with instant interaction and access to large masses offered by new platforms, faster problem solving and promotional opportunities have increased. In addition, ensuring customer satisfaction with the interactive dialogues provided have been the factors that support the sales activities of businesses.

On the other hand, in order to be successful as a result of the fact that every company can reach the customer, it has become important to create content that is different, has a remarkable design, and is equipped with proper content. Methods such as planned campaigns, automated and timely content delivery can be used to retain customers. The fact that the content is relevant to the recipient and is oriented towards their needs and requests will help businesses to retain their existing customers and attract potential customers at the right time (Gündebahar & Khalilov, 2013).

3. MOBILE MARKETING AND ANDROID OPERATING SYSTEM (GOOGLE PLAY)

In this section, mobile marketing, Android operating system, capabilities and features of Android operating system and google play platform are examined respectively.

3.1. Mobile Marketing

As a result of the rapid development and widespread use of mobile technologies, internet usage is shifting from PC internet to mobile-internet, and as a result, mobile phones have become vital tools in our daily lives.

The Mobile Marketing Association (MMA), an increasingly important organization in the field of mobile marketing, defines mobile marketing as "the use of wireless media as an integrated content delivery and direct response tool within a cross-media or standard marketing communication program used in conjunction with other channels" (Bozkurt & Ergen, 2012). Leppäniemi et al. define it simply as the use of the mobile environment as a marketing communication tool (Leppaniemi et al., 2006).

The rise of mobile marketing in marketing communication is attributed to the positive impact of developing and cheaper smartphones and the fact that it is more cost-effective, measurable, personalized and interactive compared to traditional channels (Bozkurt & Ergen, 2012).

3.2 Android Operating System

With the hardware development of mobile devices, there is a need for operating systems that will support the effective operation and control of these devices. So much so that our phones, which we started to use only for communication purposes, have started to turn into multi-featured devices with many features today. Android is an operating system with the Linux kernel and is an open source, free and free operating system kernel (Yaşar, 2017).

Mobile device manufacturers, especially Nokia, Apple, Symbian, iOS, BlackBerry OS (Research In Motion), Windows Mobile (Microsoft) and Bada, have developed the operating systems they need for their own mobile phones, so the spread of these software has not been possible (Tufan et al., 2012). Mobile device manufacturers have turned to developing an open source operating system that can run on different devices due to the unilateral software (Muştu, 2012).

Andy Rubin and his friends founded Android Inc. in 2003, and as a result of their research, this company managed to run an operating system with a Linux kernel on a cell phone. In this way, the first Android works started. Google acquired this company in 2005 in order to expand its work on mobile operating systems. With Google's acquisition of Android, Rubin and his colleagues

also started working at Google. In 2007, Google announced the idea of developing a common operating system under the name Android. 34 hardware, software and mobile operator companies formed an alliance called the Open Handset Alliance. The aim of this alliance is to create a common, open and standardized platform in the mobile device industry. This team, which was initially formed by Google, includes phone manufacturers such as HTC, Samsung, LG, Motorola, Sony Ericsson, as well as processor manufacturers such as Intel and Qualcomm, and graphics chip manufacturers such as Nvidia. The association currently continues to work with 84 companies (Muştu, 2012).

With Google's release of the source codes of Android in 2008, the developed structures started to be integrated into different phones, HTC company completed this process the fastest and became the first mobile phone brand with Android processor. HTC (Dream) using Android 1.0 version; internet browser, media player, gmail account manager features and supported the Android market (Kilgo, 2009).

3.3 Capabilities and Features of the Android Operating System

Depending on the development of technology, mobile devices offer conveniences such as gathering many devices with different features in a single vehicle, reducing their size, making them suitable for personal use, and carrying them easily. In addition, the use of the internet, taking photos, location benefit, learning information and access to multimedia tools have put mobile devices in a key place that can produce solutions to many problems of our lives.

The devices where Android processors are currently available can be listed as follows

- Smartphones
- Tablet computers and Netbooks
- Televisions
- GPS (Global Positioning System) devices
- Media players (DVD, VCD, etc. players)
- Smart Watches
- Home appliances and automobiles
- E-Book readers
- Headphones

The Open Handset Alliance, which was established for the development of the Android operating system, has played an important role in Android finding such a wide range of applications. In addition, another reason why Android is preferred is that the Android operating system uses the Linux kernel,

supports open source, and can run on different types of devices.

3.4 GOOGLE PLAY PLATFORM

Google play (formerly Android Market in 2008-2012) is a package manager and electronic media distribution/sales platform developed by Google for the android operating system. Android Market was founded by Google on Semptember, 2008 and launched in October 2008 (Internet Society, 2015). The Google store, which first started to spread in the US and the UK, started to operate in 29 countries in 2010. It serves as the official app store of the Android operating system, allowing users to browse and download applications such as "music, movies, books, apps and games for Android" developed with the Android SDK and published through Google. It also includes Cloud media player. All Android content is available on the web, in the playstore and on Google TV. Google Play offers music, magazines, books, movies and television programs through its digital media store (Internet Society, 2015). The applications offered on Google Play can be used for free or for a set price through Google Play. The most important service of Google Play is that it brings together three separate brands such as Android Market, Google Music and Google eBook store under one umbrella.

4. MOBILE MARKETING AND ANDROID OPERATING SYSTEM (GOOGLE PLAY)

A total of 100 people participated in the study. In this study, a questionnaire was first developed to obtain the relevant data. The questionnaire was administered through the Google Forms website. Google Forms creates a different access address for each questionnaire and allows it to be sent to the participants via e-mail. Participants can access the questionnaire and answer the questions by following this link to their e-mails. The survey questions were prepared within 2 weeks with the help of similar surveys in the literature. Before finalizing the questionnaire, a pilot study was conducted with 10 people and minor revisions were made to the questions according to the results of the pilot study. Finally, the questionnaire consisted of 3 sections. The first section is to identify the demographic characteristics of the participants;

- Gender
- Education Status
- Age
- Do you have an internet connection at home?
- Do you use a smart phone? Are there any restrictions on internet use at your workplace?

questions were asked.

In the second part, 8 questions were formed by creating a communication scale of consumers regarding mobile marketing. In the last part, 16 questions were prepared by creating a scale of consumers' service quality related to mobile marketing. The statements regarding the communication and service quality scales in mobile marketing were created using a five-point Likert scale to determine the opinions of the participants. These statements were categorized in five ranges from negative to positive as "Strongly Disagree", "Disagree", "Undecided", "Agree" and "Strongly Agree". After the questionnaires were collected, SPSS software was used to analyze the data. Descriptive statistics such as the mean and standard deviation of the subjects were calculated for each item in the questionnaire. Since the data of the study were obtained before 2020, no ethics committee certificate was obtained.

Frequency analyses were conducted to analyze the demographic characteristics of the participants. The findings obtained are given in tables. There are a total of 100 people who participated in the research and filled out the questionnaire. Since there were no incomplete questionnaires in the study, all questionnaires were included in the analysis. While evaluating the questionnaire questions, reliability analysis was applied and the answers were given in tables; distribution percentages were indicated.

The findings regarding the 100 participants are shown in Table 1. Of the participants, 54.0% were female, 46% were male, 61% were between the ages of 26 and 35, and 86% were undergraduate graduates.

Table 1. *Characteristics of the Participants*

Groups	***Frequency (n=100)***	***Percentage (%)***
Gender		
Female	54	54.0
Male	46	46.0
Age		
25 years and under	29	29.0
26 - 35 age range	61	61.0
36 - 45 age range	4	4.0
46 - 55 age range	4	4.0
56 years and over	2	2.0
Education Level		
Associate degree and under	5	5.0
Undergraduate graduate	86	86.0
Master's degree / Doctorate	9	9.0

Figure 1 shows that 85% of the participants have an internet connection at home. It is important for the participants to be connected to the internet at

home. The remaining participants are thought to use mobile internet at home.

Figure 1: *Participants' internet use at home*

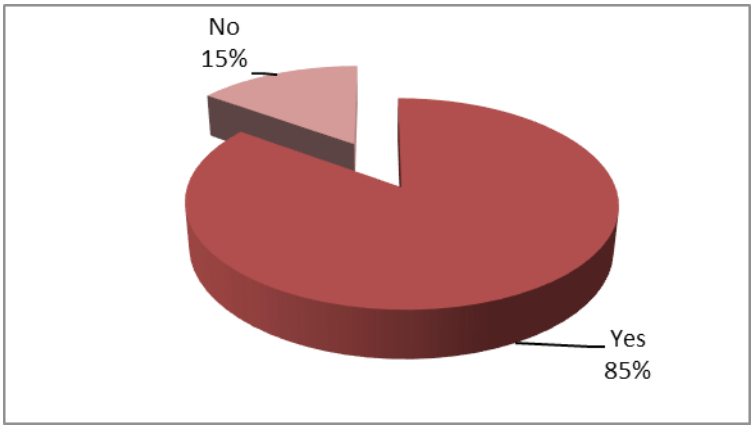


Figure 2 shows that 98% of the participants own a smartphone. It can be assumed that the participants who own a smartphone can connect to the internet with the phone in their hands. It can be considered that the participants benefit from mobile marketing activities.

Figure 2: *Participants' smartphone use*

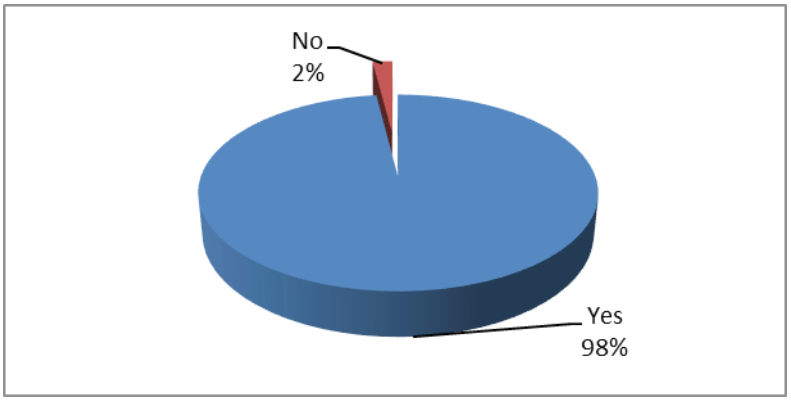
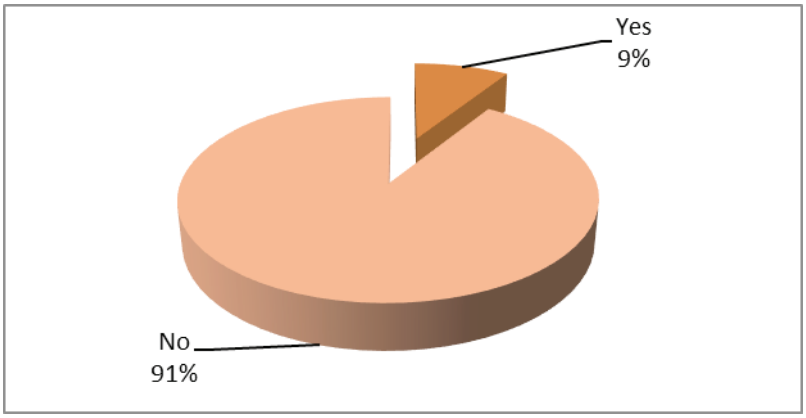


Figure 3 shows that internet use seems to be important for the participants. It is seen that 91% of the participants do not have quota restrictions for internet use at their workplace.

Figure 3: *Whether there is a restriction on participants' internet use at their workplace*



4.1 Reliability Analysis

Before proceeding to the descriptive values of the research variables, the analysis of the relationship between the variables and the hypothesis tests, the questions were combined and subjected to reliability analysis. Table 2 presents the results of the reliability analysis of the scales used.

Table 2. *Cronbach's Alpha reliability coefficients of the scales*

Scales	Number of questions	Reliability coefficient
The scale of communication of consumers related to mobile marketing	8	0.841
The service quality scale of consumers related to mobile marketing	16	0.910

Cronbach Alpha value was used to calculate the internal consistency of the statements. The reliability coefficient of the communication scale of consumers regarding mobile marketing is 0.841. The reliability coefficient of the service quality scale of consumers regarding mobile marketing was found to be 0.910. It was observed that the reliability of the statements used was high. When the total expression statistics of the expression values answered by the participants are examined, there is no need to delete any statement to increase reliability. It was determined that the deleted statements did not significantly increase the existing reliability coefficient in both scales. The reliability coefficient values obtained in both scales meet the lower limit criterion of 0.60 accepted in the literatüre (Cronbach, 1990).

4.2 Normal Distribution Analysis

The normality of consumers' views on the communication scale of mobile marketing and the service quality scale of mobile marketing were analyzed by Kolmogorov-Smirnov test with the help of SPSS software. The results are given in Table 3.

Table 3. *Normal Distribution Test*

Kolmogorov-Smirnov Test	***The scale of communication of consumers related to mobile marketing***	***The service quality scale of consumers related to mobile marketing***
N	100	100
Asymp. Sig. (2-tailed)	0.018	0.008

According to the test results, it was seen that both scales did not show normal distribution ($p<0.05$). Therefore, non-parametric techniques were used in the analysis of both scales.

4.3 Analysis Results Regarding the Statements Composing the Scale

The main descriptive findings calculated for the statements in the two scales used in the compilation of the data are shown in Table 4 and Table 5.

When the values of consumers' opinions on the communication scale regarding mobile marketing are analyzed in Table 4, it is seen that the statement with the highest mean is the 3rd statement; "I think that I intend to shop through mobile marketing services." The statement with the lowest mean is the 1st statement, which is "I find it fun to receive mobile advertisements."

Table 4. *Descriptive Findings of the Communication Scale of Consumers Regarding Mobile Marketing (N=100)*

Statements	***Minimum***	***Maximum***	***Average***	***Standard Deviation***
1. I find it fun to receive mobile advertisements.	1	5	3.88	1.192
2. I think mobile marketing saves me time.	1	5	4.04	1.014
3. I think that I intend to shop through mobile marketing services.	1	5	4.27	0.874
4. I think I will use mobile marketing services very often in the near future.	1	5	4.16	1.012
5. I think mobile marketing contributes to improving life.	1	5	4.14	0.985
6. I find it boring to receive mobile advertising.	1	5	4.17	0.888
7. I think that mobile advertising provides the information I need in a timely manner.	1	5	4.06	0.983
8. I think that mobile marketing services do not violate a person's private life.	1	5	4.14	0.899

When the values of consumers' opinions on the service quality scale regarding mobile marketing are examined in Table 5, it is seen that the statement with the highest average is the 8th statement; "I find it convenient to watch sports competitions such as football, basketball, etc. on mobile (watching live matches / goals / important moments)." The statement with the lowest mean is statement 2, which is " I think there are potential risks in using mobile marketing services for personal product purchases."

Table 5. *Descriptive Findings of the Service Quality Scale of Consumers Regarding Mobile Marketing (N=100)*

Statements	***Minimum***	***Maximum***	***Average***	***Standard Deviation***
1. I think there is a potential risk in using mobile marketing services for commercial product purchases.	1	5	4.14	0.975
2. I think there are potential risks in using mobile marketing services for personal product purchases.	1	5	3.98	1.063
3. I think it is safe too shop through mobile marketing services.	1	5	4.08	0.961
4. I think it is a good idea to use mobile marketing services.	1	5	4.02	0.943
5. I think mobile advertising is a good source of timely information.	1	5	4.14	1.015
6. I find it convenient to follow breaking news on mobile instantly.	1	5	4.16	0.873
7. I find it convenient to watch TV- listen to radio (watch various TV/radio channels live-online) via mobile.	1	5	4.22	0.970
8. I find it convenient to watch sports competitions such as football, basketball, etc. on mobile (watching live matches/ goals/important moments).	1	5	4.34	0.844
9. I find it convenient to make reservations and buy tickets via mobile (plane, train, bus, concert tickets, hotel reservations, etc.).	1	5	4.05	0.914
10. I find it convenient to receive guidance and information services via mobile (traffic, weather, etc.)	1	5	4.12	1.018
11. I find it convenient to buy health products via mobile (blood pressure monitör, steam machine, etc.).	1	5	4.21	0.924

12. I find it convenient to buy white goods and small household appliances via mobile.	1	5	4.11	1.024
13. I find it convenient to buy clothing products via mobile.	1	5	4.12	1.018
14. I find it convenient to buy home textile products via mobile.	1	5	4.21	1.028
15. I find it convenient to chat with others via mobile.	1	5	4.18	0.947
16. I find it convenient to buy computers and computer products via mobile.	1	5	4.04	0.984

Table 6 shows the frequency and percentage distributions of the responses of the consumers regarding their opinions on the communication scale of mobile marketing. 51% of the participants strongly agree with the statement "I think I will use mobile marketing services very often in the near future", 49% of the participants strongly agree with the statement " I think that I intend to shop through mobile marketing services" and 47% of the participants strongly agree with the statement "I think mobile marketing contributes to improving life".

Table 6. *Findings on Consumers' Communication Views on Mobile Marketing (N=100)*

Statements	***Strongly Disagree***		***Disagree***		***Undecided***		***I agree***		***Strongly Agree***	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
1. I find it fun to receive mobile advertisements.	6	6	6	6	23	23	24	24	41	41
2. I think mobile marketing saves me time.	3	3	3	3	22	22	31	31	41	41
3. I think that I intend to shop through mobile marketing services.	1	1	3	3	13	13	34	34	49	49
4. I think I will use mobile marketing services very often in the near future.	1	1	6	6	20	20	22	22	51	51
5. I think mobile marketing contributes to improving life.	1	1	6	6	18	18	28	28	47	47
6. I find it boring to receive mobile advertising.	1	1	3	3	17	17	36	36	43	43
7. I think that mobile advertising provides the information I need in a timely manner.	1	1	7	7	18	18	33	33	41	41
8. I think that mobile marketing services do not violate a person's private life.	2	2	1	1	19	19	37	37	41	41

Table 7 shows the frequency and percentage distributions of the answers given by consumers regarding their opinions on the service quality scale regarding mobile marketing. 53% of the participants strongly agree with the statements " I find it convenient to watch sports competitions such as football, basketball, etc. on mobile (watching live matches/goals/important moments)." and " I find it convenient to buy home textile products via mobile." and 51% of the participants strongly agree with the statement " I find it convenient to watch TV- listen to radio (watch various TV/radio channels live-online) via mobile."

Table 7. *Findings Regarding Consumers' Service Quality Views on Mobile Marketing (N=100)*

Statements	***Strongly Disagree***		***Disagree***		***Undecided***		***I agree***		***Strongly Agree***	
	N	*%*	*N*	*%*	*N*	*%*	*N*	*%*	*N*	*%*
1. I think there is a potential risk in using mobile marketing services for commercial product purchases.	1	1	6	6	17	17	30	30	46	46
2. I think there are potential risks in using mobile marketing services for personal product purchases.	2	2	9	9	18	18	31	31	40	40
3. I think it is safe too shop through mobile marketing services.	1	1	5	5	21	21	31	31	42	42
4. I think it is a good idea to use mobile marketing services.	1	1	6	6	19	19	38	38	36	36
5. I think mobile advertising is a good source of timely information.	1	1	9	9	12	12	31	31	47	47
6. I find it convenient to follow breaking news on mobile instantly.	1	1	4	4	13	13	42	42	40	40
7. I find it convenient to watch TV-listen to radio (watch various TV/radio channels live-online) via mobile.	1	1	6	6	14	14	28	28	51	51
8. I find it convenient to watch sports competitions such as football, basketball, etc. on mobile (watching live matches/goals/important moments).	1	1	2	2	12	12	32	32	53	53
9. I find it convenient to make reservations and buy tickets via mobile (plane, train, bus, concert tickets, hotel reservations, etc.).	1	1	4	4	21	21	37	37	37	37

10. I find it convenient to receive guidance and information services via mobile (traffic, weather, etc.)	2	2	6	6	16	16	30	30	46	46
11. I find it convenient to buy health products via mobile (blood pressure monitör, steam machine, etc.).	1	1	5	5	13	13	34	34	47	47
12. I find it convenient to buy white goods and small household appliances via mobile.	3	3	4	4	17	17	31	31	45	45
13. I find it convenient to buy clothing products via mobile.	4	4	1	1	19	19	31	31	45	45
14. I find it convenient to buy home textile products via mobile.	2	2	6	6	14	14	25	25	53	53
15. I find it convenient to chat with others via mobile.	1	1	5	5	16	16	31	31	47	47
16. I find it convenient to buy computers and computer products via mobile.	1	1	8	8	16	16	36	36	39	39

4.4 Research Hypotheses

Within the scope of the study, a total of 12 hypotheses were developed to analyze the relationships between the variables. The hypotheses of the study were formed within the framework of the theoretical relationships discussed earlier and as a result of the evaluation of the collected data. "Mann-Whitney U Test" and "Kruskal Wallis Analysis" methods were applied in order to determine the communication views of consumers regarding mobile marketing and the service quality views of consumers regarding mobile marketing. The hypotheses are given below respectively:

H_1: Participants' communication views on mobile marketing differ according to their gender.

H_2: Participants' service quality views on mobile marketing differ according to their gender.

H_3: Participants' communication views on mobile marketing differ ac-

cording to their ages.

H_4: Participants' service quality views on mobile marketing differ according to their age.

H_5: Participants' communication views on mobile marketing differ according to their educational background.

H_6: Participants' service quality views on mobile marketing differ according to their educational level.

H_7: Participants' communication views on mobile marketing differ according to their internet usage at home.

H_8: Participants' service quality views on mobile marketing differ according to their internet use at home.

H_9: Participants' communication views on mobile marketing differ according to their smartphone usage status.

H_{10}: Participants' service quality views on mobile marketing differ according to their smartphone usage status.

H_{11}: Participants' communication views on mobile marketing differ according to whether there is a restriction on the use of the Internet in their workplaces.

H_{12}: Participants' service quality views on mobile marketing differ according to whether there is a restriction in the use of the Internet in their workplaces.

4.4.1 Difference Tests Related to the Collected Data

H_1: Participants' communication views on mobile marketing differ according to their gender.

The relationship between the participants' communication views on mobile marketing and gender was analyzed according to Mann - Whitney U Test. The results of the analysis are given in Table 8.

Table 8. *Communication views on mobile marketing – Gender*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Communication views on mobile marketing	Female	54	50.01	2700.50	1215.500	-0.184	0.854
	Male	46	51.08	2349.50			
	Total	100					

According to the results of the analysis in Table 8; communication views on mobile marketing do not show a statistically significant difference at the p>0.05 level according to gender. H_1 hypothesis is not supported.

H_2: Participants' service quality views on mobile marketing differ according to their gender.

The relationship between the participants' service quality views on mobile marketing and gender was analyzed according to the Mann - Whitney U Test. The results of the analysis results are given in Table 9.

Table 9. *Service quality views on mobile marketing – Gender*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Service quality views on mobile marketing	Female	54	49.71	2684.50	1199.500	-0.294	0.769
	Male	46	51.42	2365.50			
	Total	100					

According to the results of the analysis in Table 9; service quality opinions on mobile marketing do not show a statistically significant difference at p>0.05 level according to gender. H_2 hypothesis is not supported.

H_3: Participants' communication views on mobile marketing differ according to their ages.

The relationship between the participants' communication views on mobile marketing and their age groups was analyzed according to Kruskal-Wallis Analysis. The results of the analysis are given in Table 10.

Table 10. *Communication views on mobile marketing – Age*

Dimensions	Groups	N	Ranks Average	Chi-Square	Degrees of freedom	p Value
Communication views on mobile marketing	25 years and under	29	47.22	1.703	4	0.790
	26 - 35 age range	61	51.20			
	36 - 45 age range	4	60.38			
	46 - 55 age range	4	60.13			
	56 years and over	2	37.75			
	Total	100				

According to the results of the analysis in Table 10, it is seen that there is no statistically significant difference in communication views on mobile marketing according to age groups at the level of $p>0.05$. H_3 hypothesis is not supported.

H_4: Participants' service quality views on mobile marketing differ according to their age.

The relationship between the participants' service quality views on mobile marketing and their age groups was analyzed according to Kruskal-Wallis Analysis. The results of the analysis results are given in Table 11.

Table 11. *Service quality views on mobile marketing – Age*

Dimensions	Groups	N	Ranks Average	Chi-Square	Degrees of freedom	p Value
Service quality views on mobile marketing	25 years and under	29	51.22	1.807	4	0.771
	26 - 35 age range	61	50.54			
	36 - 45 age range	4	62.75			
	46 - 55 age range	4	39.88			
	56 years and over	2	35.50			
	Total	100				

According to the results of the analysis in Table 11, it is seen that there is no statistically significant difference at the $p>0.05$ level according to the age groups. H_4 hypothesis is not supported.

H_5: Participants' communication views on mobile marketing differ according to their educational background.

The relationship between the participants' communication views on mobile marketing and their level of education was analyzed according to Kruskal Wallis Analysis. The results of the analysis are given in Table 12.

Table 12. *Communication views on mobile marketing - Education Level*

Dimensions	Groups	N	Ranks Average	Chi-Square	Degrees of freedom	p Value
Communication views on mobile marketing	Associate degree and under	5	25.10	6.074	2	0.048
	Undergraduate graduate	86	50.47			
	Master's degree / Doctorate	9	64.89			
	Total	100				

According to the results of the analysis in Table 12; communication views on mobile marketing show a statistically significant difference according to the level of education ($p<0.05$). H_5 hypothesis is supported.

H_6: Participants' service quality views on mobile marketing differ according to their educational level.

The relationship between the participants' service quality views on mobile marketing and their level of education was analyzed according to Kruskal-Wallis Analysis. The results of the analysis results are given in Table 13.

Table 13. *Service quality opinions on mobile marketing - Level of Education*

Dimensions	Groups	N	Ranks Average	Chi-Square	Degrees of freedom	p Value
Service quality views on mobile marketing	Associate degree and under	5	32.00	3.134	2	0.209
	Undergraduate graduate	86	50.52			
	Master's degree / Doctorate	9	60.61			
	Total	100				

According to the results of the analysis in Table 13, it is seen that there is no statistically significant difference at the $p>0.05$ level according to the level of education. H_6 hypothesis is not supported.

H_7: Participants' communication views on mobile marketing differ according to their internet usage at home.

The relationship between the participants' communication views on mobile marketing and their internet use at home was analyzed according to the Mann - Whitney U Test. The results of the analysis results are given in Table 14.

Table 14. *Communication views on mobile marketing - Internet use at home*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Communication views on mobile marketing	Yes	85	49.98	4248.00	593.000	-0.431	0.667
	No	15	53.47	802.00			
	Total	100					

According to the results of the analysis in Table 14, it is seen that there is no statistically significant difference at the p>0.05 level according to the use of internet at home. H_7 hypothesis is not supported.

H_8: Participants' service quality views on mobile marketing differ according to their internet use at home.

The relationship between the participants' service quality views on mobile marketing and their home internet usage status was analyzed according to Mann - Whitney U Test. The results of the analysis results are given in Table 15.

Table 15. *Service quality opinions on mobile marketing - Internet use at home*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Service quality views on mobile marketing	Yes	85	50.01	4251.00	596.000	-0.401	0.688
	No	15	53.27	799.00			
	Total	100					

According to the results of the analysis in Table 15, it is seen that there is no statistically significant difference at the p>0.05 level in terms of service quality opinions on mobile marketing according to the status of internet use at home. H_8 hypothesis is not supported.

H_9: Participants' communication views on mobile marketing differ according to their smartphone usage status.

The relationship between the participants' communication views on mobile marketing and their smartphone usage status was analyzed according to the Mann - Whitney U Test. The results of the analysis results are given in Table 16.

Table 16. *Communication views on mobile marketing - Smartphone use*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Communication views on mobile marketing	Yes	98	50.61	4960.00	87.000	-0.271	0.786
	No	2	45.00	90.00			
	Total	100					

According to the results of the analysis in Table 16, it is seen that there is no statistically significant difference at the p>0.05 level according to the use of smartphones. H_9 hypothesis is not supported.

H_{10}: Participants' service quality views on mobile marketing differ according to their smartphone usage status.

The relationship between the participants' service quality views on mobile marketing and their smartphone usage status was analyzed according to the Mann - Whitney U Test. The results of the analysis results are given in Table 17.

Table 17. *Service quality views on mobile marketing - Smartphone use*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Service quality views on mobile marketing	Yes	98	50.65	4963.50	83.500	-0.357	0.721
	No	2	43.25	86.50			
	Total	100					

According to the results of the analysis in Table 17, it is seen that there is no statistically significant difference at the p>0.05 level in terms of service quality opinions on mobile marketing according to smartphone usage status. H_{10} hypothesis is not supported.

H_{11}: Participants' communication views on mobile marketing differ according to whether there is a restriction on the use of the Internet in their workplaces.

The relationship between the participants' communication views on mobile marketing and whether there is a restriction on internet use in their workplaces was analyzed according to the Mann - Whitney U Test. The results of the analysis results are given in Table 18.

Table 18. *Communication views on mobile marketing - Whether there is a restriction on internet use at workplaces*

Dimensions	Groups	N	Ranks Average	Ranks Total	Mann-Whitney U Value	Z Value	p Value
Communication views on mobile marketing	Yes	9	47.11	424.00	379.000	-0.368	0.713
	No	91	50.84	4626.00			
	Total	100					

According to the results of the analysis in Table 18, it is seen that there is no statistically significant difference at the p>0.05 level according to whether there is a restriction on the use of internet in the workplace. H_{11} hypothesis is not supported.

H_{12}: Participants' service quality views on mobile marketing differ according to whether there is a restriction in the use of the Internet in their workplaces.

The relationship between the participants' service quality views on mobile marketing and whether there is a restriction on the use of the internet in their workplaces was analyzed according to the Mann - Whitney U Test. The results of the analysis results are given in Table 19.

Table 19. *Service quality opinions on mobile marketing - Whether there is a restriction on internet use at workplaces*

Boyutlar	*Gruplar*	*N*	*Sıralar Ortalaması*	*Sıralar Toplamı*	*Mann -Whitney U Değeri*	*Z Değeri*	*p Değeri*
Service quality views on mobile marketing	Evet	9	60.67	546.00	318.000	-1.103	0.270
	Hayır	91	49.49	4504.00			
	Toplam	100					

According to the results of the analysis in Table 19, it is seen that there is no statistically significant difference at the p>0.05 level according to whether there is a restriction on the use of internet in the workplace. H_{12} hypothesis is not supported.

5. CONCLUSION

Technology continues to change and develop at its usual pace every day. With the technological developments included in life, it is seen that the way of living life has started to change. When we look back 15 - 20 years, it can be seen that with technology, many behaviors, especially shopping, have started to leave the shops and enter mobile environments at a great speed. With the internet, which connected a few institutions until yesterday, retailers can now sell all kinds of products over the internet. This is because the internet has transformed into a huge market that includes billions of mobile phones around the world and every user with a phone has become a buyer.

Of the participants, 54.0% were female, 46% were male, 61% were between the ages of 26 and 35, and 86% had a bachelor's degree. It was observed that 85% of the respondents have an internet connection at home and 98% of them own a smartphone. 91% of the respondents have no quota restriction for internet usage at work. Therefore, it is seen that the majority of the participants can connect to the internet from both their homes and workplaces without facing any quota. In addition, except for only 2 participants, all participants have smartphones.

The reliability coefficient of the consumers' communication scale for mobile marketing is 0.841 and the reliability coefficient of the consumers' service quality scale for mobile marketing is 0.910. These results show that the scales used in the study have internal consistency.

A noteworthy point in the study is that the participants think that using mobile marketing services for personal and commercial product purchases involves potential risks. This is due to the risk of sharing personal information provided during the purchase process with third parties. From this point of view, sectoral studies can be conducted on consumers' risk perceptions, safe shopping and protection of personal information, and businesses can eliminate purchasing barriers.

The results of the research show that the gender, age, internet usage at home, smartphone usage, and whether there is a restriction on internet usage in the workplace do not affect the communication and service quality levels of consumers regarding mobile marketing. In addition, it has been seen that the communication views on mobile marketing show a statistically significant difference according to the level of education, while the service quality views on mobile marketing do not show a statistically significant difference at the level of $p>0.05$ according to the level of education.

The fact that smartphones, which are the main elements of mobilization, and the behavior of being constantly connected to the internet are present in the majority of the participants shows that the appropriate environment for

mobile marketing is provided. In this suitable environment, businesses will be able to offer their products directly to the masses who can buy them with mobile marketing activities that are suitable for them, and they will be successful by making sales in a market with high potential.

This research is limited to the sample that could be reached between the specified dates and the answers given freely by this group to the data collection tool. By increasing the sample volume in a larger space, the results obtained can be generalized to a wider audience. In future studies on the subject, different age groups can be addressed and research can be conducted on different potential target audience profiles. In addition, it is recommended that the topic should be renewed by covering the innovations in mobile marketing technology, as it loses its relevance in short periods depending on technological developments.

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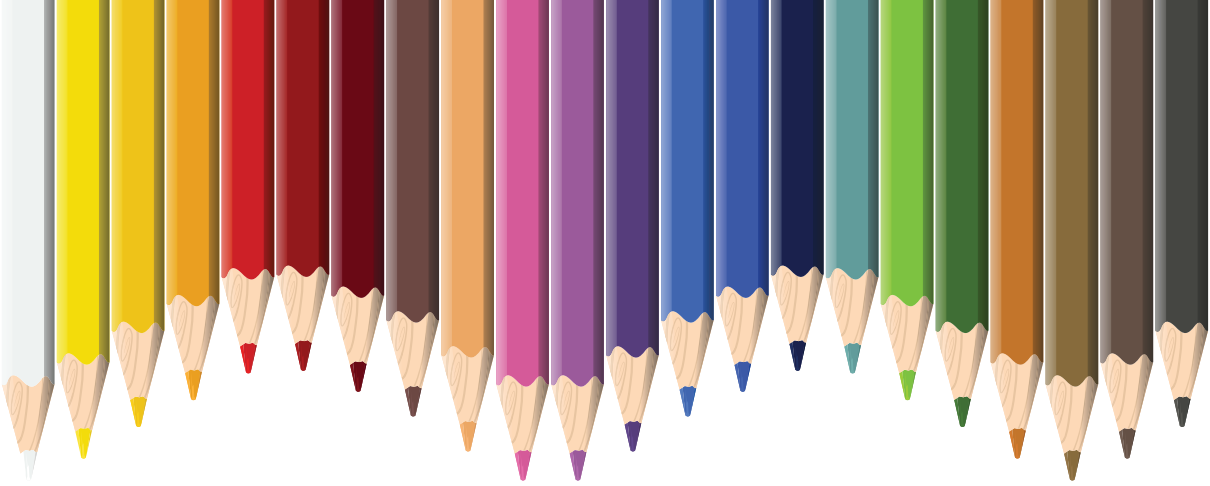

Chapter 7

A RESEARCH ABOUT DETERMINING THE IMPORTANCE OF WORD OF MOUTH MARKETING FOR CHOOSING PRE-SCHOOL EDUCATION INSTITUTION IN TRAKYA[1]

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1. INTRODUCTION

In the consumption sector, competition between brands has increased. At the same time, there has been an environment where consumers have to do more research to find the right one among these alternatives.

There are too many companies in the market that use marketing, sales, and public relations channels very well. Besides, there are preferred goods or service brands although they don't use advertising channels very often. They actually use a very frequently used distribution channel thanks to their existing consumers. This is where the concept of **word-of-mouth communication (WOMC)** and marketing comes into play, as it is known, advice.

In today's intense competitive environment, businesses that want to gain an advantage against their competitors have to choose the most effective communication channel(s) for the messages they will send to target consumers and use this communication channel(s) correctly. Today, many businesses realize the power of **word-of-mouth communication** created by neighbors, friends, family members and experts (Avcılar, 2010, s. 334-347).

It is understood that not only the factors related to the school itself, but also the individuals within and outside the family are more effective in choosing the institution. As with many other commercial products, peer-friend advice is more significant in the choice of educational services, on the other hand, it has been seen that the advertising and promotion activities of the institutions are not enough to affect consumers. In addition, even in the studies on the factors affecting the school preferences of the parents and the advertising strategies of private schools, it was determined that the most frequently used information source by the parents was their environment, the families of other students studying at the school and the staff working in the institution (Tokuç, 2007, p. 56).

2. WORD-OF-MOUTH MARKETING

Before explaining the concept of "word-of-mouth marketing" which is very important in terms of marketing communication, it would be more appropriate to explain communication, marketing communication and word of mouth communication (Taşkın, 2011, p. 165).

2.1 Communication Concept

From the past to present, there are many definitions of communication. There is an explanation for communication like it is a process of sending and receiving the messages between the group of people and organizations (Odabaşı & Cemalcılar, 1995, p. 15).

People living in the society communicate with each other within some

reasons and goals. This cycle is defined as the "communication process" (Efeoğlu & Çetin, 2012, p. 186).

Communication is very significant because of improving the comprehensibility between the people and organizations. Humans are social existence, for this reason they must live together with the others, and they need to keep in touch with the other people. This need is only eliminated by the connection process (Sarıışık & Özbay, 2012, p. 2).

There are three remarkable elements can be summarized in all these definitions of communication:

- At least two sides for communication like the sender or source and the receiver are needed.
- There is aimed to set up a common opinion between the sender and receiver.
- All these activities should describe a process (Odabaşı,1995, s. 15).

In the direction of communication, a person takes messages from the other people or environment continuously and also sends some to others. Because of this interaction, people can develop and renew themselves (Vural, 2012, p. 3).

2.2 Marketing Communication Concept

Marketing communication is a process managed by the experts who make the marketing process of the organization, product, or service easier tries to convince the consumers (Odabaşı & Oyman, 2002, pp. 55-56). Marketing communication is taking and explaining the messages from market by the channels because of changing available messages, creating new communication opportunities, and discovering wished reaction in target audience (Durmaz, 2012, s. 237).

The main purpose of many companies is providing awareness about their products or services and making them more registrable than their competitors in an existing market. This success will be achieved by some businesses use marketing communication most effectively (Cohen, 2000, s. 66).

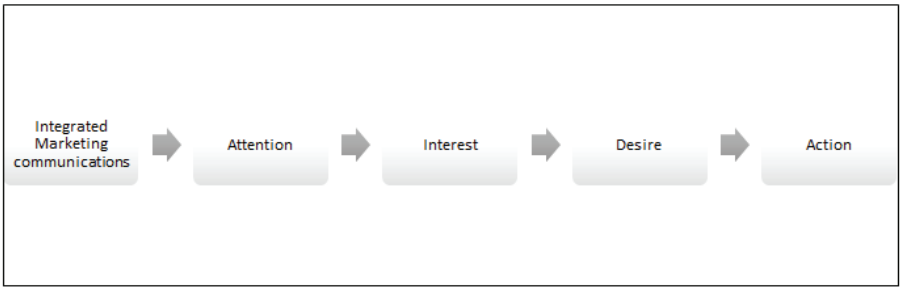
Bylthe (2001) points out that marketing communication follows a six-stage process. These are respectively,

- Determining who should receive the message,
- Predicting by the salesman how the message sent will be met by the target audience,
- Making the choice of the message,

- Determining through which channels the target audience will receive the message,
- Determining which features of the product or service will be transmitted,
- Testing whether the message has achieved the targeted success by conducting market research (pp. 200-232).

After this approach of Bylthe, business start to use AIDA process. According to AIDA approach, marketers call customer's attention forever. AIDA is formed by its first letters as "A" is for attention, "I" is for interest, "D" is for desire and "A" is for action (Churchill & Peter, 1998, pp. 18-30). The message sent should be clear and more attractive for bright understanding of the consumer. Otherwise, the receiver can't perceive this message. The more remarkable the message is, the greater the tendency of the customer to the product or service (Bylthe, 2001, pp. 200-232).

Figure 1 AIDA model



2.3 Word-of-mouth Communication

Although mass communication tools are significant in communicating with the consumers, communication between people also has a very important place. While mass media tools are effective in creating product or service awareness, personal communication is effective in persuading consumers (Bayus, 1985, p. 31). Marketing research shows that recommendations have an important place among the information sources that consumers care about. It has been concluded that the most important factor in the formation of recommendation trends is personal resources. It is seen that recommendation behaviors are more effective for service purchases (Yağcı & Çabuk, 2014, p. 47).

Arndt (1967), the earliest researcher emphasized that it is the communication between the sender and the receiver without any commercial purpose related to any brand, product, or service (pp. 291-295). According to a different definition, Word-of-mouth communication is the sum of the custom-

er experiences from brands, businesses, organizations, products, or services (Buttle, 1998, pp. 241-243).

Word-of-mouth communication is an important factor influencing customers' purchasing decision. Consumers rely on the information they obtain through word-of-mouth communication when making a purchase decision. Especially in service areas, due to the intangibility, it plays an important role in finding new customers and retaining existing ones (Bayus, 1985, p. 31). Because individuals are exposed to a lot of information bombardment and it takes a long time to filter the right information (Silverman, 2001, p. 23).

WOMC process starts with the encoding of the message is wanted to convey to the receiver by an information source. The encoded message is sent to the receiver through various communication channels. In this way, the message delivered to the receiver is decoded and interpreted. The receiver's comment is transmitted to the source via feedback. During this process, some environmental factors may negatively or positively affect the transmission of the message to the other side of the communication (Mowen & Minor, 2001, pp. 148-149).

As in other types of communication, various elements are required for the transfer of the ideas from the receiver to the source in word-of-mouth communication. These elements are source (sender), message, communication channel, receiver (target), feedback (response) and noise. In order for communication to continue effectively, the source must encode and transmit the message in a way that the receiver can understand. The receiver also needs to perform the encoding action to convert the message into thought or ideas (Karaoğlu, 2010, p. 14).

2.3.1 Characteristics of Word-of-mouth Communication

Word-of-mouth is a persuasive and very powerful communication method. There are some qualities that make this method effective. Expressing these qualities more clearly is necessary to understand the causes of the effect. These characteristics are reliability, experience transfer, being customer based, money and time saving (Karaca, 2010, p. 62).

Reliability

WOMC is more confidential than the salesperson. When people are going to buy a product or service that is important for them, they may prefer to act with the advice of familiar person or go to a trusted salesperson with the recommendation of this familiar person before meeting the seller. Even the service or product is not good, it will be more reliable and qualified to the consumer. Because, this person's friend, family or etc. are reliable for him (Yavuzyılmaz, 2008, p. 19).

Experience transfer

When the consumers decide to buy a product or service, they think that they want to try the product or service and have a real experience with low risk. The direct and indirect are two ways for gaining this experience. Direct experience is the process of trying the product virtually which may be more costly than indirect one in terms of time, money, risk of failure or disappointment. On the other side, indirect experience is talking or listening to other people about their experiences and helping others. People share their concerns and risks with this kind of activities (Gildin, 2003, p. 100).

It can be said that the experience in word-of-mouth accelerates the adoption process of the product. If the consumers experience the product how much faster, they will adopt a product or service as fast as it (Karaca, 2010, p. 40)

Being Customer-based

Word-of-mouth communication is the most customer-based form of all communication types. This communication process is carried out by customers and outside intervention is often ineffective (Karaca, 2010, pp. 12-62). There is no way or method to control word-of-mouth communication. Customers take over the campaigns of businesses that given up the control. The important point in here is that an experienced customers convey their experiences to another customer and guides them. However, businesses have succeeded in being different will also enable their customers to talk positively about their products or services (Trout & Rivkin, 2011, p. 265).

Money and Time Saving

When the studies in literature are examined, it is seen that word-of-mouth communication has an important place in the consumers' daily lives. Consumers share their purchasing experiences with each other and think that the information they obtain in this way is more reliable (Silverman , 2001, p. 15). This situation leads an ordinary consumer to obtain information from someone who has experienced this product or service before in order to have information about a product or service that they do not know much about. In this way, the time to have the necessary information will be shortened and the consumer will reach the desired product in the optimum time.

In addition to all these, companies allocate large budgets for advertising activities, and these budgets can actually become ineffective as a result of word-of-mouth communication between people. Word-of-mouth communication which has a very important advantage such as low cost can be more effective than the promotions made by spending big money. It saves time and money for both customers and businesses (Karaca, 2010, p. 45).

2.3.2 The Concept of Word-of-Mouth Marketing

The concept of word-of-mouth marketing (WOMM) has become popular in world marketing strategies in a very short time, and it has a concept feature that people and organizations in the marketing sector focus more and more every day.

Word-of-mouth marketing is that customers influence each other about a product, service, or brand. Customers convey their experiences about products, services, or brands to other potential customers through communication. This communication is very valuable for customers and companies. It is important for customers in their decision-making processes and for companies in understanding which type of word-of-mouth marketing strategy is more effective (İncirkuş, 2014, p. 1). According to another definition, WOMM refers to the informal sharing of experiences and information among consumers after purchasing a product or service. Word-of-mouth marketing is an important marketing strategy offers more reliable information to the consumers (Chung & Darke, 2006, p. 269).

If we put word-of-mouth marketing into a concept, it is a talking process about a brand or product among the consumers and telling it to third parties. Word-of-mouth marketing creates and provides reasons for customers some data to talk about the product or services everywhere (Yüksekbilgili, 2008).

Word-of-mouth communication forms the basis of **word-of-mouth marketing** concept. WOMC is the process of personal interaction between the sender and the receiver which can lead to the transfer of messages, the receiver's behavior, or attitudes (Merton, 1968, p. 335). On the other hand, WOMM is the process of influencing consumer-to-consumer communication within the framework of professional marketing through conscious studies. That's why companies should embark on a WOMM process where they provide some specific reasons to the consumers for keeping the conversation going about their brand, product, or service (İncirkuş, 2014, p. 4).

Bozkurt (2013) listed the distinctive word-of-mouth marketing features emerged from many definitions in the literature as follows:

- WOMM can contain conversations about the brand, product and service or company.
- Sharing ideas, thoughts or prejudices can be face-to-face, as well as in electronic environments such as mobile phones, chat rooms, e-mail, websites, send to friend links and social media applications.
- In addition to being spontaneous, it can also occur with the guidance of companies (p. 137).

The Importance of Word-of-Mouth Marketing

WOMM is the type of marketing that has the most power to influence customer decisions among the marketing concepts. Companies develop broad sales methods, advertisements, and marketing strategies, but WOMM is in a more dominant position alongside all these efforts (Silverman , 2001, p. 23). This fast and inexpensive method is a unique opportunity for today's marketing industry. Because competition is increasing in marketing and also marketing and advertising budgets are growing in parallel (Lin & Cheng-Hsi, 2006, p. 1210).

Kotler (2008) argued that advertisements and sellers can't be as effective as consumers' friends, relatives, old consumers, or independent expert on customers' purchasing decision (pp. 1-2). In service marketing academic studies, there is a pre-purchase trial constraint due to the service intangibility, so this makes WOMM important (İnan, 2012, pp. 191-192). WOMM is fast and the contained information has no limits. The resources can expand or collapse the information they have (Taşkın, 2011, p. 179). Companies consider their advertisements through WOMM more superior than regular advertising campaigns. In order to implement WOM advertising, companies try to find people who are talkative and curious, quick to adopt the product or service and have a wide environment. If these people adopt the companies' products or services, they will become free sellers (Kotler, 2008, p. 2).

According to Kılıçer (2006); the prominent reasons why WOMM is stronger than traditional communication types can be listed as follows:

- WOMM is strong, influential, and interesting in its market. Being impartial and independent also increases its reliability. A buyer of a product or service prefers to receive information from third parties rather than from a person who benefits from the business.

- Consumers can easily convey their experiences to others and want to minimize the risks associated with the product or service will be bought.

- WOMM is not affiliated with any person, institution, or organization. Because of this, WOMM is reliable.

- WOMM is consumer-oriented because, the consumer is a person will start the WOMC process.

- WOMM prevents consumers from wasting time.

- There is no cost in return for the information obtained through WOMM (p. 54).

2.3.3 Word-of Mouth-Communication Variables

Word of mouth communication consists of five dimensions that are expertise, idea seeking, opinion leadership, perceived risk level and recommendation.

Expertise

Expertise is gained through experience, training and knowledge. Knowledge and training about the product and experience as a customer are the components that create expertise (Wells & Prensky, 1996, p. 459).

When the relationship between the expertise of the person giving advice and WOMC effect was investigated, researchers detected a positive results (Kılıçer, 2006, p. 25). Bansal and Voyer (2000) also say in their research that if the level of perceived expertise of the source increases, consumers tend to initiate the communication process about the product or service themselves (p. 26).

Idea Seeking

Idea seekers can be explained as individuals who seek information or comments about topics they are curious about, services to purchase or products that interest them.

Opinion seekers don't focus on a specific service or product group, but simply use WOMC to get information about the product or service they need (Feick & Price, 1987, p. 87).

Opinion Leadership

Opinion leaders are people who are not afraid of risks, self-confident and active in social life (Odabaşı & Gülfidan, 2002, p. 280). At the same time, people who have knowledge and interest about services or product groups are called opinion leaders. Therefore, identifying opinion leaders for marketing strategies is of great importance for companies (Stern & Stephen, 1988, p. 48). Opinion leaders are knowledgeable and experienced about a particular service or product. They have more knowledge than others because they have more expertise (Goldsmith & Flynn, 1999, p. 52). Opinion leaders can be anyone in the person's close circle such as friends or relatives. On the other hand, they can be also professionals such as doctors, pharmacists, dentists, or lawyers who advise their clients or patients. In addition, film or restaurant critics and writers in consumer publications are also opinion leaders (Hoyer & MacInnis, 2004, s. 393).

Perceived Risk

Professionals using social sciences for explaining human behavior work carefully about consumer behavior. The concept of perceived risk also has

wide effects on consumers' purchasing decisions. Consumers hesitate about whether the product or service they buy fits with them and represents their energies. In addition, they are afraid of making the people around them especially their family members disappointed. Therefore, consumers tend to evaluate all risks in detail (Kaplan, 2009, pp. 66-67). The perceived risk can be interpreted as the objective expectation of losing. The greater the certainty about losing, the greater the perceived risk. It has been observed that as the level of risk perceived by consumers increases, they give more importance to the advice from their relatives.

If the perceived risk level of a consumer is high, they compare the product or service alternatives or they tend to seek advice from other people during the purchasing phase (Laroche et al., 2010, pp. 197-210).

The usefulness of information provided through WOMC is indisputable especially in reducing uncertainty and risk situations. In this case, it positively affects the risk level of WOMC (Arndt, 1967, p. 26).

Advice (Recommendation)

Recommendation is when a person conveys his or her positive or negative opinions about a product or service to others (Bahar, 2015, p. 69).

If there is a strong commitment between the source and the consumer, the information and advice consumers receive during decision-making appears to be more effective (Bansal & Voyer, 2000, p. 170).

3. A RESEARCH ABOUT DETERMINING THE IMPORTANCE OF WORD OF MOUTH MARKETING FOR CHOOSING PRE-SCHOOL EDUCATION INSTITUTION IN TRAKYA

Pre-school education services have some unique aspects like many other services. Although the primary consumer of this service seems to be children, "the decision maker" of the educational institution is the parent of the children. These decision makers are mostly parents, but they can sometimes be a relative or close family friends who supports the family financially and morally. Decision makers are also the common consumer of this service. To explain; many people who affect the purchasing decision of some products do not participate the consumption process, but families or decision makers are heavily involved in service consumption in the selection of pre-school education institutions. The decision makers are more affected by the results of their choices than the children because the evaluation of issues such as service content, quality and satisfaction belong to them (Polat & Çelmeli, 2015, pp. 145-148). One of the most important duties of the families is choosing a qualified pre-school education institution for their children. Families' knowledge about pre-school education and the people they take advice from affect the choice of

pre-school education institution and their expectations from it (Koç, 1996, p. 12). The advice they receive from their inner environment such as family, relatives, friends/colleagues, and derivatives are very effective. Before purchasing a service, consumers are willing to seek advice in order to minimize the perceived risk factor. Pre-school education is also a very important type of service for parents or people who decide on educational institutions. Consumers who make or will make this decision for their children or a relative they care for will need the information, experiences or opinions of experienced people related to this service purchased. For this reason, this study was conducted on this segment of the service sector.

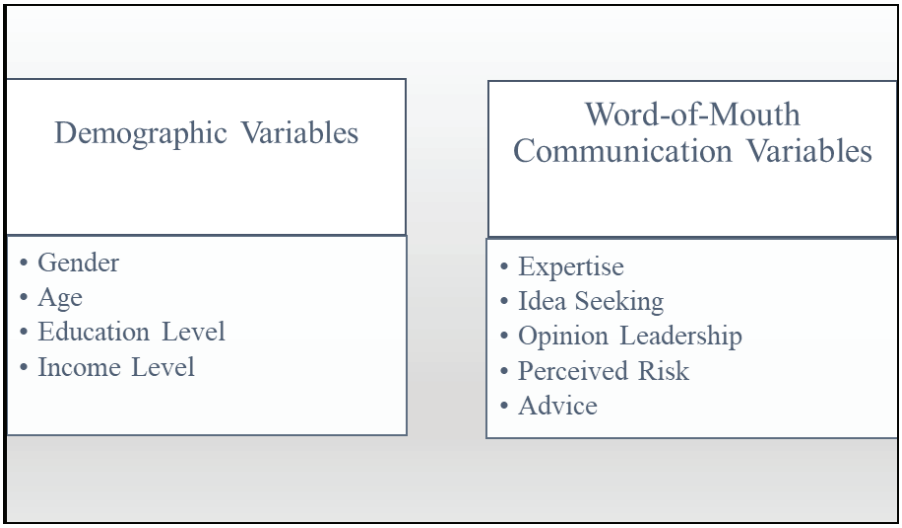
Another dimension of the issue is the gap in the Turkish literature about which factors consumers consider when choosing pre-school education institutions.

In the marketing literature, there have been many studies about the consumer' purchasing process of many products such as; FMCG, mobile phone, textile and etc., but there is not enough research from a marketing point of view regarding pre-school education institution preferences (Polat & Külter, 2007, pp. 109-126).

According to the results are obtained in this study's literature review, studies directly on this research subject are limited. In many studies in the literature, WOMM has been handled with different aspects, and research has been carried out about the effect of WOMM generally on health services and technology products. It has been determined that there aren't many large-scale studies on this subject in our country. Also, there aren't many books.

In order to fill this gap in the marketing literature; I did my research by setting up the model Figure 2 below. In this research; expertise, idea seeking, opinion leadership, perceived risk and advice dimensions which are important in determining the role of WOMM were researched according to the demographic characteristics of the people in pre-school education sector.

Figure 2 Research Model



Quantitative research method is used for this study. This study focuses on the pre-school education institution sector, was conducted among the people who have made or will make decision about pre-school education institution of children in Trakya. Decision makers of pre-school education service can be the families of the child, but also family elders or relatives who provide financial support in this decision.

Sampling method of this research is "snowball sampling". It is a non-probability sampling method. In the snowball sampling method, the first person within the research universe that the researcher can reach are determined. In the light of the data obtained from this person, the next people are contacted and a sample that is thought to represent the universe is created (Ural & Kılıç, 2021, p. 46).

The used survey is for people who have or will make a decision about the pre-school education institution. After applying 50 online survey questions, the results were analyzed, and the research results were explained in a way that would contribute to the literature. A 5-point Likert scale was used in this study.

After all analysis were done, demographic characteristics were determined. The majority of the participants who have chosen or will choose a pre-school education institution for one child. It has been observed that female individuals are more active in this selection. People between the ages of 31-40 are more active in choosing a pre-school education institution. People with bachelor and above education are more prominent in the decision process

when making this choice. Individuals earning 6.501-15.500 TL as income join the purchasing process of pre-school education institutions.

Consumers often need advice in the process of purchasing services. Reasons of the importance of WOMC are that it is found to be more reliable by potential consumers than other marketing methods, the transfer of experience is more, and it is found to be effective in terms of saving time and money. In terms of businesses, it can be preferred because it doesn't cost too much (Arndt, 1967, p. 291).

According to this study's analysis:

- People definitely get advice before choosing a pre-school education service, and they also received advice. There were some studies that the advice is often given when it is not needed.

- People describe themselves as conscious and researcher while receiving advice. Majority of people think that they give or take advice in the decision-making process for avoiding risks and being willingness to help in this process.

- People receive advice from friends or colleagues and educators at the decision process of purchasing pre-school education services. Besides, preschool education employees and the internet are also effective sources of information.

- Considering the characteristics of the resources; it has been observed that the opinions of knowledgeable and experienced individuals are more important due to the significance of children's education especially. Moreover, it is clearly seen how much we are influenced by the ideas of the people around us during our decision-making process.

This study shows that demographics are effective on WOMC variables at the purchasing process of people.

The perceived risk and idea seeking in choosing a pre-school education institution differ according to gender during the purchasing process.

Gender is effective demographic factor used to measure the impact of WOMM on consumer purchasing behavior. While the purchasing behavior of men differs greatly from the women, it has been observed that men and women have different preferences even when purchasing the same product.

Even though equality between men and women, equal rights and an equal working environment are advocated in today's society, it is seen that women mostly focus on family matters in purchasing activities but men focus on occupational subjects (Rothschild & Stiglitz, 1976, pp. 629-649).

Female participants, who play a greater role in choosing a pre-school education institution do more research on ideas and think about risk possibilities more. Because this choice carries the possibility of physical or psychological risks coming back to them through their children.

At the purchasing decision stage, while men prefer solution-oriented products in a short time, women get help from experienced people around them to achieve the best results for them and their children (Özdemir & Tokol, 2008, pp. 57-80). Female individuals' tendency of seeking opinions from more people, doing research to eliminate alternatives, and talking more on a topic causes a difference in the variable of seeking ideas according to the gender groups.

In addition, the perceived risk dimension varies according to gender, because of the physical, psychological, and social risk perceptions of women and men are different from each other. When female individuals seek advice from their environment or people who got the pre-school education service before, they think that they avoid financial and moral risks more than male individuals. Getting advice from more people means lowering risk for females. Due to the perceived risk variable, female individuals use WOMC more.

Another demographic researched is age in this study.

Consumers tend to purchase with different needs in every period of life. It is obvious that young consumers and older consumers have serious differences in product preferences (Tek, 1999, p. 801).

As a result of the research, age affects people's word-of-mouth communication process in terms of idea seeking dimension. People at their 20-30 ages need more advice because of their lack of experience and evaluate alternatives more.

The age groups show significant difference because people at their 20-30 ages are more researcher in terms of their generation. Young and middle-aged consumers are more likely to seek out the opinions of other people. Besides, for young and middle-aged consumers who use new technologies intensively, electronic word-of-mouth (E-WOMM) is also daily life routine like WOMM through some comments on internet platforms, blogs, social media and etc. At the same time, their ability to exert more physical and psychological effort than older age groups are also related to their idea-seeking orientation and their need to eliminate the alternatives.

When we look at the research, education level of people affects word-of-mouth communication between people by expertise level of people who give advice about pre-school education institution. As the level of education increases, people's attention to the other party's level of expertise increases. Since they are also more involved in the education sector, the expertise of

the other party makes a big difference. People completed bachelor and above degrees pay more attention to the expertise of the person they receive advice from when choosing a pre-school education institution.

When the education level changes, there is also a difference in the purchasing situation. As the level of education increases, the perception of quality changes and socially responsible and conscious consumers are formed (Sürücü, 1998, p. 19).

Another WOMC variable affect decision process of pre-school education institution is the perceived risk. Income level is effective on risk perception of people who take advice from others.

The different perception of financial, sociological, psychological, physical and performance risks in pre-school education services in income groups has caused this dimension to vary. The income level of consumers also directly or indirectly affects their purchasing power. Consumers with high incomes may spend excessively in order to gain social status as well as meeting their basic needs. The person with low income doesn't want to spend any money except their basic needs. People with low income want to minimize the risk of time and money while spending (Cemalcılar, 1998, p. 247).

While the consumer puts a product they need the most at the top of the priority list, they place the product with the least need at the bottom. Income status determines the order of necessity of needs. Limited income affects the distribution among products.

In this study, people with 2.500 TL and less income were found to consider these risks more because they are likely to encounter some material or moral damages as a result of their choices.

4. LIMITATIONS OF THE RESEARCH

In this research, 225 people were reached from various parts of Trakya. Since it would be very difficult to reach more mass in terms of time and cost, the research was limited number of people.

The other limitation is that male and female participants were not reached in equal numbers and there is a large gap between their numbers. The results mostly belong to female participants and don't reflect the views of male participants very much.

Despite all these limitations, the results of the research are intended to provide information that will guide people who will conduct research on this or similar issues in the future. In addition; it is aimed to understand the behavior of potential customers and to guide their marketing strategies by giving important information to institutions providing pre-school education services.

5. SUGGESTIONS TO COMPANIES ABOUT WORD-OF-MOUTH MARKETING IN PRE-SCHOOL EDUCATION SECTOR

Institutions providing pre-school education services can organize campaigns for their current or potential customers' close circles, especially their colleagues/friends and educators. As seen in the research, individuals are most influenced by their immediate environment when taking advice.

Institutions can encourage market experts or educators to provide voluntary information because the consumers often seek advice from their immediate environment or experts in the decision process of pre-school education institution service. At the same time, institutions should provide that events such as conferences and meetings for existing or potential customers under the name of "expert opinion" should organize by educators and experts related to this service. Because; each client is a source of advice for the brand and company. Therefore, they can inform about their businesses and trainings by holding meetings.

Each customer is willing to receive information from customers who have used this product or service before. Pre-school education institutions should identify potential consumers and provide information flow in the form of conversation between existing customers and potential customers from time to time. Creating independent WOM providers is a cost-free advertising resource for businesses.

In particular, opinion leaders within the community need to be identified very successfully by businesses. In this way, it will be ensured that other independent information sources also advertise in favor of the brand.

Expertise, perceived risk, advice, opinion leadership and idea seeking highlighted in the research differed according to demographic characteristics. Businesses should make their WOMM strategies according to their potential customer portfolios based on these points. For example; strategies suitable for equalizing risk perception according to gender should be used because of the perceived risk levels of men and women are different. On the other example, considering that an individual has low or middle income perceives more risk during the selection process of the pre-school education institution, some suitable PR application can be used on these groups.

If companies know which type of purchasing decision consumers use when choosing a pre-school education institution, they can also organize marketing activities to influence this behavior.

In the literature, the effects of WOMM have generally been measured by studies in the technology and healthcare sector. Education is as important concept as health and technology. Especially, the choice of pre-school educa-

tion institution is among the choices that are approached very sensitively, researched and taken advice because the institution where children will receive their first education is very important. Businesses providing pre-school education services should improve themselves in this regard by taking this into account and improve their service quality by realizing the power of advice.

For the future studies, in order to emphasize that education is very important at every level, it can be considered that the effect of WOMM on the preferences of state or foundation higher education institutions can be considered and compared. Besides; this subject can be expanded with a study across Türkiye. Moreover; it can be investigated which type of consumer purchasing decision-making or which type of purchasing behavior can be affected by the WOMM variables in the consumer's school institution choices.

ABBREVIATIONS

WOM	Word-of-Mouth
WOMC	Word-of-Mouth Communication
WOMM	Word-of-Mouth Marketing
E-WOMM	Electronic Word-of-Mouth Marketing

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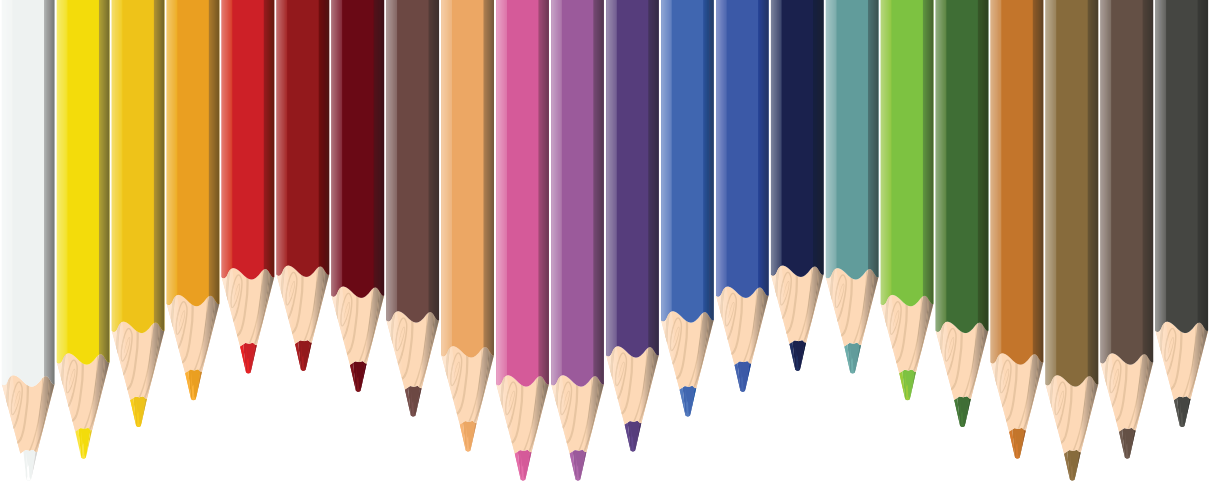

Chapter 8

ELECTRONIC FLIGHT BAG (EFB) FAT FINGER CASES IN THE COCKPIT

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INTRODUCTION

Constantly evolving technology reduces the information gained through complex methods. Although automation has minimized human error, unmanned aerial vehicle (UAV) is controlled with fingers; information is obtained quickly via touchscreens and buttons, and even flight management with display units is challenging to operate an aircraft (Chialastri, 2012). There are aircraft on the market equipped with touchscreens on which the fat finger attracts attention in many cockpit zones. Flight management with touchscreens is another factor in glass cockpits (George, 2018).

From the past to the present, aircraft manufacturers have developed touchable buttons, spring-loaded switches, knobs, Flight Management Systems (FMS), and joysticks. However, EFB has its touchscreen (Lawrenson et al., 2023).

The fingers are the only physical part between the flight crew and the Electronic Flight Bag (EFB). Since the result depends on the flight crew's inputs, these inputs are usually executed with the flight crew's fingers. Fat Finger explains any problem caused by the accuracy of the inputs (Kolly et al., 2012).

Adapting to the challenges of modernized aircraft has led to a competitive EFB market with highly effective and easily accessible information, where paperwork is in digitized format and accurate calculations save time, reduce physical workload, and provide other operational benefits (Fitzsimmons et al., 2002).

These EFB devices are installed or built into the cockpit by the manufacturer as part of the aircraft or as a portable tablet, pad, or laptop under different brands and EFB names. Where there are differences between pad and Tablet, evolving technologies have also introduced more glass cockpits with multiple touchscreens to control a flight. Integrated touchscreens have found similarities with tablets or pads (Sharma, R. 2023; Thales, 2019).

The use of the EFB by the flight crew is just as important as the flying skills, although the future of aircraft will bring more automated cockpits (Liu et al., 1997). This sophisticated device also has disadvantages. Some disadvantages are programs and software that need to be updated, wrong selection, computer or software errors, the risk of catching fire, battery life, and much more (Mariani, 2011). To be considered an accident, more than 5% of burns on the body are sufficient (ICAO, 2019).

Apart from this, Head-down time and workload correspondingly affect each other when EFB tasks influence each other. Another factor that has an impact is situational awareness (Hicks et al., et.al. 2014). As situational awareness is a central and critical issue for the entire aviation industry, the

importance of EFB use may not be recognized by the flight crew from time to time, as this may lead to an accident (Nguyen et al., 2019).

LITERATURE REVIEW

EFB OPERATION

EFB is one of the devices where the flight crew receives an output with the entered data. This device can also be used in pre-planning, post-planning, and during operations by ground staff, dispatch, Operation Control Center (OCC), safety management, and the performance department of a company.

This device is so noteworthy and appealing to users in a wide range that they can access all flight phase analysis, performance data, weight and balance calculations, calculations for abnormal emergencies with a selectable error limit, a paperless cockpit containing all operating manuals, and a lot of easily accessible information with a few touches of the device.

In order to carry this lightness to the aircraft and achieve this information with vital importance, the authorities are constantly monitoring, setting new rules, and ensuring that operations are maintained under specific rules (FAA 120-76D, 2017). They can have different screen sizes and brands. The manufacturer already built one class into the aircraft, but the crew can carry other classes. This automation has created a dependency for the companies and requires training to familiarize themselves with the interfaces and updates. However, according to the training results, some flight crews have less experience with non-EFB operations but are well acquainted with the traditional method of manual flight preparation. On the other hand, some crews have problems with the EFB interfaces (Laursen et al., 2017). Later, these three classes were eliminated, and the EFB classes were met, whether portable or installed equipment (FAA 120-76D, 2017).

Most EFBs are listed in the aircraft's minimum equipment list and should function properly as part of the aircraft's airworthiness certification. The manufacturer should verify crashworthiness issues (EASA, AMC 20-25A, 2019). There are IOS or Android-based devices where crashworthiness is an open question and requires further research, considering that a regular bolt from the market is not approved for use in aircraft, and these tablets, which can be bought anywhere, need to be evaluated.

There is also a need for further research into the environmental factors, such as temperature and air pressure, that cause the battery to malfunction (DiLorenzo et al., 2011). The temperature and cabin pressure vary from flight to flight. An aircraft air conditioning system blows a large amount of air into the cockpit, and the temperature and some of the aircraft's air vents are located directly above or below the mounting device. In addition, cabin pressure dif-

fers for each flight, and these tablets operate under dynamically changing air pressure. Traditional engineering methods and reality show that there is still a safety gap (Pickett et al., 2004). Screens can be scratched, blurred, overheated, and lose their sensitivity due to external factors or user errors. It can be a not recommended screen cleaner usage or external factor as exposure to sunlight in the cockpit or mounting device is near the electrically heated aircraft side windows (FAA, 2011). To address this, dynamic internal or external factors of EFBs require special monitoring and detailed crashworthiness certification for flight operations. Also, accidentally dropping a portable device can cause problems with the screen and render it inoperable altogether, whereas the screen of an EFB should display everything clearly and accurately (NTSB, 2007). The flight crew or severe turbulence can cause this unintentional dropping if the mounting device can no longer hold the EFB, has been improperly installed, or has come loose before or after the turbulence. With the various EFB device batteries on the aviation market, some battery types have a high risk of individual cells flaring up (FAA, 2017).

EFB TRAINING

Aircraft modernization and ergonomics bring fewer risks, and training and authorities' valuable efforts are subjected to mitigate most of the safety risks (Wiener et al., 1988). There are many procedures in case a user has access authorization to the EFB (R.S. Tump et al., 2015). Since it is still not entirely reliable and in these human-managed devices, the flight crew and all other internal or external users should receive EFB Training (FAA 120-76D, 2017). Practical EFB usage requires EFB Manuals or SOP and adherence to that analyzed constructive performance (Kanki et al., 2007). Those manuals mainly include a double-check mechanism based on the crew's feedback and call-outs, monitoring techniques, and alternative ways to cope with conflict. Proactive-focused companies bring training to a high level and strengthen their defense mechanisms even if there are no regulations on the subject (Liu, 1997).

Apart from the airworthiness, many authorities' manuals are routinely renewed by amendments. Operating an EFB in the company has to follow authority rules, and companies are responsible for monitoring and making their EFB system and software or buying a ready EFB system from outside sources. Therefore, every company should have an EFB Administrator (EASA, AMC 20-25A, 2019; Tump et al., 2015).

Any abnormalities in EFB should be reported (FAA 120-76D, 2017). In a dominant safety culture, events or errors of reported EFB establish good feedback for other flight crew who do not know of any possible errors from previous flight experience (Wiener et al., 1988). Thus, it increases awareness of the company and flight crew (EASA, 2021).

FINGERS

Fat fingers or slips are caused by incorrect selection, while transposition errors are usually caused by an accidental displacement between two digits (Reason,1990; ATSB, 2009). According to H. Avsar, other user factors are the speed of a user, fatigue of a muscle or organ, the tendency to use one hand more than another, vision, and finger (Avsar, 2017).

The user has difficulties with EFB design regarding ergonomic clear information presentation (Kafalı et al., 2021). Therefore, the finger can create an error if the required box is too tiny or vital information is on the second page, where it requires swiping from the first page to the second. However, the user accidentally swiped the third page, and the page number is not clearly visible or big enough.

Users' finger lengths, shapes, and sensitivity are different and pose issues under safety (Shimoga, 1993). Also, a gripping technique is another factor, and one-hand tapping is more complex (Trudeau et al., 2016). The installed EFB is in the cockpit, where the crew cannot grip it, but the portable EFB is mounted on a mounting device in the cockpit and is gripable. When it is unplugged, there is a risk of one hand tapping, and also, because the size of an EFB is bigger than a smartphone, difficulty gripping with the other hand is another factor.

The fat finger's possible inaccurate input meets with modernized aircraft, like accepting a full runway length take-off performance where the reality is an intersected or shortened runway entry take-off. In the end, the aircraft does not recognize the values of EFB and the aircraft's entry taxiway to the runway, and a possible miscalculation ended with an overrun (Wiener et al., 1988).

SHELL - LIVEWARE

With the guidance of the Human Factors SHELL model of Edwards and Hawkins, the aviation industry still uses this model in many places. It is constantly mentioned, especially in the Crew Resource Management (CRM) flight crew training. However, the industry has been developing, and in a new era, EFB integration introduced a more detailed Liveware (L) component in 2017, as shown in Figure 1, and humans have become more centralized. A discrepancy between human (L) and other components leads to human error where the flight crew inputs are processed in the EFB computers(S), and output commands the aircraft's system or automation where this assesses potential errors (Edwards, 1972; Hawkins, 1987; Miller et al., 2018).

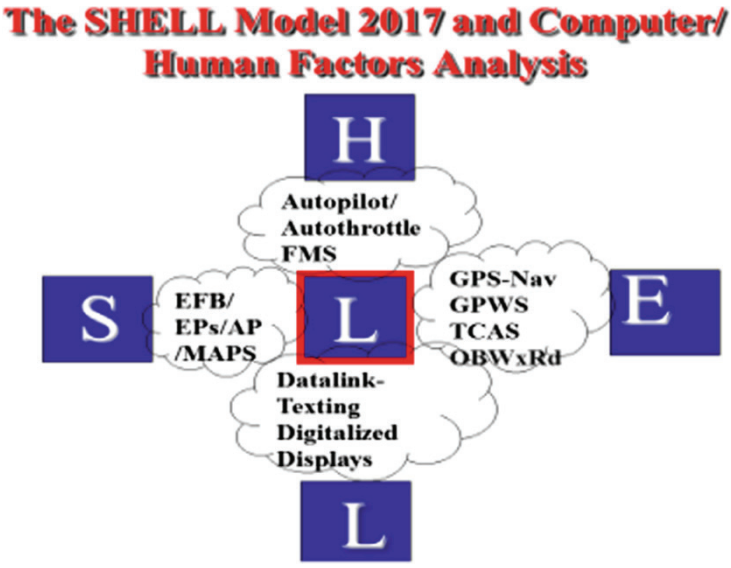

Figure 1: The SHELL model Highlighted Liveware Source: Miller, M.D.,2016.

According to the study, there is a high risk between EFB(S), user(L), and environment(E) (Kafalı et al., 2021). Consideration of a paperless cockpit where charts, maps, and much more software are reachable via EFB, this mismatch should be assessed constantly in the companies.

STERILE COCKPIT

Common Language lets flight crew follow clear communication and is not only a language but also the clarity of what they perform. At critical phases of flight, this communication integrates with a sterile cockpit, and the task's priorities become more apparent (FAA 120-48A, 2020). For example, a pilot flying (PF) in the landing phase receives a message from EFB. Priority should be to fly an aircraft because EFB is a non-essential and dangerous distraction in the landing phase. Therefore, sterile cockpit rules block flight crews from urgent EFB tasks in important phases where unnecessary task distraction is delayed in critical phases of flight (EASA, 2012). This task prioritization cockpit is helpful while entering data because any small erroneous entry may cause a big catastrophe. Many abnormal, unexpected situations interrupt the sterile cockpit, and an efficient sterile cockpit increases the safety margin, but there are still misunderstandings (Sumwalt, 1994).

EFB SOFTWARE AND PROGRAM RISKS

Software, program updates, and lack of notices to Airmen (NOTAM) checks by flight crew may lead them to erroneous entries. EFB should be updated before operation, but sometimes, NOTAM may not be in the EFB (FAA

120-76D, 2017). For example, the runway length is reduced due to maintenance work, but this new information is not in the EFB and is also not recognized by pilots in other information channels. Therefore, Pilot feedback to the company is a good practice to update the information where EFB cannot detect everything without data modification by the company. A study shows that only EFB-trained initial student pilots are at risk of not reading and using NOTAM information without an EFB (Misra et al., 2019).

Since EFB runs under portable devices with outsourced processor software and data transmission with wireless or mobile data, security solutions are required against threats like viruses and malware (FAA 120-76D, 2017). Attacked and changed information may direct flight crew to choose and believe the wrong data.

WORKLOAD AND OTHER FACTORS

Head-down Time is a window where the flight crew is away from reality, mostly between two separate duties. Flying requires constantly changing head-up and head-down time. (Hilburn, B. 2004). For example, at one point, the crew checks their approach charts and manages the aircraft via instruments. As another example, If it is a visual approach, the crew primarily focuses on speed, altitude, and bank angle and also looks out to continue visually. So quick switching is required.

The age of the flight crew is another factor. Older flight crews have experience with classic aircraft with many more switches, buttons, and fever display screens. However, when tapping a device, older flight crews prefer larger icons and more time in the EFB than younger ones (Siek et al., 2005). EFB devices increase the head-down time of the flight crew (Liu, 1997). For example, finding a description in the fuel system with a digitized aircraft operations manual may take longer than a new generation of flight crews who can find the same information in less time. On the contrary, some young flight crews lose awareness when EFB is not operational and need help planning a flight in other ways (Misra et al., 2019). Apart from the usage speed and experience of EFB, the older flight crew has a risk of accidental touches, and their tremor consideration is another risk (Nicolau et al., 2012).

Regarding trust in new automation technologies, the new generation's trust in automation is higher than old generation flight crews.(Koltai et.al, 2014). Where low trust brings an evaluation of systems accuracy, this can also lead to incorrect actions by the flight crew (Wiener, 1993).

EFB reduces the physical workload, but the mental calculation begins before entering the latest flight data from ground staff or the company (Liu, 1997). It continues while inserting data and acceptance. Any changes related to performance require a new calculation. If the physical workload or the

complexity of tasks increases when the flight crew's awareness is low, performance and mental workload deteriorate (Mansikka et al., 2018). At that stage, EFB Automation draws the pilot into a mental workload, and everyday routine EFB usage brings "tunneling of attention." This usage is directly related to mental workload (Wickens, 2002).

DISTRACTION

Since the EFB has become a daily task for the flight crew, things that deviate from the routine bring distractions. Any data that is out of the ordinary requires more effort, and many factors, such as landing delays and crew punctuality, lead to rushing and a lack of focus on the priorities of the flight (Airbus, 2004). The main priority of pilot flying is to fly an aircraft, but these disruptions can lessen the pilot flying (PF) situational awareness. According to that, with a loss of situational awareness, wrong calculation with an inaccurate finger position is possible.

MISCALCULATION AND DATA INPUT ERROR

EFB removes old-era manual calculations, but there is still a risk of miscalculation. For non-EFB calculations to determine take-off performance, the crew usually gets realistic take-off data from various sources, checks the data of a specific airport and runway, the environmental conditions, and the required thrust with many different values to calculate the take-off performance. EFB reduces the workload and saves time to focus on other flight crew duties (Liu, 1997). However, Miscalculation requires more attention because sometimes erroneous entries have no warning mechanism in devices.

According to T. Rocha et al. study, Monitor and mouse-like aircraft display units with joysticks, Flight Management Systems (FMS) and function keys, and EFB with no touch screen can bring more problems over users' motor skills and more time than one of the famous portable touchable EFB device brand. One touch-sensitive all-in-one pad of one brand showed that the user controls the input with one finger and less precisely tapping in reduced areas (Rocha et al., 2016). That shows how easy it is to impact the fat finger problem, and it also highly affects EFB with no touchpad or other aircraft systems where workload and distraction increase, and head-down time increases to finalize a duty.

OCCURRENCES

According to Hughes et al. (2011), incorrect take-off performances were examined in 11 events. As a result, software problems and incorrectly entered data were predominant in Figure 2. It is worth remembering that today's aircraft manuals are retrieved from EFB. However, the fact that there was no recalculation where every new performance changes requires a new calculation and should be a separate subject of further research.

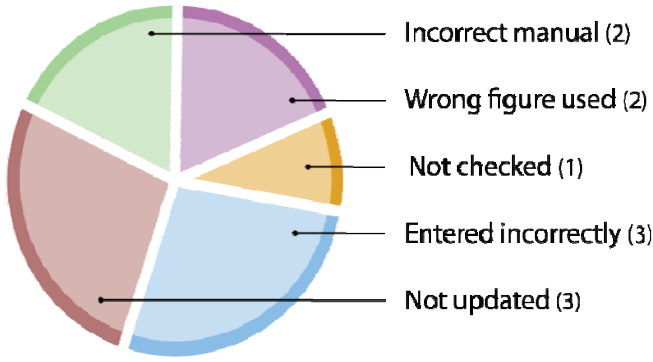

Figure 2: Error action. Source: Hughes & Godley (2011).

According to non-EFB occurrences or before the EFB era, there were different factors in performance, such as erroneous entries in ACARS and flight engineer responsibility in the cockpit. The flight crew did not check the flight engineer's wrong manual calculation (NTSB, 1992).

The possible delay distraction of the first officer followed by an input entering into the wrong column in ACARS (AAIB Denmark, 1999). Another wrong entry into the MCDU, instead of 156 knots, 126 knots, was reported (TSB, 2003).

At the beginning of the transition period to EFB operations, unfamiliarity or experience was a factor, and training needed to be improved. Lack of training and knowledge caused an occurrence (AIBN, 2004). With Increased familiarity with EFB, occurrences have not lessened enough yet.

The "Fat Finger" was mentioned as a separate contributing factor; a serious incident filed accidentally wrong take-off data selection with an EFB, and both flight crew's fat finger problem was not recognized. As a daily routine task, believing an output widened the event. Flight crew trusts in EFB, which affected a lack of focus on cross-checks of output (DSB, 2023). The reliability of EFB can bring unsafe operations. Perhaps EFB is a daily task of most pilots under no malfunction; interaction between fingers can result in a fatal accident (Wiener et al., 1988).

In the end, the Dutch Safety Board gave operators many lessons. One was to increase the accuracy of tapping in reduced areas or blind spots. Data errors need to be reported to the company for further corrections or development where aircraft cannot record all events that occurred by EFB. Many recommendations about situational awareness of companies and flight crew over EFB were in the report, where actions and constructive awareness must be executed to reduce risks with a reminder of potential catastrophic accidents. Because once take-off data was accepted, there was no alert or feedback to the

flight crew where the data was wrong (DSB, 2023).

"Unsafe events are seen as opportunities for the organization to learn"(DSB, 2023).

According to the final report, European Union Aviation Safety Agency (EASA) plans to mitigate the fat finger problem by the hard barrier. However, this should come into operation because the reported aircraft manufacturer company has no plans for the hard barrier (DSB, 2023). Workload and distraction were some factors where wrong data and failure to check caused an accident. Additionally, most of the flight crew of the reported company did not have EFB training. The flight crew was under a high workload and distracted, especially by the delay because of cargo offload and load-master vacuum of contaminated pallets. The EFB device was a laptop with a touch-screen ability (TSB, 2004).

Many possible distractions from the cabin crew and cockpit visitors may affect the error. Later on, another distraction of the radio made the flight crew not review the Flight Mode Annunciators (FMA) before departure, and recognition of the error was in the take-off roll phase. After take-off, the crew understood they had an erroneous entry as 79 Celsius instead of 49 Celsius (AAIB, 2018).

EFB reduces the physical workload; in this case, the problematic power source escalated the flight crew's physical and mental workload. In addition, the flight crews were affected by various distractions and were prone to making mistakes. Another error chain was the EFB design, and the automatic transfer of the first entered data was not noticed when making a new calculation (TSB, 2006).

Authority approvals and the importance of training were spotted where the company had no EFB approval and revision in the manuals. However, EFB's long and detailed approval starts with a request, authority meeting, EFB compliance checklist to fulfill all items, operational evaluation, and, in the end, the approval (TSB, 2004).

The operating flight crew detected erroneous take-off weight and performance entry close to the end of the runway. ATBS reported that the alerting of performance errors is not satisfied like other investigation reports. The flight crew reports showed a high trust in EFB, where data entry errors are inevitable. The distraction of the captain was another factor. The usual daily routine entries of the flight crew increased familiarity and led to less evaluation awareness; that lack of awareness resulted in a fat finger. Another finger error, as a transposition error, was found in the first officer's inaccurate tab (ATSB, 2009).

According to valuable research, as shown in Figure 3, those concerns still pose a safety problem, and it is vital to mitigate or minimize these issues with the expected increasing technology of future EFB and aircraft models (Chase et al., 2014).

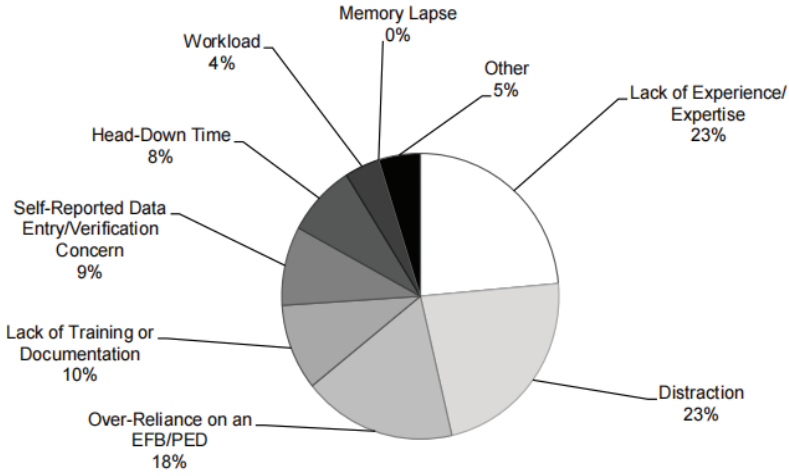

Figure 3: Self-Reported Human Performance Concerns. Source: Chase & Hiltunen, (2014).

CONCLUSION

Organizational threats such as distraction pressure from flight delays, dispatch, manuals, EFB devices, and human error have caused a low safety level. Also, EFB usage is associated with flight crew awareness and workload. Nevertheless, countermeasures against anomalies are possible. Maurino et.al., (2005, April)

Lessons and recommendations from the serious incident report were mainly about the development of the EFB (DSB, 2023). Consequently, there must be human performance considerations during the design, development, and use of these critical defenses (TSB, 2006). EFB should develop stimulus mechanisms, such as a cursor with every touch of the flight crew (FAA, 2011).

EFB tactile feedback-enhancing designs with audible and more comprehensive visual warnings can minimize the possibility of fat finger problems in flight crews (FAA, 2011).

According to the investigation report, the company's gross error check was an excellent mitigation of double-checking the erroneous data if the flight crew could execute it (TSB, 2004). Therefore, different defense mechanisms should be developed by companies where human error is inevitable in selecting inaccurate data, and future aircraft will have more automation and devices like EFB.

EASA's encouragement is to show possible hazards and mitigations in EFB Manuals, where two flight crews should perform the calculation cross-check required after that. Those tasks require good training, and the flight crew should follow the company's procedures (Tump et al., 2015). In case of pilot incapacitation or one operable EFB on board, the scenario may mitigate a possible error by increasing visual attention tactics of flight crew about EFB.

The company's guidance, training policies, and EFB design importance and development are required to recognize the errors in advance (NTSB, 2007). The flight crew's return feedback shows a good attitude toward mitigating possible occurrences (FAA 120-76D, 2017).

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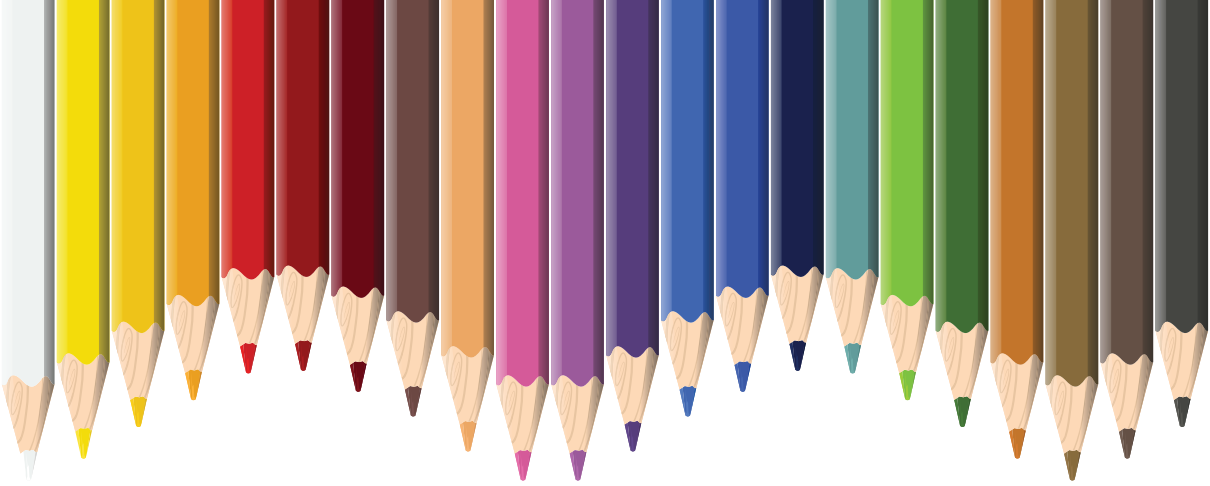

Chapter 9

AN EVALUATION ON THE CONSTRUCTION PHASES OF MANİSA-TURGUTLU, PİYALEOĞLU MUSTAFA AĞA (PAZAR) MOSQUE

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Introduction

Turgutlu, now a district center of Manisa province, is one of the most densely populated and economically developed settlements of Western Anatolia due to its location on the fertile soil of the Gediz Plain and on the historical route from Central Anatolia to Izmir. Surveys conducted in the region show that the region has been home to many civilizations throughout history, starting from the Neolithic period (Yıldırım 1997: 30-37). The region came under Turkish rule at the beginning of the 14th century when the Saruhanogullari Principality, one of the Turkmen groups that had embarked on conquest movements in western Anatolia, captured Manisa and its environs. However, the earliest documents in which the name Turgutlu can be identified as a settlement belong to the early 16th century. The name of the district is mentioned for the first time in an icmal tahrir book of the Bayezid II period (1481-1512) as "Turudlu" (Emecen 2006: 222-223). Turgutlu, apparently named after a Turkmen community, was still a village forming the center of the Yengi sub-district of the Manisa kaza of the Saruhan sanjak during this period (Emecen 1989: 221). The main development of the district was shaped as a result of the economic activities that intensified from the 17th century onwards. The decision dated 1610 to establish a market here was instrumental in Turgutlu's transformation from a village to a town by becoming a trade center and being called "Kasaba" for short (Emecen 2006: 227). Evliyâ Çelebi reported that there were five mosques and many masjids in Turgutlu, as well as three baths, eleven inns, seven coffee houses and three hundred shops (Evliya Çelebi 2011: 71-72). Built in the second half of the 19th century, the Izmir-Kasaba railroad line also contributed significantly to Turgutlu's export of its commercial products by establishing relations with international markets (Çağlar 2014: 241). In 1922, a large number of cultural assets and historical texture in Turgutlu suffered great damage in the great fire (Gökyayla 2023).

Architectural Features of Piyaleoğlu Mustafa Pasha (Pazar) Mosque

Piyaleoğlu Mustafa Paşa (Pazar) Mosque, located in the Altay Neighborhood in the city center, is one of the few buildings that survived the great fire. The building, which is registered on plot 53, block 492, parcel 1, was registered as an immovable cultural property in need of protection with the decision of the High Council of Real Estate Antiquities and Monuments dated 09.09.1968 and numbered 4257. It consists of a square prayer hall covered with a dome, a three-unit portico for latecomers to the north and a minaret at the northern end of the western facade (Figure 1). A two-story rectangular reinforced concrete mass was recently added to the east. To the north of the portico for latecomers, there is a second portico (sakıf) in the form of a wooden porch. The construction material is rough masonry stone and brick in alternating order. There is a reinforced concrete, unqualified fountain to the north.

According to the construction inscription, it was built by Piyaleoğlu Mustafa in 1065/1654-55. In addition to the construction inscription, there is also a foundation dated 1067/1656-1657. According to the foundation, among the buildings that brought income to the mosque are "a coffeehouse in the Pamuk bazaar, a coffeehouse adjacent to the mosque, a grocery store, a quilt shop, a tobacconist shop, another coffeehouse and a tobacconist shop" (Gökçen 1950: 106). Although some old photographs suggest that the remains of the walls adjacent to the eastern and western facades of the building may belong to the coffeehouse and grocery store described as adjacent to the mosque in the waqf, there is no clear data on this.

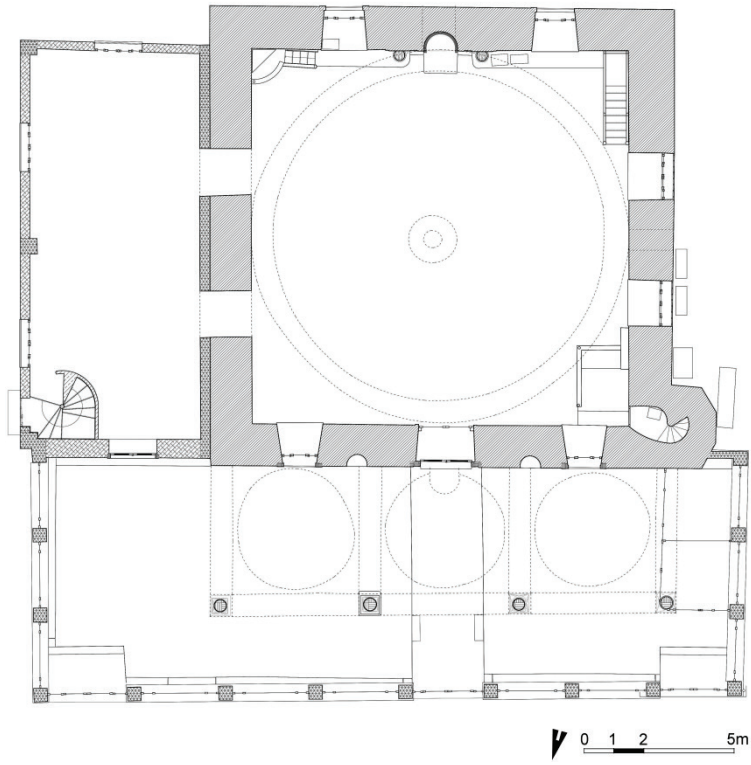

Figure 1- Documentation, plan, 2023 (Dares Architecture)

The walls were built with rough masonry stones and bricks in alternating order. Spolia marbles were also used at the corners. The joints were made visible with cement based plaster. On the upper part of the facades, there are five rows of brick sawteeth eaves. The southern and western faces have a symmetrical arrangement (Photo 1,2). Both of these faces have five windows arranged in two rows. The two windows in the lower row have pointed arches. The lower row of windows on the southern facade are narrowed with stone

jambs and semi-circular arches were added later. On both the western and southern faces, there is a circular-shaped window in the center and a window with pointed arches on both sides. Several decorative aspects are apparent on the western facade: one of the spolia marbles is decorated with floral ornament with curved branches at the southern end; on the upper part, there is a cypress motif formed with bricks on both sides of the circular window in the center.. Although the facades on the eastern, southern and western originally had a symmetrical design, a reinforced concrete two-storey mass was added to the east of the building in 1997 to be used as a women's gallery (Photo 3).

The minaret, located at the northern end of the western face, has a cylindrical body rising on a five-sided base (Photo 4). Between the base and the body is a lug with triangular bands. The upper part of the base, built with rough masonry and bricks, has pointed arched panels. The perception of the triangles in the shoe part has become difficult due to cement-based plaster interventions. The body is built with bricks. The body, which is seen plastered in some old photographs, is currently unplastered.

The dome of the prayer hall has an octagonal drum. All domes and the porch of the second portico for latecomers level in the north are covered with lead. The porch-shaped portico for latecomers in the north is carried by square-sectioned reinforced concrete piers resting on marble-coated walls that are slightly raised from the ground (Photo 5). The piers are connected to each other with pointed arches in the east and west and semi-circular arches in the north. The piers and arches are covered with mosaic. The original portico for latecomers of the building consists of three units covered with domes. The dome transitions are provided with pendants. The domes are carried by four spolia columns connected to each other with semi-circular arches. On the north wall of the prayer hall, there is an entrance opening in the centre, an outer mihrab and a window on either side. Above the entrance, there is a mükebbire in the centre and a window on each side (Photo 7). The windows in the lower row have stone jambs, semi-circular arches and iron bars. The upper ones have semi-circular arches and plaster exteriors. The mükebbire in the center has a half-conical form and iron bars.

Photo 1- Southern Facade.

Photo 2-Western facade.

Photo 3- Eastern facade.

Photo 4 - Minaret.

Photo 5-General view from North.

Photo 6- Prayer hall north wall and portico for latecomers.

The prayer hall is entered through a flat arched opening enclosed in a rectangular frame (Photo 7). At the top of the flat arch is the building inscription (Photo 8). The text of the Arabic inscription consisting of seven lines placed in cartouches with segmented arches is as follows (Tepekaya 2008: 51; Görür 2013: 497):

مصطفی ابن پیاله یعنی عبد صعیف

حقدن ایستردم یاپم بر معبد حوب غریب

بر عبادتکاهه محتاج کوردم بو محل جامعی

بشلادم فیالحال بنده قالمیوب صبر شکیب

حمدالله کر تمام اولوب دیدم تاریحنی

جامعک اتمامنی قلدی بکا الله نصیب

سنه ١٠٦٥

It is learned from the inscription that the building was built in 1065/1654-55 by Piyale son Mustafa. The date of construction is given in numbers as well as in ebced calculation.

Photo 7-Prayer hall entrance.

Photo 8- Inscription.

The walls of the prayer hall are quite simple in terms of ornamentation (Photo 9-11). Dome transitions are provided with large pendentives. The interior face of the dome and the pendentives contain recent low-quality painted decorations. The remaining wooden beam slots on the north, east and west walls indicate that there was originally a women's gallery in the north, but it does not exist today. The women's gallery must have been removed due to the addition added to the east in 1997 and used as a women's gallery.

The mihrab, located in the center of the south wall, has a semicircular niche and a quarter sphere shaped architrave (Photo 12). The mihrab niche has a rectangular frame delimited by moldings, and on either side of it are columns with gilded composite capitals. On the upper part of the columns, there is an inscription with religious content between two consoles and a semi-circular arched crown above it. There is a plaster pitcher on both sides of the semi-circular arch and around it there are plaster curved branches surrounding the circular window in the upper part of the semi-circular arch. There are also religious inscriptions on the pediment of the semi-circular arch. The date 1340/1924 at the end of the inscription just above the arch proves that the mihrab was intervened in the repair after the fire of 1922. As a matter of fact, it is learned from the document dated 12.02.1924 in the Republican Archive of the Presidency of the State Archives that 1500 Turkish Liras were sent for the ongoing repairs (CA, 13/109-4).

The wooden minbar in the southwest corner of the prayer hall is a recent and unqualified element. There is no information about the original minbar. The wooden preacher's pulpit (vaaz kürsüsü) in the southeast corner is also of poor quality.

The two-storey mass added to the east of the building and used as a women's gallery can be entered through the opening in the eastern part of the por-

tico for late comers and through the openings on the eastern wall, which were originally windows but were converted into entrances (Photo 16). According to the inscription on the upper part of the opening, it was built in 1997 by a person named Ahmet Yılmaz Maden.

Photo 9- Prayer hall north and east walls.

Photo 10- Prayer hall south wall.

Photo 11- Dome.

Photo 12- Mihrab.

Comparison, Evaluation and Restitution Suggestions

Piyaleoğlu Mustafa Paşa (Pazar) Mosque is a square planned building covered with a dome. The single-domed plan design, which is frequently seen in Central Asian and Iranian buildings in the pre-Islamic period, seems to have found an important counterpart especially in Qarakhanid and Ghaznavid turbehs. Tim, Arap Ata Turbeh (978) (Cezar 1977: 114), Talas, Ayşe Bibi Turbeh (12th century) (Çeşmeli 2007: 120) and Talas, Balaci Hatun Turbeh (12th century) (Çeşmeli 2007: 122) are examples of single-domed mausoleums of the Qarakhanid period, while Sengbest, Aslan Cazip Turbeh (1028) (Aslanapa 1999: 47) is an example of the Ghaznavid period. The earliest known examples of single-domed mosques were built in Iran during the Great Seljuk period. Among these examples are the Isfahan, Masjid-i Jum`a (Friday Modque) (1080) (Cezar 1977: 327), Qazvin, Masjid-i Haydariye (1115) (Cezar 1977: 363), Gulpayegan, Masjid-i Jum`a (1118) (Cezar 1977: 358) and Ardistan, Masjid-i Jum`a (1160) (Cezar 1977: 364).

The first examples of single-domed mosques in Anatolian-Turkish architecture can be seen in a group of Seljuk masjids built in and around Konya in the thirteenth century. Many of these buildings have a portico for latecomers built on the same axis as the entrance facade. These spaces, which are either enclosed or porticoed, are covered with vaults (Katoğlu 1967: 81-100; Dilaver 1971: 17-28). Akşehir, Ferruh Şah Masjid (1224) (Demiralp 1996: 20) and Akşehir, Küçük Ayasofya Masjid (1235) (Demiralp 1996: 28) are some of the buildings with a square plan and a dome-covered prayer hall. Konya, Beşarebey Masjid (1213) (Katoğlu 1967: 90), Konya, Hacı Ferruh Masjid (1215) (Dilaver 1971: 27) and Konya, Küçük Karatay Masjid (1248) (Katoğlu 1967: 90) are closed to the outside; Akşehir, Taş Madrasa Masjid (1250) (Katoğlu 1967: 92), Konya, İnce Minareli Madrasa Masjid (1260-1265) (Dilaver 1971: 28) and Konya, Sırçalı Masjid (13. century) (Dilaver 1971: 28) are among the examples with portico for latecomers.

It is observed that single-domed mosques became widespread in Anatolia, especially during the Principalities and the Early Ottoman period. In this period, many single-domed mosques and masjids, small or monumental, consisting only of a prayer hall or with a portico for latecomers, were built (Öney 2007: 4). Bilecik, Orhan Mosque (first half of the 14th century) (Ayverdi 1966: 31), Gebze, Orhan Mosque (first half of the 14th century) (Ayverdi 1966: 140) and Balat, İlyas Bey Mosque (1404) (Durukan 1988: 29) are among the few examples without a portico for latecomers. İznik, Hacı Özbek (Zeynel) Masjid (1333) (Ayverdi 1966: 164), Manisa, İlyas Bey Masjid (1362) (Acun 1999: 29), Kütahya, Kurşunlu Mosque (1377-1378) (Uysal 2006: 638) and Edirne, Şehabeddin Paşa Masjid (1436-1437) (Bayrakal 2001: 32) are just a few examples with a portico for latecomers. The construction of single-domed mosques continued in the following centuries of Ottoman archi-

tecture. Gebze, Çoban Mustafa Paşa Mosque (1523-1524) (Kuban 2016: 234), Tekirdağ, Rüstem Paşa Mosque (1553) (Tuncel 1974: plan 6), İstanbul-Üsküdar, Çinili Mosque (1640) (Sözen at al. 1975: 259), İstanbul Nur-u Osmaniye Mosque (1749-1755) (Kuban 2016: 528) and İstanbul, Dolmabahçe Mosque (1852-1855) (Kuban 2016: 634) are some of the examples built in the 16th century and later.

The Pazar Mosque, built by Piyaleoğlu Mustafa in 1654-55, consisted of a square-plan prayer hall covered with a dome, a three-unit portico for latecomers to the north, and a minaret at the northern end of the western facade (Figure 2-4). According to the foundation dated 1067/1656-1657, there was a coffee house and a grocery store next door. A early 1923 Albert Kahn's photograph of the southern and western facades shows traces of a demolished building adjacent to the western face (Photo 13). Although it is conceivable that these buildings could have been the coffee house and grocery store mentioned in the waqf, there is no precise data on their qualities and plan schemes. The prayer hall dome, which has been covered with lead until today, must have been covered with lead in the first construction together with the portico for latecomers domes.

The most reliable source for the second restitution phase of the building is the Albert Kahn's photograph of the building after the 1922 fire. In this photograph of early 1923, the dome of the prayer hall is covered with lead, while the domes of the portico for latecomers are covered with alaturka tiles (Figure 5). Such applications are frequently encountered especially in the 19th century due to the high cost of lead. In the photograph, stone jambs, semi-circular arches and iron railings, which are still present today, can also be seen on the lower row of windows on the south facade. Therefore, these elements must also belong to the second phase. Except for the two windows in the lower part of the south facade in the photograph, there is no wooden joinery on the outer faces of the windows. The body of the minaret is plastered in this period.

It is understood from the old photographs of the building that the third restitution phase was realized during the restoration after the 1922 fire (Photo 14). In this period, a wooden portico covered with alaturka tiles was added to the north of the portico for latecomers, that is, a second portico for latecomers (Figure 6,7). The domes of the original portico for latecomers are covered with alaturka tiles as in the second period. The date 1340/1924 on the mihrab of the building indicates that this element also took its present form during the repair after the fire. During this period, it can be seen that registered wooden joinery was added to the windows on the west facade and the pulley, which can be seen in the photograph. The body of the minaret is still plastered.

Another photograph, probably from the 1960s or 1970s, shows that in the fourth restitution phase, the domes of the original three-unit portico for

latecomers and the surroundings of the dome of the prayer hall were covered with lead again. It is seen that the arches between the arches of the wooden portico in the north were closed with a glass screen and the alaturka tiles were renewed with Marseille type tiles (Photo 15) (Figure 8). The plasters on the body of the minaret were removed and left with joints. The plasters on the minaret body were removed.

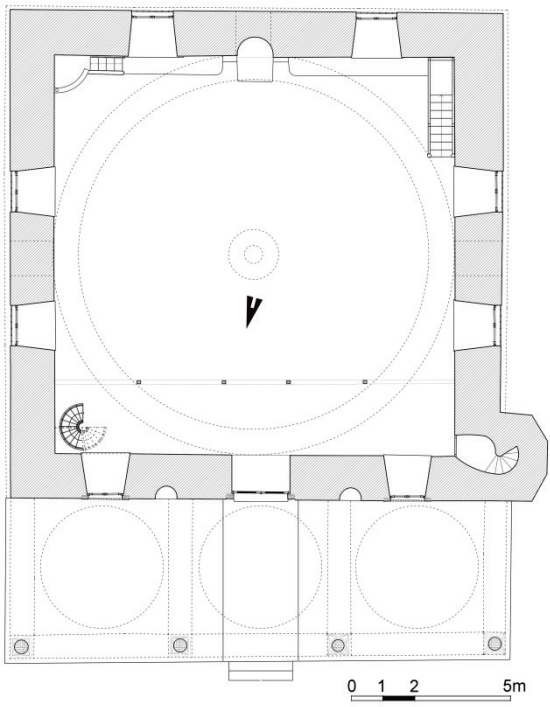

Figure 2- 1st restitution phase, plan. (Dares Architecture)

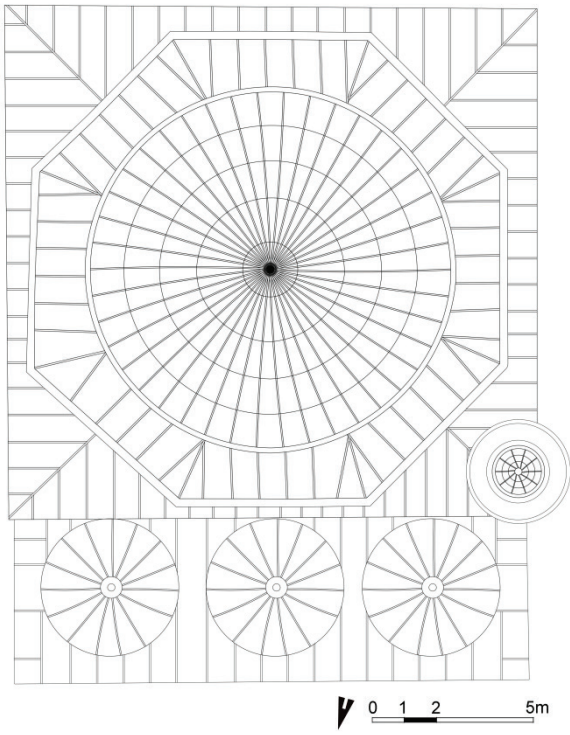

Figure 3- 1st restitution phase, roof plan. (Dares Architecture)

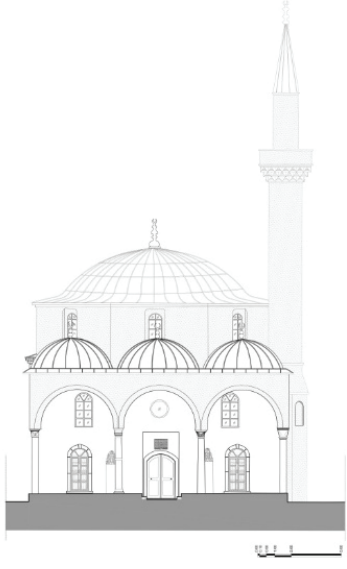

Figure 4- 1st restitution phase, northern facade. (Dares Architecture)

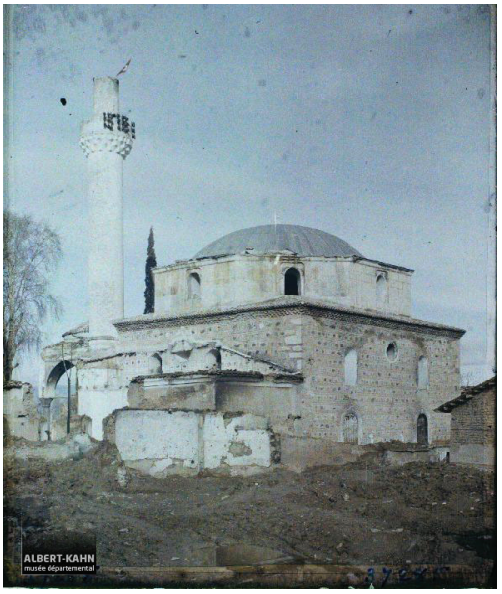

Photo 13-Albert Kahn's photograph after the 1922 fire.
*(*https://collections.albert-kahn.hauts-de-seine.fr/simple-recherche?q=turgutlu&pgn=1*)*

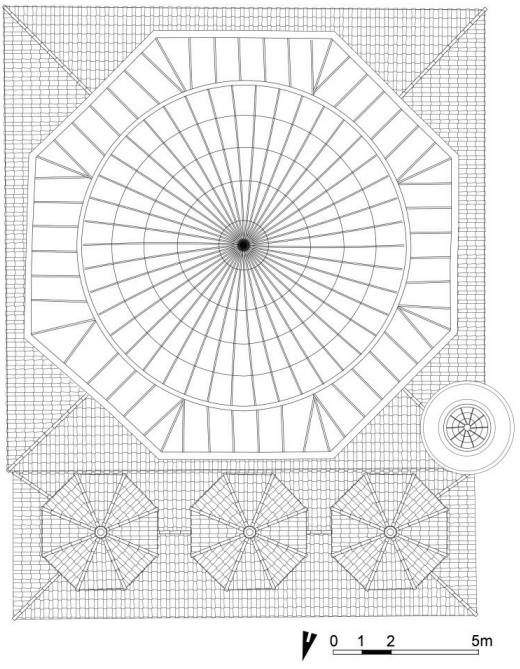

Figure 5- 2nd restitution phase, roof plan. (Dares Architecture)

Photo 14- General view from the north-west in the 1940s
(Photo. Ahmet Hamdi Yenice) (from Turgutlu City Museum Archive)

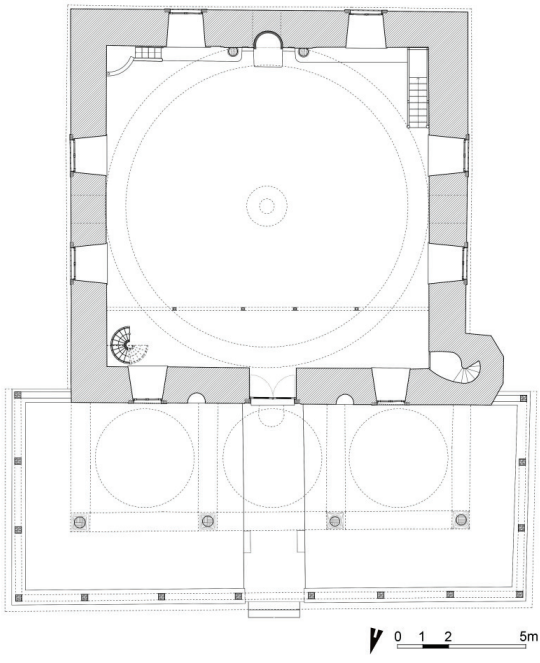

Figure 6- 3rd restitution phase, plan. (Dares Architecture)

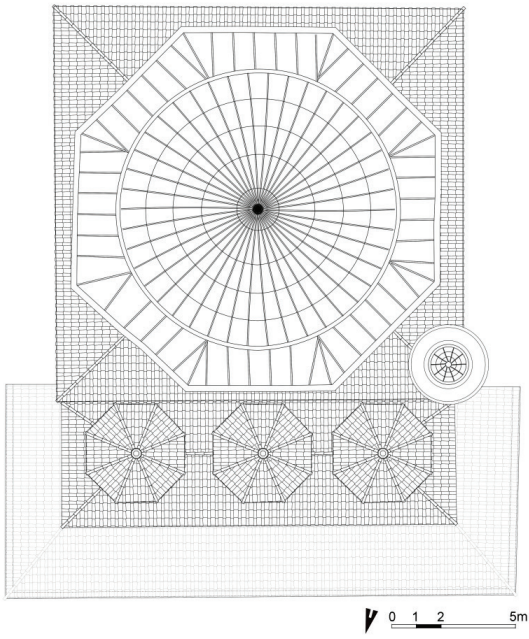

Figure 7- 3rd restitution phase, roof plan. (Dares Architecture)

Photo 15- General view from the north-west in the 1970s (from Turgutlu City Museum Archive Museum)

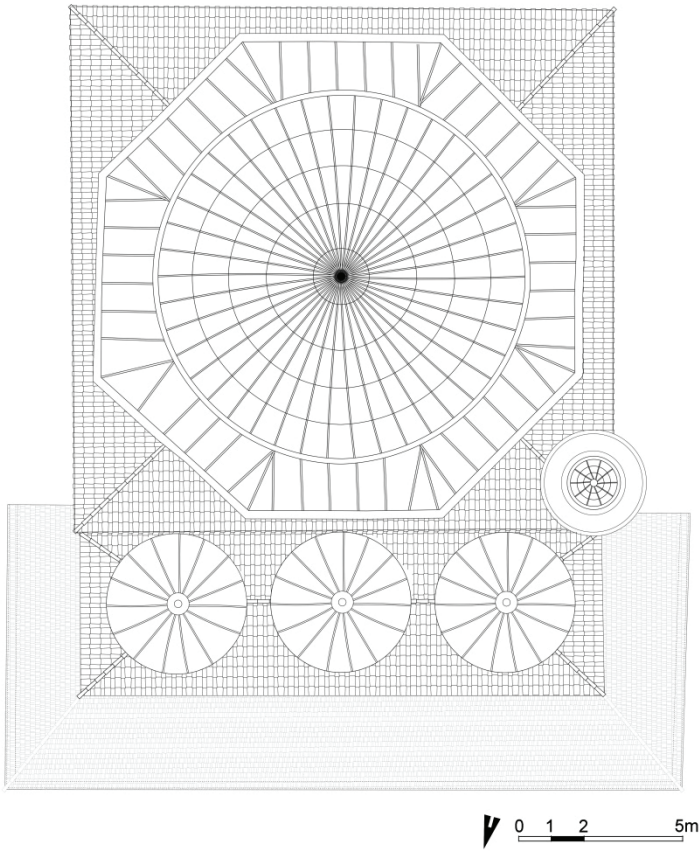

Figure 8- 4th restitution phase, roof plan. (Dares Architecture)

Conclusion

Piyaleoğlu Mustafa Paşa (Pazar) Mosque, built in 1654-55, has survived to the present day with various interventions. The building consists of a square-plan prayer hall covered with a dome in the first construction, a three-unit portico for latecomers covered with a dome to the north, and a minaret at the northern end of the western facade. Originally all the domes were covered with lead, but probably due to financial constraints, the covering of the portico for latecomers domes was renewed as Alaturka tiles in the 19th century.

The Pazar Mosque is one of the rare buildings in Turgutlu that survived the great fire of 1922 with little damage. However, the date 1340/1924 on the mihrab and an archival document from the same year prove that the building underwent a repair immediately after the fire and that the mihrab was also intervened on this date. It is possible to accept that the second portico, which was built in the original portico for latecomers seen in a photograph from the 1940s, also belongs to this repair. In a photograph from the 1970s, it is seen that the second portico was covered with glass windows and the Alaturka tile coating was renewed with Marseille type tiles. In the same period, it can be determined that the domes of the three-unit portico for latecomers covered with alaturka tiles in the previous stage were covered with lead again as in the original.

The building took its present form with the interventions carried out at the end of the 1990s. In these interventions, the second portico for latecomers was completely renovated, a two-storey reinforced concrete space was added to the east to be used as a women's gallery, and the original women's gallery was canceled. In order to provide a connection between the reinforced concrete addition to the east and the building, the original lower row windows on the east wall were opened and converted into an entrance.

Standing since the mid-17th century, Piyaleoğlu Mustafa Pasha (Pazar) Mosque is one of the most important witnesses of Turgutlu history. The building, which has undergone many repairs in its 400 years of existence and survived the great fire of 1922 with little damage, continues to live as one of the most important cultural heritage elements of the city despite the negative interventions it has experienced in recent years.

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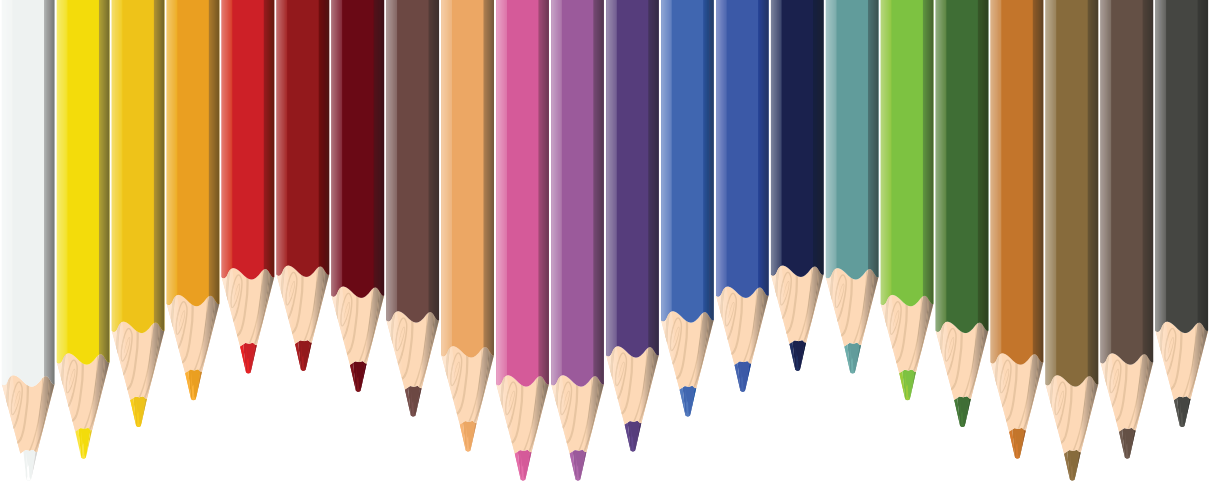

Chapter 10

SAFETY AND SECURITY FOR TOURISM: CHALLENGES AND SUGGESTIONS FOR DESTINATIONS BASED ON LITERATURE REVIEW

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1. Introduction

In a new era where travel and tourism have become an integral part of people's lives, the harmony between security, safety, and tourism stands as a linchpin for the sustenance and growth of the tourism industry. The perception of security profoundly affects travel decisions of tourists. Potential visitors often rely on information and reviews regarding a destination's safety measures, influencing their choice of where to visit. Thus, a positive perception of security can significantly bolster tourism, while any security concerns can deter travelers and impede the development of a destination (Tarlow, 2009; Mopeli, 2009). While the perception of security may arise from personal experience, it can also be shaped by second-hand information. Tourism destinations are often chosen based on this collected information and comparative assessments of safety (George, 2003).

In other words, the perception of a destination's security significantly influences a tourist's choice when planning a holiday. Industries like tourism prioritize health, safety, comfort, and hygiene, making security concerns paramount. This is why it's challenging to associate concepts like war, terrorism, and tourism. The presence of war and terrorism, as well as a lack of public order, serve as barriers to tourism (Seçilmiş and Ünlüönen, 2009). Based on these explanations, it is crucial to identify the security issues of destinations and provide corresponding solutions.

In this regard, the primary aim of this study is to explore the significance of security in tourism, addressing security issues identified in previous studies, and proposing preventive measures. The study will present various solution suggestions derived from the findings of previous research. To fulfil this purpose, a comprehensive literature review was conducted, encompassing the concept of security, security in the context of tourism, crime's impact on tourism, the influence of terrorism on the industry, and suggested measures from previous studies.

2. Literature Review

2.1. The Concept of Security in Tourism and Previous Research

Security holds significance not only within the realm of tourism but also across various sectors. It serves as a frequent subject of academic studies (Chiang, 2000; Hall et al., 2004; Kôvári and Zimányi, 2011; Popescu, 2011; Scott et al., 2013; Cheng et al., 2022). Originating from Latin, the term security comprises "se'' (without) and "curus" (uneasiness) (Mesjasz, 2004; Orhero, 2020; Magliulo, 2016).

The concepts of safety and security differ from each other. They are considered indispensable for ensuring the success of tourism events. Consequent-

ly, extensive studies on these concepts have been conducted in the tourism literature over the past thirty years (Kôvári and Zimányi, 2011). Here's a summary of these studies:

Cavlek (2002) explored destination security from the viewpoint of tour operators. The author highlighted how gauging the security perceptions of tour operators towards a destination significantly impacts the success of marketing that particular place. To gather insights, data were collected from tour operators. The analysis revealed a critical tendency: tour operators tend to refrain from organizing tours to destinations with lower security levels, avoiding potential risks.

In George's study (2003), tourists visiting Cape Town were surveyed to assess their perceptions of Cape Town's security. The findings revealed that respondents felt insecure when venturing out after dark or utilizing the city's public transportation. Consequently, the study recommended collaborative efforts between tourism police and operators to address these concerns.

Chen and Noriega (2004) investigated the impact of terrorist attacks on tourism. Their study involved surveys where participants answered questions regarding their perceptions of the September 11 attacks on the tourism industry, governmental and business responses, the significance of safety in destination/activity selection, airport security measures, and alterations in spending patterns, travel choices, and leisure activities. The research findings indicated that faculty members were more inclined to witness changes in their lifestyles, travel decisions, and activity preferences compared to students.

In their study, Seçilmiş and Ünlüönen (2009) explored the factors influencing security perceptions within the tourism sector. They aimed to establish connections between tourists' perceptions of security in Istanbul and their personal characteristics, conducting surveys among both local and foreign tourists. The research findings indicated that gender, education, length of stay, and the purpose of arrival significantly influenced tourists' security perceptions. Conversely, variables like age and the frequency of visits to the region did not impact security perceptions.

Ghaderi et al. (2017) explored the correlation between foreign visitor arrivals and security. From 2006 to 2012, they utilized the generalized method of moments approach across two panels comprising 29 developed and 45 developing nations. The results revealed that industrialized nations exhibited favourable values across social, economic, and political sub-indices of security.

Péter et al. (2019) discussed the evolving challenges facing law enforcement in ensuring the safety of tourists and dealing with terrorist threats at special events and tourist destinations around the world. The study also explored the broader concept of security, which encompasses environmental

safety, consumption, and health, not only for tourists but also for those living in tourist destinations.

Wang et al. (2019) conducted a study that emphasized the significance of security and safety within the global tourism market, particularly focusing on China's position. Their research involved a comprehensive analysis of 160 studies on tourist security and safety spanning from 1990 to 2018. This investigation encompassed both English and Chinese literature, revealing distinct approaches. The analysis highlighted a disparity: while English literature provided a more comprehensive view, considering both the supply and demand sides of tourism, Chinese studies often approached tourism safety and security in isolation.

In their study, Wang et al. (2022) discussed the perceptions of service quality and safety in tourists' recreational preferences in urban forests. A theoretical model is proposed to examine how service quality factors such as visual quality, facility integrity, and accessibility affect the perception of safety among tourists. In the study, data were collected from urban forest green areas in Fuzhou. As a result of the analysis, it was determined that visual quality positively affects the sense of security, traffic accessibility positively affects the perception of control, and facility integrity has a positive effect on both the sense of security and the perception of control.

Ding and Wu (2022) aimed to reveal the relationship between tourism security perception and destination image. Researchers have found that the perception of security in a tourist destination significantly affects both the cognitive and emotional perception of this destination. This finding suggests that tourism safety plays a critical role in shaping the overall image of a destination.

In their study, Malleka et al. (2022) focused on the safety and security aspects of tourism in Johannesburg, South Africa, which is often perceived as an unsafe city due to high crime rates. Drawing attention to the growth in Johannesburg's city tourism despite its reputation for crime, the authors examined how they perceived the security of three different points of the city. As a result of the research, it was determined that international tourists consider these areas relatively safe to visit. On the other hand, tourists not only return to Johannesburg but also recommend it to others.

Toker and Oktay (2023) analysed 597 studies from the Scopus database over the previous 45 years as part of a thorough bibliometric analysis of the topic of tourist safety and security. Their analysis, which used VOS viewer for scientific mapping, revealed a notable increase in citations and research in this field, especially in the past ten years. The report provides recommendations for future research areas and an assessment of the state of the art in tourism safety and security research.

2.2. The Importance of Security in Tourism

Security within the realm of tourism holds paramount importance for every nation, destination, and tourism entity. Undoubtedly, security stands as a fundamental necessity across all human activities, including tourism. The perception of security among tourists significantly shapes the actualization of tourism. It evolves from an individual's assessment of potential risks in the region they plan to visit or are currently in (Aras, 2017).

Naturally, tourists gravitate away from holidaying in environments where they feel insecure. Given the delicate nature of tourism, even the slightest security concerns can detrimentally impact the sector. The expectation and assurance of safety at a destination play a pivotal role in tourists' travel decisions (Bahar and Bilen, 2020). Hence, attracting tourists to a country relies on understanding their perceptions of that country. As a tourist's mental image influences their choice of holiday destination, it becomes imperative to comprehend and proactively address these perceptions. If negative perceptions exist, efforts to rectify and inform about the country's image should be a priority for management (Seçmiş and Ünlüönen, 2009).

2.3. Security Issues in Destinations

2.3.1. Terrorist Attacks on Destinations

As terrorism directly or indirectly impacts the political, economic, social, and cultural fabric of societies, its repercussions naturally cast a negative shadow on the tourism sector. Remarkably, terrorism is not just an incidental consequence but a deliberate target of the tourism industry. Terrorism aims to disseminate ideological, political, ethnic, or economic agendas through its actions. The tourism sector, owing to its multifaceted social, cultural, economic, human, and international dimensions, becomes an attractive target for terrorist activities, providing a platform for their messages to gain greater visibility. Consequently, terrorists focus their actions on tourism destinations (Seçmiş and Ünlüönen, 2009).

2.3.2. Crimes Committed by Local People Against Tourists

Some crimes against tourists are perpetrated by locals, influenced by factors such as unemployment and income inequality. These circumstances can lead to security issues in the destination, notably resulting in crimes like harassment, theft, and fraud (Avcıkurt, 2017).

Sexual harassment encompasses unwanted and disturbing approaches for sexual purposes or offers of sex in exchange for money. Verbal harassment involves making tourists feel threatened through verbal abuse. Physical harassment includes unwanted physical contact, threatening body language, or

physical aggression (Üngüren et al., 2015).

Previous studies reveal a significant prevalence of tourist harassment. For instance, in Jamaica in 2007, 35% of tourists reported experiencing harassment during their visits. Similarly, a study in Marmaris in 2007 found that 45% of foreign tourists faced harassment. In Barbados between 1991 and 1994, 59% of tourists were subjected to harassment. Another study in Ghana showed that 79% of tourists visiting the country experienced harassment (Üngüren et al., 2015).

2.3.3. Harassment of Local Sellers

Shopkeeper harassment is harassment that occurs when tourists are directed to the shop by salespeople and forced to shop (Üngüren et al., 2015). In addition, taxi driver harassment is one of the most common types of harassment seen in tourist destinations, damaging the security image of many destinations (Milliyet, 2023).

2.3.4. Extreme Traffic

The issue of excessive traffic and non-compliant drivers poses a significant safety concern for tourists. Our country's current traffic safety status is notably considered more problematic, especially in comparison to European Union countries. This negative situation adversely impacts the tourism sector. Traffic accidents, extensively covered in foreign media, tarnish Turkey's international image. Consequently, foreign tourism interest may divert to competitor nations, potentially leading to a decline in tourism revenues. Given Turkey's position in tourism and the increasing number of foreign tourists yearly, it's imperative to swiftly address transportation disruptions, a crucial problem in the tourism sector (Güven and Erdem, 2012).

2.3.5. Security Problems Encountered in Hotels

Security breaches within hotel businesses can significantly impact tourists' perceptions of a country. Incidents like fires, explosions, natural disasters, hazardous material leaks, and food poisoning might occur in hotels (Yağmurluklu, 2016). In Turkey, the prevalent all-inclusive system in accommodations, especially those offering sea, sand, and sun tourism, results in visitors spending the majority of their time at these establishments. If hotels are not careful, food poisoning can occur in such hotels. Thus, the proactive measures taken by these establishments to ensure food safety play a vital role in both customer satisfaction and safety (Cömert et al., 2008; Çanakçı and Canakçı, 2017). Moreover, ensuring safety within accommodation facilities demands attention to aspects like fire exits, staff training for emergencies, and providing necessary guest advisories.

2.3.6. Pandemics

The outbreak of the COVID-19 pandemic in late 2019 swiftly evolved into a global health crisis, disrupting various sectors worldwide (Kesici and Uzunöz Altan, 2021; Kesici, 2023). Tourism has been deeply affected by COVID-19. Tourists do not want to visit destinations where diseases occur (Çifçi et al., 2023).

2.3.7. Refugee crisis

The global refugee crisis has significant implications for tourism security, influencing various facets of travel and destinations. The interaction between refugee crises and tourism security presents multifaceted challenges and considerations, impacting the safety, perceptions, and experiences of travellers. Understanding and addressing these complexities is crucial for ensuring a secure tourism environment (Dinçer et al., 2017).

2.4. Solution Suggestions Determined in Previous Studies

Some precautions have been stated in previous studies to ensure and protect the security environment in destinations and to constantly ensure the perception of security in tourism.

Table 1: *Measures Identified in Previous Studies*

Precautions (Seçilmiş and Ünlüönen, 2009)
• Hotels should give importance to in-service training for their employees on hygiene, food safety, customer relations and security in tourism.
• In areas where tourism is concentrated, security cameras should be increased, continuous monitoring should be carried out and incidents should be intervened quickly.
• Information offices that will solve all kinds of security problems of tourists and provide the information they need should be expanded.
• Countries should set rules and develop policies regarding consumer rights and tourist health.
• Police and Gendarmerie should be trained on crimes against tourists.
• The tourism sector has become one of the most important income-generating sectors with the increase in the welfare of people. Explaining this awareness to the local people and raising their awareness will make a positive contribution to the relations between tourists and local people.
• Completing legal procedures in Turkey quickly and in accordance with European Union standards will create the image of a safe country in the eyes of tourists.
• Tourist sending and tourist receiving countries should cooperate on security issues.
• Clear and understandable written and visual materials should be prepared to inform tourists about risk and dangerous areas.

• To solve the communication problem of tourists, some studies should be carried out in their language and considering their culture. For example, managers should provide communication opportunities in many languages to solve the communication problem of tourists.
• One of the ways to establish safer communication with tourists is the international symbols and signs used. These symbols, which are extremely important for tourist safety, should be used where necessary in all businesses.
• Differences in prices applied to domestic and foreign tourists should be eliminated.
• Public institutions, all schools, especially universities, organizations in the tourism sector, media, private educational institutions, and non-governmental organizations should assume primary duties and responsibilities in educating local people and groups associated with the tourism sector on health and safety issues.
• Society does not have sufficient information about health and safety in tourism. This situation is especially evident in the relations between locals and tourists. Tourist-local relations should be maximized by spreading tourism awareness in society.

Precautions (Bahar ve Bilen, 2020)

- Security services offered to tourists should be standardized,
- Personnel to be assigned in the field of tourism should be trained professionally, and tourism awareness and education level should be increased,
- Tourism police and tourism gendarmerie who know foreign languages and are familiar with tourism sociology and psychology should be employed in tourism destinations,
- Cooperation and coordination on security should be ensured between all relevant persons, institutions and organizations, the central authority, local organizations, security units, tourism institutions, local people, and tourists,
- To create a safe environment, measures should be taken to prevent unemployment and injustice in income distribution,
- To prevent traffic accidents that threaten safety, drivers should be trained, and measures should be taken to ensure that they comply with traffic rules.
- Continuity of the fight against terrorist crimes should be ensured by international cooperation.
- To eliminate the negative atmosphere against Turkey, promotional campaigns should be organized by the Prime Ministry - Ministry of Foreign Affairs, Ministry of Culture and Tourism, TOBB and NGOs.
- In particular, the inspections of all visitors and tourism businesses should be increased in a way that does not harm the image of the region/country,
- Necessary penal actions should be intensified when it comes to detecting businesses showing security weaknesses,
- Documentation and records should be kept healthy to facilitate prediction of the measures to be taken,
- Guidelines should be set regarding the measures that touristic facilities can take against illegal interventions in the operation of touristic facilities,

- To prevent and detect terrorist acts in tourist areas, security imaging systems should be equipped with high resolution and night vision systems, and if possible, integrated with facial recognition systems, and regular control of the instant images obtained should be ensured,
- Marketing strategies should be made less sensitive, and efforts should be made to ensure that the markets targeted after terrorist attacks enter into a faster recovery process,
- Crisis and emergency action plans should be made effective in tourism businesses.

Conclusion and recommendations

This study aims to examine perceived security problems in tourist destinations and propose corresponding solutions. Conducting a literature review, the study identified security issues in previous research conducted within these destinations. General security concerns revealed from this investigation encompass taxi driver fraud, sales fraud, crime by local people, insufficient hotel precautions, traffic issues, terrorism, pandemics, and irregular refugees' crisis.

Taxi driver fraud stands out as one of the most prevalent issues across many countries. Similarly, local sellers deceiving tourists emerged as a significant security problem. Dunn and Dunn (2002) noted that such deceptive behaviours are particularly common in countries with struggling economies, posing security risks for tourists. Furthermore, the study identified inadequate security measures in hotels as another concern.

Residents exhibiting inappropriate behaviour towards tourists were flagged as another security problem. Brown (1999) suggested that locals may target female tourists under the misconception that they seek casual encounters, leading to potential incidents of sexual harassment. Additionally, tourists might be viewed as easy targets in certain situations (Ryan, 1993; Harper, 2001; de Albuquerque and McElroy, 2001).

Lastly, traffic congestion, terrorism, and the refugee crisis pose significant security challenges for destinations. Paraskevas et al. (2007) highlighted how the perception of a country can unsettle tourists due to previous terrorist activities or attacks. Even in areas without ongoing terrorism, past incidents can linger in tourists' minds for years. Additionally, the refugee crisis is another factor causing concern among tourists.

Based on previous studies findings (Ryan, 1993; Seçilmiş and Ünlüönen, 2009; Aras, 2017; Üngüren et al., 2015; Bahar and Bilen, 2020), this study makes some suggestions to authorities. These recommendations aim to address the identified security concerns and contribute to creating a safer and

more welcoming environment for tourists. These suggestions:

❖ Invest in Security Personnel: Increase the presence of security personnel like police, tourism police, and gendarmerie to ensure public safety.

❖ Tourism Awareness Programs: Launch educational campaigns to raise awareness among tourists about safety protocols and local laws.

❖ Enhanced Surveillance: Implement security cameras and surveillance systems in high-traffic tourist areas to monitor activities and deter potential threats.

❖ Regular Inspections: Conduct routine checks on businesses, accommodations, and tourist attractions to ensure compliance with safety standards and prevent fraudulent activities.

❖ Traffic Control: Strengthen traffic management systems to alleviate congestion and minimize road accidents in popular tourist zones.

❖ Collaboration with Local Communities: Engage local communities to foster a sense of responsibility and cooperation towards ensuring a safe environment for tourists. Increase inspections to prevent local vendors from deceiving or harassing tourists, imposing deterrent penalties on businesses displaying such behaviour.

❖ Emergency Preparedness: Establish emergency response plans and train staff in accommodations and businesses to handle crises like natural disasters or medical emergencies efficiently.

❖ Counterterrorism Measures: Implement measures to counteract the impact of terrorism, including information campaigns, intelligence sharing, and security protocols. Intensify promotional campaigns to counteract the negative impact of terrorism on the destination's image.

❖ Regulate Licensing: Enforce strict regulations for licensing and certification of businesses operating in the tourism sector, ensuring they adhere to safety standards.

❖ Continuous Evaluation and Improvement: Regularly assess security measures, seek feedback, and adapt strategies to address evolving security challenges.

❖ Training for taxi drivers: Provide tourism training for taxi drivers and promote tourism awareness among them.

❖ Solve the stray refugee problem in tourism destinations: Take proactive measures to address the refugee issue in the context of tourism management.

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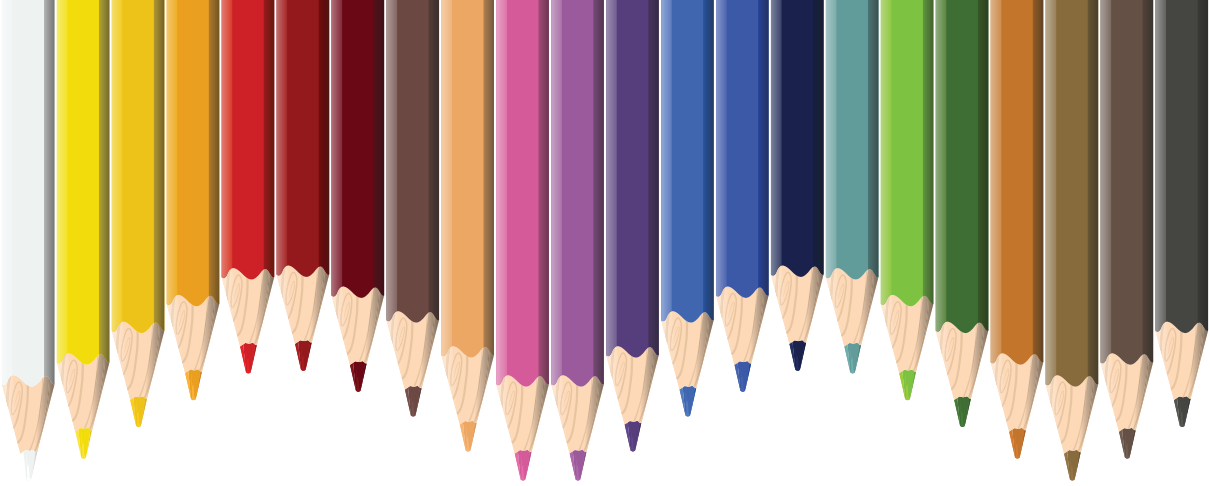

Chapter 11

SUSTAINABILITY IN AVIATION AND CURRENT PRACTICES

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1. Introduction

The assumption that there are limited resources to meet unlimited human needs is fundamental to economics. Humans utilize all accessible natural resources to satisfy their present needs. (Marshall, 2009). Natural resources can be obtained from underground minerals, rivers, forests, or soil. They are also present in the air we breathe. These resources are essential for meeting human needs, but they are not infinite. It is possible for them to be irreversibly destroyed or even disappear. This is why sustainability is crucial. Sustainability refers to acting responsibly to meet the current needs of humanity while ensuring that future generations can meet their own needs. (Portney, 2015). The concept of sustainability aims to prevent large-scale or permanent damage to natural resources, the environment, and society resulting from human production or consumption activities, while also ensuring their continuity.

The concept of sustainability has been a topic of discussion since the 1970s, and its significance is growing (Caradonna, 2022). As awareness of global warming, climate change, and water scarcity has increased, the importance of sustainability has become more apparent (Mukheibir, 2010). Today, sustainability policies are implemented in all sectors, from transportation to tourism, agriculture to industry (Edwards et al., 2020; Garetti & Taisch, 2012; Hassan, 2000). Today, sustainable finance practices and sustainable health policies are becoming more prevalent in our daily lives (Jeucken, 2010; Kruk et al., 2018). The growing popularity of sustainability can be attributed to three main factors:

- The impact of human activity on the environment can now be measured more accurately than ever before (Arora et al., 2018).
- This impact poses a significant threat to human health and has been linked to the increased incidence of diseases such as cancer, particularly among disadvantaged communities (Borowy, 2013).
- Furthermore, pollution has rendered some natural resources unusable (Laurance & Useche, 2009).

Today, sustainability studies are a priority for many international organizations and governments. The United Nations, which aims to promote global unity through sustainability, has established 17 goals to achieve success by 2030 in three key areas: ending extreme poverty, combating inequality and injustice, and addressing climate change (United Nations). These 17 goals can be summarized as follows:

- No poverty
- Zero hunger
- Good health and well-being

- Quality education
- Gender equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Reduced inequalities
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land
- Peace, justice and strong institutions
- Partnerships

Table 1. *Examples of sustainable policies*

MODEL POLICY	ACTION TAKEN	REF
Investments in renewable energy sources	To increase the production of renewable and clean energy from natural sources such as solar, wind, geothermal, and alternative energy sources such as nuclear energy and hydrogen energy, and to encourage their use and production by providing government-centered incentives to these areas.	(Christensen & Hain, 2017; Qadir, Al-Motairi, Tahir, & Al-Fagih, 2021; Uyar & Beşikci, 2017)
Investments in alternative energy sources		
Investments in energy efficiency	Developing high energy efficient technologies, making R&D investments in this field and expanding their use.	(Cooremans, 2012; Q. Wang, Li, & Pisarenko, 2020)
Organic production techniques	Prevent soil pollution by reducing or completely abandoning the use of chemical fertilizers or pesticides. To introduce legal regulations on this issue.	(Niggli, 2015)

Waste management policies	Taking measures, making investments and supporting/ encouraging these activities through government policies, such as waste reduction, sorting and recycling in production facilities and enterprises.	(Camana et al.,2021; Morrissey & Browne, 2004)
Awareness raising policies	Raising public awareness of sustainability through public service announcements or local government activities, and informing the public about the possible consequences of environmental pollution. In addition, in order to raise awareness of sustainability in public and private education institutions, to include this issue in the curriculum, to prepare different education programs for different age groups and to encourage participation.	(Sarti & St. John, 2019)

When analyzing the policy measures outlined in Table 1, it is important to note that investments are currently focused on measures related to energy use. This is due to the fact that energy use contributes significantly to greenhouse gas emissions, which in turn contribute to climate change and global warming (Kronenberg, 2009). The amount of greenhouse gases emitted varies depending on the energy source utilized. Given that the highest greenhouse gas emissions are caused by fossil fuel use, the focus of solutions is primarily in this area (Mohammadi et al., 2014). Fossil fuels are predominantly used in the transportation sector, with road transportation accounting for 75% of the sector and air transportation accounting for 11.6% (Ritchie, 2020). Despite this data, sustainability is more commonly associated with air transportation than with road transportation. The reasons for this are discussed in detail in the following sections.

2. Sustainability in Transportation Sector and Evaluation of Airline Transportation

The transportation sector is responsible for 21% of greenhouse gas emissions, with road transportation accounting for 75% of this amount (Ritchie, 2020). Despite this, current academic studies and global prevention policies tend to focus more on air transportation. This is due to two main reasons. Firstly, aircraft, which are the primary mode of air transportation, consume more fuel than other means of transportation. A passenger who chooses air transportation emits more greenhouse gases per kilometer than a passenger who chooses road transportation (Dalla Chiara et al., 2014). The second rea-

son is that greenhouse gas (GHG) emissions from road transport occur on the ground, while emissions from air transport are directly released into different layers of the atmosphere. (Ekici et al., 2023). Commercial air transport aircraft typically operate between FL380 (38,000 ft) and FL450 (45,000 ft). This altitude range corresponds to the upper level of the troposphere and the lower level of the stratosphere (Ekici et al., 2023). The stratosphere contains a layer of ozone that absorbs harmful UV radiation from space, including all of C and most of B. If the concentration of gases in the atmosphere were to change and cause ozone depletion, it could increase cancer mortality rates by exposing living organisms to more radiation from space (Ahmad, 2017). In another scenario, if there is a thickening of the ozone layer, then the rays that should be emitted from the earth to space are trapped in the atmosphere, threatening to increase the earth's temperature (global warming) (Larin, 2021). When aircraft complete the cruise phase at high altitudes (42,000 feet and above), harmful gases are released. These gases can be absorbed by the atmosphere, causing rays from space to bounce back into space before reaching the Earth. This phenomenon is known as global cooling and is one of the possible undesirable scenarios (global cooling) (Dameris, 2010). Flights below a cruising altitude of 42,000 feet may reflect rays emitted from the earth back to the earth through the troposphere, contributing to global warming. Air transport has a higher global impact than other modes of transportation due to the direct emission of pollutants into various layers of the atmosphere. In contrast, emissions from land, sea, and rail transport vehicles cannot reach the upper layers of the atmosphere, thus having a lower impact on the ozone layer (Ekici, 2020).

To address the criticism of air transport emissions, it is necessary to examine sustainable aviation policies from the past to the present.

3. The Emergence of Sustainable Aviation

The Paris Convention, signed by 38 countries in 1919, established the foundations of civil aviation. While the agreement does not explicitly address sustainability, it played a crucial role in bringing the issue to the forefront of the agenda, paving the way for the subsequent Chicago Convention. The Paris Convention was the first official example of the idea that countries should have sovereignty over their own airspace to ensure safe and orderly aviation (The Postal History of ICAO, 1919). The issue of airspace sovereignty pushed countries to make multilateral agreements for air transportation. For this reason, the Chicago Convention was organized in 1944 with the participation of 52 countries. In addition, the International Civil Aviation Organization (ICAO) was established in the same year in accordance with the Chicago Convention. The main purpose of ICAO is to ensure that aviation activities are carried out in a safe, orderly and efficient manner while reducing the environmental impacts of civil aviation (Mackenzie, 2010). At this point, the activities carried out by ICAO:

- To set standards in the field of international civil aviation
- Promote the development of international civil aviation,
- To help reduce the environmental impact of international civil aviation.

ICAO decisions are binding for member states, but they must not infringe on the sovereign rights of member states in their airspace. Member countries may be exempt from ICAO decisions if necessary for national security. ICAO decisions are made within the framework of Annexes, which are documents containing standards and recommendations set by ICAO. There are currently 19 annexes, each describing specific topics and presenting standards in their respective areas. The goal is to establish an internationally harmonized and safe aviation system. Member states integrate national and international regulations by creating their own regulations within the framework of these annexes. The 19 annexes in use today are titled as follows

(ICAO):

- ANNEX 1 : Personnel Licensing
- ANNEX 2 : Rules of the Air
- ANNEX 3 : Meteorological Service for International Air Navigation
- ANNEX 4 : Aeronautical Charts
- ANNEX 5 : Units of Measurement to be Used in Air and Ground Operations
- ANNEX 6 : Operation of Aircraft
- ANNEX 7 : Aircraft Nationality and Registration Marks
- ANNEX 8 : Airworthiness of Aircraft
- ANNEX 9 : Facilitation
- ANNEX 10 : Aeronautical Telecommunications
- ANNEX 11 : Air Traffic Services
- ANNEX 12 : Search and Rescue
- ANNEX 13 : Aircraft Accident and Incident Investigation
- ANNEX 14 : Aerodromes
- ANNEX 15 : Aeronautical Information Services
- ANNEX 16 : Environmental Protection
- ANNEX 17 : Security: Safeguarding International Civil Aviation Against Acts of Unlawful Interference

- ANNEX 18 : The Safe Transport of Dangerous Goods by Air
- ANNEX 19 : Safety Management (EASA)

Considering the objective of reducing the environmental impact of aviation, which is one of the main goals of ICAO, it becomes clear that combating climate change is of global importance. While national governments may regulate this area, addressing global issues such as climate change and environmental sustainability requires global measures (Vinke-de Kruijf & Pahl-Wostl, 2016). Therefore, the participation and support of all stakeholders are essential for finalizing these processes as desired in the aviation sector. To ensure this, ICAO has established common standards (Han, 2021). There is also coordination between other international civil aviation organizations, governments, airlines, airports and other stakeholders. The underlying reason for the need for such a broad perspective is that sustainability in the aviation sector has not only environmental, but also social and economic dimensions (Dimitriou & Sartzetaki, 2020).

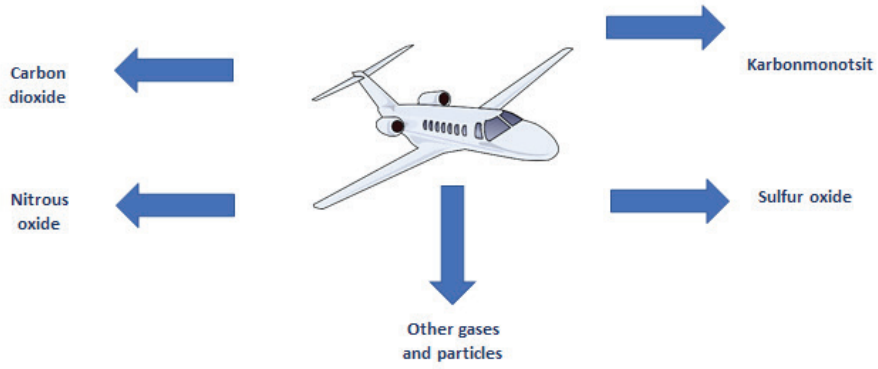
Although the aviation sector is often criticized for its negative impact on the environment, particularly in terms of carbon emissions and their contribution to climate change and global warming, it can also have positive social and economic effects. From an economic perspective, the sector plays a significant role in areas such as development and employment. By enabling fast and easy travel, the aviation sector strengthens global business ties and increases trade volume (Lenaerts et al., 2021). The aviation sector is closely linked to and contributes to the growth of many ancillary sectors, including airports, airlines, tourism, retail, restaurants, hotels, and logistics (Benarbia & Kyamakya, 2022; Bieger & Wittmer, 2006). The growth of the aviation sector in a country can attract foreign investors and foreign equity investments, creating new business opportunities (Ramón-Rodríguez, Moreno-Izquierdo, & Perles-Ribes, 2011). These innovations can be particularly rapid in the tourism industry. For instance, a study conducted in China found that the introduction of charter flights in Kunming and Guilin, due to developments in the aviation sector, immediately made the region one of the most popular destinations and led to significant economic growth. The study also reported that Japan invested in the aviation sector to develop the tourism industry and achieved positive results in regional development (Wu et al., 2012).

4. Sustainability Practices in the Aviation Industry

A significant effort to reduce the environmental impact of aviation is directed towards alternative and renewable energy sources. These sources include biofuels, hydrogen, electricity, and electro fuels, which can replace fossil fuels with little or no environmental impact (Su-ungkavatin etal., 2023).

Aviation fuels are the primary energy source for a wide range of aircraft. They vary depending on their application in the civil or military sectors, their source of production, and the specific type of engine they are designed for (Undavalli et al., 2023). These fuels can be broadly classified into two main categories: gas turbine or jet engine fuels and piston engine fuels (Ekici et al., 2016). It is worth noting that fuel specifications for piston engines and gas turbine engines differ significantly due to the distinct mission profiles and operational conditions of their respective engines and combustors (Ekici et al., 2020). Jet engine and gas turbine fuels are specifically formulated to meet the requirements of high-performance engines used in commercial and military aircraft, as well as other jet-powered applications. These fuels are known for their high energy density, stability at high temperatures, and efficient combustion in gas turbine engines. Jet fuels usually have specific specifications and undergo strict quality control measures to ensure their compatibility and performance in gas turbine engines (Ozbek et al., 2021). Reciprocating engine fuels are specifically designed for use in reciprocating engines, which are commonly found in small aircraft, general aviation, and reciprocating helicopters. These fuels possess unique properties that are tailored to meet the operational requirements of piston engines, including ignition characteristics, octane ratings, and resistance to explosions. Reciprocating engine fuels typically have lower energy densities than jet fuels, but possess the necessary properties for reliable and efficient operation in these types of engines (Altuntas, 2021). The production of aviation fuels encompasses various pathways, including conventional fuels derived from crude oil sources, chemically synthesized fuels, and fuels derived from various agricultural crops and bio-wastes, often referred to as bio-renewable fuels (M. Wang et al., 2019). Emission outputs of conventional fuels are summarized in Figure 1.

Fig.1 *Emission outputs*



Alternative aviation fuels, including both biofuels and synthetic fuels, play a crucial role in promoting aviation sustainability (Blakey, Rye, & Wilson, 2011). However, their cost-effectiveness has been a subject of criticism (Kim, Lee, & Ahn, 2019). Aviation fuel prices are susceptible to sudden fluctuations due to market volatility and changes in supply and demand. The volatility of fuel prices can have negative effects on airlines, resulting in increased operational costs, even for those that have implemented fuel hedging strategies. Given the rising costs of oil and the depletion of non-renewable fossil fuel resources, as well as growing environmental concerns, it is becoming increasingly important to explore alternatives to fossil fuels (Undavalli et al., 2023). Bio-renewable fuels, such as biofuels, are produced from renewable feedstocks like plant biomass, algae, and bio-wastes. These fuels are considered more sustainable and environmentally friendly than conventional fossil-based jet fuels because they have the potential to reduce greenhouse gas emissions and dependence on fossil resources. Bio-renewable aviation fuels can be produced through processes such as bioconversion, pyrolysis, and hydrotreating, which convert biomass into liquid hydrocarbon fuels. These fuels have properties that are compatible with existing aircraft engines (Blakey et al., 2011). Alternative aviation fuels encompass both biofuels and synthetic fuels. Biofuels are derived from renewable biomass resources, while synthetic fuels are produced by chemical processes using carbon-based feedstocks, which can include fossil resources or renewable resources (Styring et al., 2021).

5. Fuels Developed for Sustainability

Today, it is possible to mention 3 alternatives that stand out in sustainable aviation studies: Sustainability aviation fuel (SAF), electricity and hydrogen (Ng, Farooq, & Yang, 2021).

Of the alternatives available to the aviation sector, SAF is considered the most potent. Increasing the use of SAF is a primary objective of the Paris Agreement (Becken, Mackey, & Lee, 2023). SAF is a non-fossil fuel option that is carbon-neutral and environmentally friendly. Its prominence is due to the fact that it can be used in existing aircraft without requiring any technical modifications (Santos & Delina, 2021). Its significance lies in its compatibility with existing aircraft and airport refueling systems, requiring no technical modifications. Studies have shown that SAF can increase fuel efficiency by 1.5-3%. SAF usage is increasing globally, with availability in 50% of airports worldwide. The primary challenge to the adoption of SAF is its cost, as it is currently eight times more expensive than conventional fuels (Canadian Environmental Test Research and Education Center, 2022). As a result, its use is limited to a small fraction of global fuel consumption. SAF sources used today are summarized in Figure 2.

Fig.2 *SAF sources*

Electricity is another alternative fuel. Electric vehicles, which have recently gained a significant share in road transportation, are also an important option for air transportation. The main feature that stands out is that it works with zero emission (Ansell, 2022). Today, the Slovenian Pipistrel Velis Elektro is the first certified 100% electric aircraft and is a small 2-seater model (Pipistrel). The main challenge to achieving 100% electric operation of large passenger aircraft is the weight of the batteries. However, this issue is being addressed through the development of hybrid aircraft (Ansell, 2022). When considering the entire flight cycle, it is important to note that emissions from the generation of electricity required for electric aircraft can potentially hinder the goal of sustainability.

Hydrogen is a third alternative fuel that produces water vapor as a by-product. Its use in aviation eliminates the emission outputs of traditional fuels. One unit of hydrogen gas fuel provides three times the energy of conventional fuel. Furthermore, the hydrogen fuel cell generates electricity, eliminating the battery load problem in electric aircraft. Despite its advantages, there are also some disadvantages to consider. The most significant issue is the production and accessibility of hydrogen fuel (Yusaf et al., 2022).

Result

The aviation sector is of vital importance to national economies and meeting individual needs. While criticisms of the sector cannot be ignored, it remains an indispensable part of our lives. To ensure its development, it is necessary to eliminate its negative externalities. To achieve global targets, governments should support R&D activities and allocate sufficient resources. However, due to varying levels of development, not all countries can allocate the necessary resources. In such cases, international institutions and organizations should increase cooperation. Although air transportation solutions within current technological possibilities cannot completely solve the problem, they are important steps towards improvement and have positive results. Most of these solutions consist of alternative fuels and biofuels that can be integrated into the technology still in use. Although alternative and biofuels minimize environmental impacts, their availability, production costs, and storage

remain problematic.

In conclusion, creating a sustainable future for the aviation industry requires comprehensive and long-term strategies that involve national and international investments, cooperation, and resource sharing. This is not a choice, but a necessity for the well-being of humanity and our planet.

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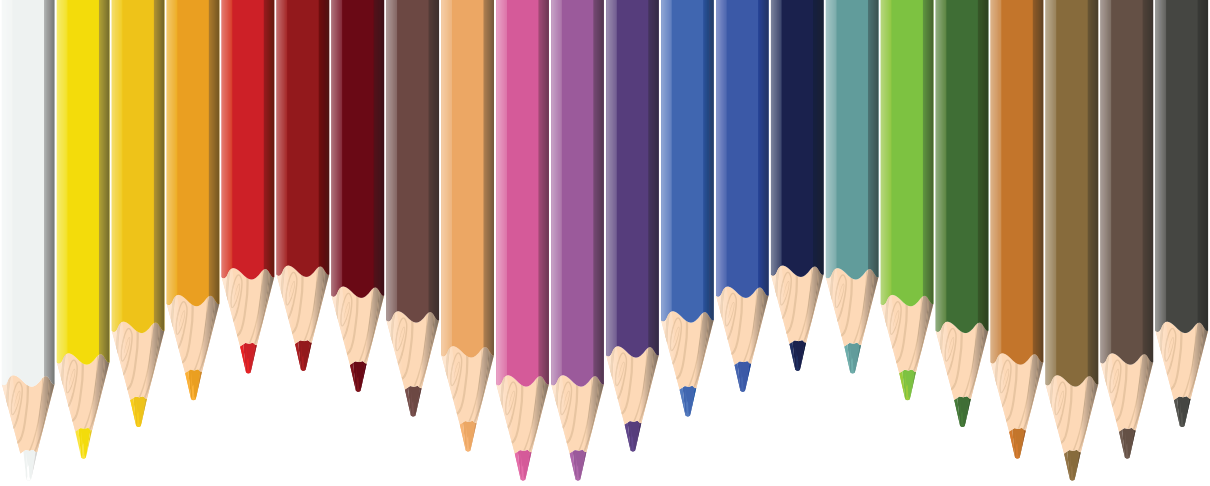

Chapter 12

AN AREA WITH INSUFFICIENTLY EVALUATED THERMAL TOURISM POTENTIAL: EMET (KUTAHYA) DISTRICT CENTRE[1]

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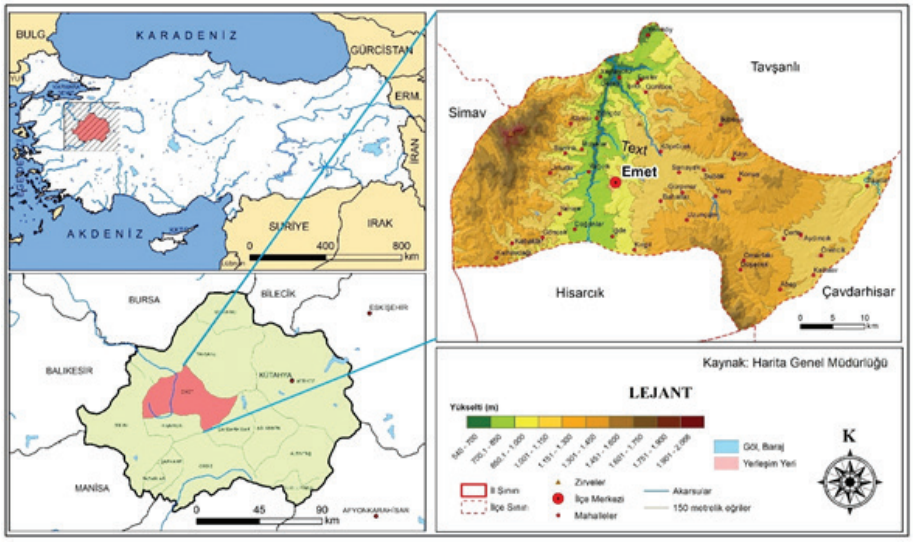
INTRODUCTION

Emet district is located in the Central Western Anatolian part of the Aegean region, adminastrively connected to Kütahya province and surrounded by Tavşanlı in the north, Hisarcık in the south and Simav in the west (Map 1). The average elevation of the district centre is 896 m. above the sea level. The area generally has a slightly hilly morphology. As far as historical records are concerned, Emet was named after a woman who first discovered the district in ancient times (Emet Union for Providing Service for Villages, n.d. :10). It is known that thermal spring waters have been used in the world since the times of ancient Greek and Roman civilisations (Tzedopoulos et al., 2018: 206). Emet is a settlement area with thermal spring water resources due to its geological structure. In addition, there are thermal springs in different areas of Kutahya province as well. Emet thermal springs can be said to be of big importance in terms of thermal areas in Kutahya, given that Aegean Region also has many thermal springs (Koksal, 1988: 59). It is known that thermal springs have been operated in the district centre for many years. In this study, the current situation of thermal springs and accommodation facilities are explained from a geographical perspective.

Map 1. *Location Map of the Research Area*



METHOD

In this study, primarily data were obtained from various official institutions. Then, these data were uploaded to the ArcGIS program, rendering the maps. Also, information regarding accommodation facilities was obtained

from the Ministry of Culture and Tourism. The results are explained in tables and graphs. Oral interviews and meetings were held with various institutions and results were analyzed adhering to geographical principles.

Properties of the thermal Springs

The thermal water resources of the area are used in the baths and the thermal hotel run by the district council. These springs have been studied in detail by several institutions. One of them is the spring in Green Thermal Springs Region. According to the analyses carried out by the General Directorate of Mineral Research and Exploration, the temperature of the open pool spring is between (38-42 °C) (Table 1). In terms of colour and appearance, the spring is colourless and clear with a pH rate of 6.94 at 25°C, thus making it acidic in nature.

When analyzed in terms of the chemical characteristics, the cation values of the water are respectively potassium (K+) 3.2 mg/l, sodium (Na+) 9.5 mg/l, calcium Ca++ 84 mg/l, and magnesium Mg++ 27 mg/l, while anion values are bicarbonate (HCO3) 281 mg/l, carbon trioxide (CO3)<10mg/l, sulphate SO4 108 mg/l, chlorine C1 14, nitrogen dioxide NO2 <0.01, nitrate (NO3), phosphate (PO4)<0.1 and total 403 mg/l anion. The total mineralisation value of the spring was measured as 588,53 mg/l, with the spring having a general classification of mineral poor water.

Table 1. *Physical and Chemical Properties of Open Pond Source*

Physical Properties		**Cations**	**Mg/l**	**Anions**	**Mg/l**
Water Temperature	38-42 °C	Potassium (K+)	3.2	Bicarbonate (HCO3)	281
Colour	Colourrless	Sodium (Na+)	9.5	Carbon trioxide (CO3)	<10
Clarity/Hazziness	Clear	Calcium (Ca++)	84	Sulfate (SO4)	108
Ph (25 °C)	6.94	Magnesium (Mg++)	27	Chlorine (Cl)	14
		A_5 Total	0.01	Nitrogen dioxide (NO2)	<0.01
		B Total	0.2	Nitrate (NO3)	<1
		Total: 133.91		Phosphate PO4 Total	<0.1
				Total: 403	
				Others:51.62	

Source: Compiled from Didik (1995: 34).

Accomodation

Accommodation facilities support the development of thermal tourism, contributing to the district economy. Accommodation is one of the basic elements of tourism, which includes both nutrition and overnight stay (Özgüç, 2013: 102). All accommodation facilities located in the town center are operated with municipal certificates, which are hotels and hostels, 11 in total, (Table 2), 8 hostels and 3 hotels located in Emet district center. One of the facilities in question is Emet Thermal Resort Hotel, operated as a five-star thermal hotel. The property of the facility belongs to the municipality and is rented to private businesses and individuals for certain years. The hotel building has 123 rooms and 463 beds. Similarly, in our country, such facilities are generally operated through renting (Kahraman, 1991:10).

Table 2. *Accommodation Facilities in the District Center*

Facility Name	Type	Room Capacity	Bed Capacity
Atılım Thermal Motel	Hotel	14	28
Emet District Governorship Social Assistance Foundation Residence	Hostel	12	56
Şahanlar Hotel and Hostel	Hostel	18	36
Emet Thermal Resort Hotel	Hotel	123	364
Ebiro Hostel	Hostel	17	43
Elite Hostel	Hostel	19	47
Erdogan Hostel	Hostel	17	46
Dumenlioglu Hostel	Hostel	19	56
Serhat Hostel	Hostel	20	60
Bor Park Hotel	Hotel	45	90
Konak Devran	Hostel	7	14

Source: *Emet Manucipal Police Department, 2021.*

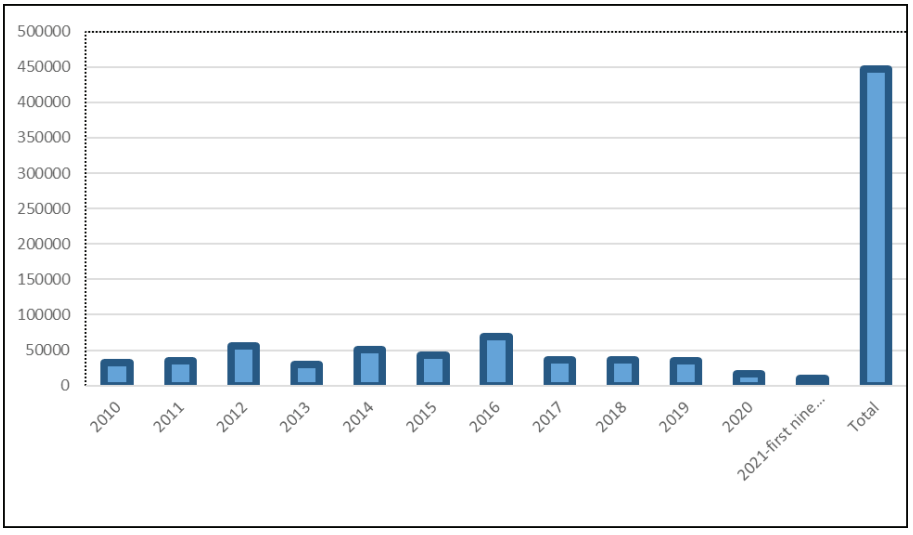
In this part of the study, statistics from the Ministry of Culture and Tourism are included. Since 2010, the number of visitors to the facilities has increased higher than the district population itself. For example, in 2010, the population of the district center was 10.668 (TUIK, 2010). However, a total of 446.949 people accomodated in the facilities between 2010-2021 (Table 3). When the total number of visits to the facilities was examined by years, the highest number of visits to the facilities was in 2016 when 68.441 people stayed in the facilities (Figure 1). In 2012, 55.533 people used these accommodation facilities, indicative of the demand for the facilities.

Table 3. ***Number of Visits to Accommodation Facilities by Years (2010-2021)***

Year	Number of Facility Use
2010	32396
2011	34309
2012	55533
2013	29739
2014	51120
2015	42733
2016	68441
2017	36087
2018	35636
2019	34756
2020	16102
2021-first nine months	10097
Total	446949

: **Source:** *Ministry of Culture and Tourism Tourism Statistics, 2021.*

Figure 1. *Number of Facility Use by Year*



On the other hand, the lowest number of visitors to the facilities was in 2020 with 16,102 visitors, which could be attributed to the preventive measures implemented due to the Covid-19 pandemic that were effective in the world and in our country in that year. As a matter of fact, in the same year, the facilities remained closed to visitors for a while. In 2021, the thermal resort

hotel, which ranks first in terms of capacity, had to remain closed for a while due to the municipal tender bid procedures, all leading to a decrease in the number of visitors, although the figures for the last three months have not been added. In fact, in 2020, the number of visitors to the facility decreased from 16.102 to 10.097.

Visitors to the facilities between 2010 and 2020 were examined by month and it was determined that the months with the highest number of visitors were July (41.536), August (44.519) and October (44.170) (Table 4). The highest share in the distribution of visitor numbers by month was in July (10%), August (10%) and October (10%).

Table 4. *Number of Visitors to the Facilities by Month (2010-2020)*

Month(s)	Number of Visits	Percentage (%)
January	29381	7
February	27030	6
March	36615	8
April	36219	8
May	38431	9
June	36665	9
July	41536	10
August	44519	10
September	34167	8
October	44170	10
November	31494	7
December	33625	8

Source: *Ministry of Culture and Tourism Tourism Statistics, 2021.*

When the months with the lowest number of visitors are analysed; February (27030), January (29381) and November (31494) stand out as a whole. When the distribution of visitors by months is expressed proportionally; the number of visitors in February was 6%, 7% in January and 7% in November (Figure 2). When the visits to the facilities are compared by months, it is seen that summer months are generally more preferred.

Figure 2. *Proportional Distribution of Those Coming to the Facility by Years (2010-2020)*

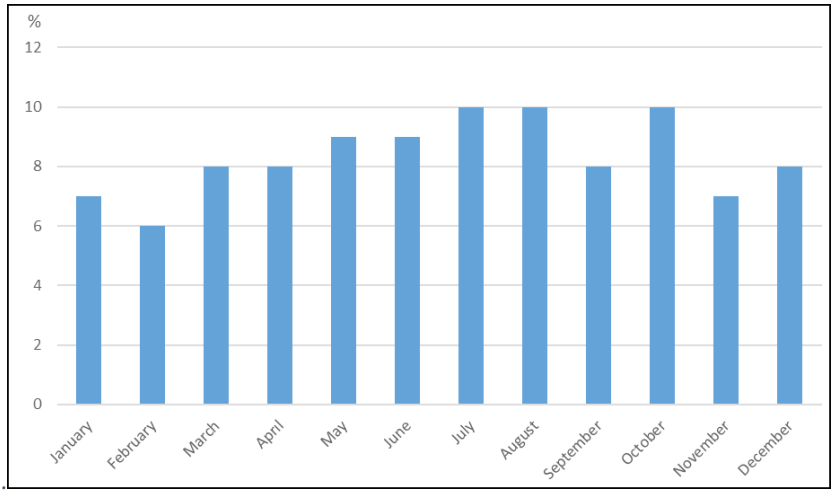


Image 1. *An Overview of Emet Thermal Hotel Resort&Spa (ECDAD, n. d.)*

A significant part of the tourism activities in the district center are predominantly carried out within the scope of thermal tourism. As a matter of fact, the district was decleared as a 'Thermal Tourism Center' by the decision of the Council of Ministers on 17.10.1993 (Official Gazette, 1993) and one of the facilities in this area was established in 2005. Emet Thermal Resort Hotel is a five-star hotel operated with a municipal certificate (Photo 1).

Within the thermal facilities, there are two natural outlets and two drilling sources (T.R. Kütahya Governorship Provincial Health Directorate, 2011). According to on-site findings, visitors from out of town mostly benefit from the hotel's hot spring water and accommodation facilities. It can be said that visits to the facility during the winter months are for therapeutical purposes[1]. Given the fact that thermal springs can be used for therapeutical purposes (Deniz, 2016: 327).

In the summer months, touristic visits take place mostly for holiday purposes. There are various treatment units within the thermal hotel: balno-therapy units (1 treatment pool, 12 bench baths) and physical therapy units (one massage unit and physical therapy unit) (T.R. Kütahya Governorship Provincial Health Directorate, 2011).

Thermal Baths

It is known that thermal bath culture has an important place in the district for a long time. The bath, which date back to ancient times, is known as 'Davutlar Bath' among the people living here. The bath, which was destroyed by the Old Gediz earthquake, leaving only the ruins of the bath today, was used both culturally and in the field of healthcare (Photo 3). The mentioned earthquake displaced the flow of the thermal water source towards the south. In Emet district, the previous springs were separated from their location due to the earthquake (Doğaner and Tuncel, 1992: 49). In place of the destroyed baths, Ottoman and Kaynarca baths were erected in later periods (Photos 2 and 4).

Photo 2. A View from the Ottoman Bath

1 Results of the interview with the manager of Emet Thermal Resort & Spa.

Photo 3. Ruins of Davutlar Bath after the 1970 Gediz Earthquake

Photo 4. A View from Kaynarca Bath

Photo 5. Kaynarca Turkish Bath Private Baths

Both of these baths are operated by the district municipality. The Ottoman Bath serves men between Sundays and Wednesdays, while Kaynarca Bath is operated between Thursdays and Sundays. The average number of people coming to the baths is around 80-100. Ottoman Bath serves only for men, and Kaynarca Bath serves only for women. The Ottoman Bath has private bathrooms (Photo 5). Staff and visitors at the bath stated that the baths here are mostly used by the elderly to treat knee and other pains. The thermal spring waters are expected by people to provide relief and cure some diseases (Falconer, 1867: 49).

Transportation

Transportation is among the factors that contribute to tourism. However, Emet lacks sufficient transportation facilities as there is no railway or air transportation to the district. The morphology of the study area land shows a wavy feature, limiting the transportation opportunities. In our country, landforms and elevation are known to render transportation difficult (Doğanay and Çavuş, 2016: 607). The road used for transportation is the asphalt highway 12 m in width (D-595). However, the road in question cannot fully meet the transportation needs. Insufficiency of roads and their relatively high distance compared to the city can be considered among the reasons why transportation

cannot develop there (Yılmaz, 2009: 129-130). The distance to the Kutahya province from the Emet district center is 93 km, which is relatively high. (Table 5). Moreover, bus services from other districts are also not sufficient.

Table 5. ***Approximate Distance of the District to Some Settlements (km.)***

Settlement Name	Distance/ km.
Kütahya	93
Hisarcık	12
Domaniç	81
Yeniköy	43
Musalar	8
Yağcık	6
Bahatlar	7

Source: *Calculated through Kütahya Special Provincial Special Provincial Administration Maps for Village Roads and GDH Bursa 14th Regional Directorate Regional Map and on-site observations.*

CONCLUSION AND RECOMMENDATION

The research area is located in the central western Anatolian part of the Aegean Region and it is administratively within the borders of Kütahya province, with its relatively high distance to the province (approximately 93 km to the city center). The site is under the influence of tectonism due to its geological characteristics. Therefore, thermal water outflows have occurred from fractured structures over time. Thermal springs have contributed to the economy of the district. The baths have been in operation for a long time. Ottoman and Kaynarca baths were built in place of the baths destroyed by the earthquake, serving many daily visitors from outside the city and the neighborhood. The thermal resort hotel is a well-organized facility with a bed capacity of 364 and various treatment units where those who come from outside the city with tour expeditions accommodate mostly. In this respect, the baths should be transformed into a more modern structure in the same way. As a result, the main suggestions that can be listed for the development of spa tourism in the field are as follows:

-A planning should be made in terms of sustainable utilization of the thermal facilities.

-There is a need to improve the general condition of the facilities.

-In terms of transport, the infrastructure of existing transport routes should be renewed.

-It is necessary to prepare a detailed promotional guide for the thermal springs. In addition, including alternative tourism types that create attraction in this guide will contribute more to the region.

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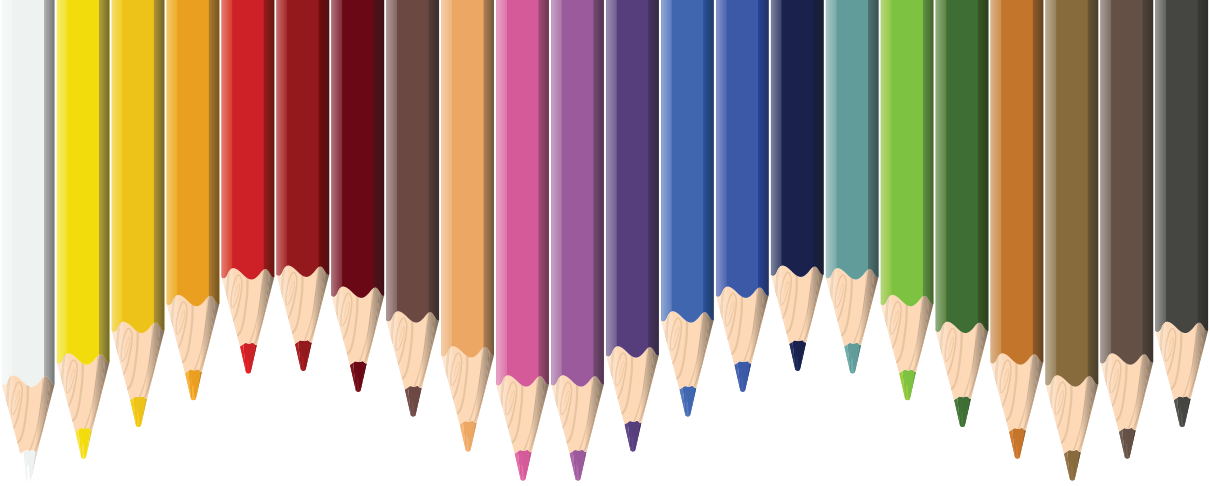

Chapter 13

THE HISTORICAL CONTEXTUALIZATION OF THE GREAT MOSQUE AT BEYŞEHİR

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Beyşehir a district in the province of Konya lies on the southeastern shore of Turkey's third-largest lake, Beyşehir Gölü that bears the same name. This lake was well known as Karalis in antiquity. The town of *Karallia* of Pamphylia was founded near the lake in the ancient times (Parry, 1986: 1191). Occupation on the site continued during the Byzantine Empire. After the Battle of Mankizert in 1071, the Seljuk Turks conquered most of Anatolia, so the region of *Beyşehir* became a part of Turkish territory. During the Seljuk rule, the people of the *Eymür* tribe under the chieftaincy of *Nuraddin ibn Madan Ghazi* were settled in this region.

After the Battle of Miryokefalon in 1176, the Turkish presence in Anatolia and the region of Beyşehir was secure. However, the city was abandoned in the middle of the 12th-century. Then Sultan Alaeddin Keykubad ordered to rebuild the city around 1240 AD (Erdoğru, 1992: 84). Every year Sultan Alaeddin Keykubad travelled between *Alaiye* and *Konya* and passed through the region of Beyşehir. He liked the region and ordered to build a palace, which was then called *Kubad Abad* on the western shore of *Beyşehir Lake*. In 1228, the palace was completed, and the Sultan stayed every year for a certain period. This palace had elaborate tiles on which there are the representations of figures and mythological creatures (Arık, 2000). After the Battle of *Kösedağ* in 1243, Mongols got control of Anatolia. The Seljuk state had lost its legitimacy. For this reason, the Turkmens rebelled against the Seljuk authority under the suzerainty of Mongols. A period of civil war and chaos took place.

During the early years of the 13th-century, the ruins of *Karallia* were called *Viranşehir* city (Konyalı, 1992:21). The city was referred as *al-Medina-al Suleymaniyye al Ashrafiyye*, *Suleymanshehir*, *Begshehir*, *Bekshehir* and *Beyshehri* in the Turkish primary accounts. The city was renamed as *Suleymanshehir* in honour of *Eşrefoğlu Süleyman Bey* (Erdoğru, 1992: 84).

During the last quarter of the 13th century, many Turkmen emirates were founded in Anatolia. Eşrefoğlu Emirate was one of them and was founded by Eşrefoğlu Süleyman Bey, whose actual name was *Seyfeddin Süleyman Halil Bey* in c. 1280 (Alperen, 2001: 28-32). Around 1277-1282, Eshrefids had got control over Akshehir and its vicinity (Kofoğlu, 1995: 484).

The first capital of the emirate was Gorgorum (today's Gökçimen village near Seydişehir). After the Seljuk's Sultan Gıyasaddin Keyhusrev III died in 1282, the rivalry between the Seljuk princes emerged and Eşrefoğlu Süleyman Bey was one of the major actors of the period (Uzunçarşılı, 1937:13). Then he moved the capital to Viranşehir in 1288, which was renamed Süleymanshehir and then later Beyşehir or Beyşehri (Kofoğlu, 1995. 484; Alperen, 2001: 29).

Until 1308 when the Seljuk state was collapsed, the emirate was subject to the Seljuks then it became independent in 1299. Eşrefoğlu Süleyman Bey fought against the Mongols and their dominance in Anatolia in alliance with

the Mamluks of Egypt. He extended his territory until *Ilgın* in 1288 and rebuilt the city walls of Beyşehir. He also acquired control over *Şarkikaraağaç*, *Seydişehir* and *Bozkır* (Alperen, 2001: 29-36).

Figure 1: General view of the mosque (from east)

During his rule, several buildings were constructed in Beyşehir, especially Eşrefoğlu Süleyman Bey Mosque (Figure 1) and its accompanying complex. There is a vaqfiyya as an inscription on the portal of Beyşehir Eşrefoğlu Süleyman Bey Mosque and according to this inscription, the mosque was built with a *han* and a double bath (Önge, 1968: 139-144; Yavaş, 1995: 479).

Furthermore, he minted some coins at Beyşehir, for example, silver coins of 1299 under the name of the Sultan Alaeddin Keykubad III. Then Eşrefoğlu Mübarizüddin Mehmed Bey also stroke copper and silver coins (Erel, 1963:18-19; Konyalı, 1991:195-198). Citing the Paris version of the Seljukname, Uzunçarşılı suggested that the Eşrefoğlu Süleyman Bey was killed by the Qaramanids (Uzunçarşılı, 1937: 13). Although the exact date of his death is unknown, the *Türbe* where he was buried was recently dated in 1301 or 1302. His *türbe* is adjacent to the eastern wall of Eşrefoğlu Süleyman Bey Mosque (Konyalı, 1991: 48).

Eşrefoğlu Süleyman Bey had two sons: Mehmed and Eşref. After his death his son Mübarizüddin Mehmed Bey took the throne. Mübarizüddin

Mehmed Bey expanded his territory to *Gelendost*, *Yalvaç*, *Sultandağı*, *Çay*, *İshaklı* and *Bolvadin*. In addition, he was the patron of *Bolvadin Çarşı Camii*, *Demirli Mescid in Beyşehir* and a mosque in *Akşehir* (Alperen, 2001: 36). Besides Mübarizüddin Mehmed Bey and his son the Eşrefoğlu Süleyman II accepted *Mavlaviyya* (Konyalı, 1991: 57-61). During this period, Eşrefoğlu Emirate was controlling almost 10000 km² area. According to *Masalik-ul Absar*, the emirate had an army of 70.000 horsemen and got control over 155 villages and 65 towns (Konyalı, 1991: 56).

When the Ilkhanid Emperor *Oljaitu* died, *Emir Çoban* became the ruler. Mübarizüddin Mehmed Bey obeyed the Ilkhanid sultan Emir Coban in 1318. Then he started to act independently. According to the inscription from a mosque of Bolvadin, the date of his death must be after 1320 (Alperen: 2001: 36-37). After him, the Süleyman II ruled the emirate but his reign did not last long. The Ilkhanid governor of Anatolia, Timurtash or Demirtaş killed him and ended the emirate of Eşrefoğlu (Uzunçarşılı, 1937: 13-14). Until 1326, Eşrefoğlu Emirate lived for a period of 46 years.

The Great Mosque of Beyşehir (Eşrefoğlu Mosque)

The mosque was built by Seyfeddin Suleyman Bey. It is the largest and the most complex wooden-pillared mosque from the period of the Turkmen Emirates. It was in an area that was surrounded by a city wall, thus, in the quarter of castle (Konyalı, 1991: 217). There are a few remaining wooden pillared mosques of the Seljuks, and the Turkmen Emirates in Anatolia preserved. They are mainly the great mosques of *Afyonkarahisar*, *Sivrihisar and Beyşehir, Ahi Şarafaddin* or *Arslanhane Mosque at Ankara* (Aslanapa, 1991: 63). Furthermore, there are some examples of wooden pillared mosques of the 14th century from some villages of the district of Beyşehir such as the Mosque of *Bayındır* village (Erdemir,1985: 193-206) and the Masjid of Köşk Köy (Önge,1974: 291-296).

In *Beyşehir Eşrefoğlu Süleyman Bey Mosque,* the wooden construction was successfully combined with an outstanding Seljuk stone portal. This mosque is also a very significant representative of the Central Asian-Turkish Mosque architectural tradition in Anatolia (Denike, 1935: 69-74; Otto-Dorn, 1959: 59-88; Kuran, 1993: 180-181; Ertuğ, 1991: 179; Kuban, 2008: 155; Kutlu, 2021: 98-100). There are well-known wooden-pillared mosques from Buhara (Belend Mosque), Semerkand (Hazret-i Hızır Mosque) and Hive (Masjid-al Jumah) etc. this tradition was maintained in Central Asia until much later times (Kuran, 1993: 180-181).

According to mosque classifications, it is an example of "basilica type" mosque like *Ankara Arslanhane Mosque* (Öney, 1989: 11). The mosque is not rectangular in plan (Figure 2) but 34 m. by 22 m. prayer hall is cut at the north corner such that the entrance is on the diagonal side (Yavaş, 1995: 479).

The building was probably adapted to the main street of the town. Its outer dimensions are 31.80 by 46.60 m (Çaycı, 1995: 479) or 31.80 by 46.55 m (Erdemir, 1999: 20).

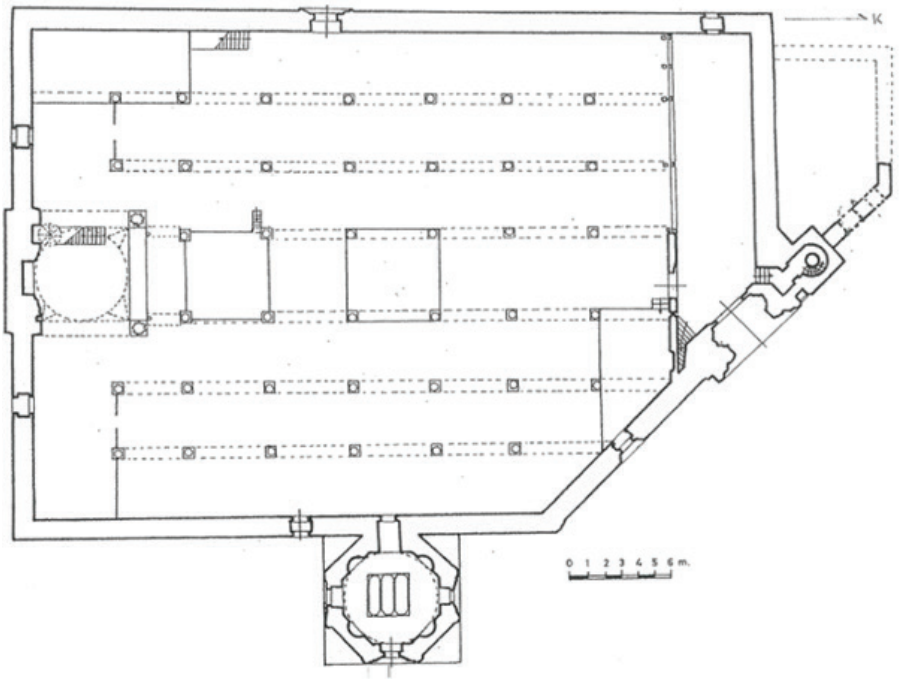

Figure 2: Architectural plan of the mosque (Çaycı,2008: 158).

Figure 3: The main portal

The mosque has two portals forming a diagonal façade of ashlar masonry. The main entrance is in the northwest and there is a monumental portal on the façade (Figure 3). The dimensions of the portal are 10. 10 m in height and 7.06 m in width (Erdemir, 1999: 21). The well-cut stones were used on this façade, but usually rubble stones were used for the remaining parts of the mosque. The projected part of the portal has floral style ornamented bordures, and rosette decorations. The ratio of floral decorations was increased on the stone portals during the 13th-century and Beyşehir Eşrefoğlu Süleyman Bey Mosque

is an example of the latest or the mature form of this trend (Öney, 1992: 10). The monumentality of the stone portal resembles the portal of Sivas Gökmedrese in Seljuk era. The architectural of the mosque was revealed in detail by M. Akok (1976: 7-28). There is an inscription on the portal, and it gives the construction date of 696 / 1296 or 1297 (Alperen, 2001: 84). In addition, there is also the list of waqf deeds of the mosque is on the inscripitions (Efe, 2014: 33-37).

Figure 4: The second portal on the western facade

The second portal (Figure 4) is located on the western façade of mosque and it was served to reach Bey Mahfili that is special praying place for the Amir or Bey of Eshrefids. The floral decorations of the portal have not had common features in Anatolian Seljuk art, for the palmette designs illustrate or imply some artistic influences of the Mamluqs of Egypt. This can be shoving a symbolic or political meaning for the close relations between the Eshrefids and the Mamluqs against the Ilkhanid Mongols.

The Minaret is at the right of the portal and on a square pedestal and has a polygonal body with one balcony. Another distinctive characteristic of this mosque is the fountain set into the base of the minaret in which an ancient sarcophagus serves as a water-tank. As a result of poor restoration, the minaret lost some of its peculiarities.

After 4 m. from the main portal there is a pointed arch as an inner portal decorated with tiles (Figure 5). There is an inscription above the arch and the date of construction (699/1299) comes from there (Konyalı, 1991:222-225). It is a fully glazed brick structure and covered with mosaic tile decoration. This arch is unique, form the perspective of Turkish Tile Art, both for its decoration and monumentality (Yetkin, 1986: 125).

Figure 5: The inner portal having mosaic tile decorations.

The entrance directly opens onto the central aisle of the hypostyle mosque. There is a dome before the mihrab, and it is decorated with glazed brick and tile (Figure 6). The opening over the center aisle emphasizes the position of the dome before the mihrab. The dome has some parallel characteristics in decoration with the dome of *Çay Madrasa*, the dome of *Konya Çifte Minareli Madrasa* and the dome of *Sahip Ata Complex*.

Figure 6: The dome

There are forty-eight wooden pillars with muqarnas capitals in six rows in the hall (Figure 7). The wooden pillars were also used in Ankara Arslanhane Mosque, but the marble capitals of ancient times were used above the pillars.

Figure 7: General view of the prayer hall (from north)

The lighting of the inside was provided by the windows located high in the wall that have been reopened but glassed over to recreate the original lighting effects. The opening over the central nave also enlightened the inside. There is a pool-like feature in the central nave called *karlık*. From the opening, snow and rain comes into the pool, but its function is not clear. These kind of wooden superstructures with an opening above are originated in Central Asia during the Chalcolitic Age and that has been commonly applied in the vernacular architecture of Central Asia (Kutlu, 2020: 2455-2486).

The 39 wooden pillars and 5 pillars of the galleries are carrying the wooden roof (Figure 7). Similarly in Ankara Arslanhane Mosque there are twenty-four pillars arranged in four rows of six pillars each (Öney, 1989: 3). The bases are stone, but the capitals are made of wood decorated with muqarnas. There are paintings and carvings on wood, and these techniques were widely common between the 13th-15th centuries. In this regard, Beyşehir Eşrefoğlu Mosque is comparable with Kastamonu Kasabaköy Candaroğlu Mahmut Bey Mosque (1366), Ankara Arslanhane Mosque (1289), and Afyon Ulu Mosque (1273).

Figure 8: The mihrab with mosaic tile decorations.

The mosque's mihrab (Figure 8) is the largest of any mosques in the Konya region. Its dimensions are 4.58 by 6.17 meters (Ertuğ, 1991: 179). It is faced in turquoise, blue, and purple tiles. The mosaic tile technique was used on the mihrab. This technique was common in the mosques of the 13th-century, such as Alaeddin Mosque and Sahip Ata Mosque at Konya, and Ankara Arslanhane Mosque (Öney, 1992: 98-99). Floral, geometric, and inscriptional ornamentations are very common on the mihrab. The star adornments resemble Konya Karatay Medrese's dome, which is decorated with star shapes in the form of tiles (Yetkin, 1986: 126).

Figure 9: The Minbar

The minbar (Figure 9) is made of wood and is an excellent example of kundekari technique (Apa Kurtişoğlu, 2015, s. 255-260). This technique is based on the use of wooden pieces in the octagonal, rhombus and star shapes. These pieces are fitted together. For Islamic art, the earliest examples of Kundekari come from Egypt, Aleppo, and Anatolia of the 12th-century (Öney, 1992: 138). This technique is also evident on the mimber of Ankara Arslanhane Mosque. According to A. Ertuğ (1991: 180), Ankara Arslanhane Mosque foreshadows the building of Beyşehir Eşrefoğlu Mosque. It has very similar decorations such as five pointed stars and techniques with Beyşehir Eşrefoğlu mosque (Öney, 1990: 6). It is richly carved with geometric and floral motifs, calligraphy and rumis. There is an inscription of *Amilehu Isa* on the minbar. On the front of the *mimber* there is *a Kufic* inscription that illustrates the name

of Allah, the name of Muhammad, and the names of four caliphs (Unutmaz, 1987: 35). Cage technique was used in the barriers of the minbar of Beyşehir Eşrefoğlu Mosque, like Arslanhane Mosque and Kızılbey Mosque in Ankara (Öney, 1992: 141).

Figure 10: The mahfil of the Amir or Bek

Bey Mahfili or *Emirler Mahfili* (Figure 10) is in the southwestern corner of the mosque and 4,47 m by 9,72 m so rectangular in plan (Çetinaslan, 2018: 194-196). It is elevated approximately 2 m. in height. There is a staircase that has thirteen stairs to ascend on the *mahfil*. There are also decorated wooden barriers around the *mahfil* that are carried by two wooden pillars with the capitals having muqarnas decorations.

The Tomb of Eshrefid: The tomb Figure 11). is joined to the eastern wall of the mosque (Çaycı, 2008: 57-61). It is a typical example of polygonal tomb structure of the era. It is easy to realize that the tomb and the mosque does not belong to the same date from the architectural material and the workmanship (Akok, 1976: 8-9). It is an octagonal structure and has a rock cut stone conical roof on the outside, but as a superstructure it has a dome inside. The inner dome is decorated with tiles over bricks and the ratio of this adornment type had decreased during the period of the Turkmen Emirates. The tile

decoration of the dome of Konya Karatay Madrasa is one of the most excellent one. Besides, the tile decoration of the dome of the tomb is the second most elaborated and amazing example of its kind (Yetkin, 1986: 127-128). It shows a continuation of Seljuk tradition in the period of Turkmen Emirates therefore it signifies the importance of the tomb (Öney,1992: 98-99). It's building inscription gives date of 701/1302. The tomb have contained the sarcophagi of Esrefoglu Suleyman I, his wife, and his son. However, the sarcophagi are not original because of the repairs in later periods of time (Akok,1976: 8).

Figure 11: The Eshrefid tomb beside the mosque

Conclusion: As a result, the Great Mosque of Beyşehir or Eşrefoğlu Mosque was started in 1296 and completed in 1299 according to the inscriptions of the stone and inner portals. It is the best-preserved example of the remaining wooden pillared mosques of the Seljuk and Turkmen Emirates. It is a monumental structure and the largest of its kind. From outside, only an elaborate example of ashlar masonry is evident. However, the stonewalls give way to a central hall that is pillared by forty-eight wooden columns, which have stone bases, but wooden capitals decorated with muqarnas. The mihrab of the mosque and the pointed arch as an inner portal of the mosque represents the latest and highly accomplished form of Seljuk tile and mosaic tile decoration.

It is a glamorous monument of the era not only in tile decoration but also in ashlar masonry and woodcarving decoration. The stone portal of the mosque illustrates that how high the level of masonry was applied in the Eşrefoğlu mosque. The minbar also demonstrates a wonderful example of kundeqari and cage techniques of woodcarving of the Seljuk era. The roof decorations (Kalemişleri) are also as excellent as the wood carving and masonry.

Eşrefoğlu Süleyman Bey Mosque is the most comparable with Ankara Arslanhane Mosque because the levels of workmanship and craft skills of both mosques are in the same way and of the highest quality. However, from the aspects of stone works, Eşrefoğlu Süleyman Bey Mosque is very high in quality and craftsmanship than Ankara Arslanhane Mosque.

In this article the architectural and historical uniqueness or peculiarities of the Great Mosque of Beyşehir or Eşrefoğlu Mosque is aimed to be underlined. In 2023, UNESCO declared that "Wooden Hypostyle Mosques of Medieval Anatolia" are listed in World Heritage List.

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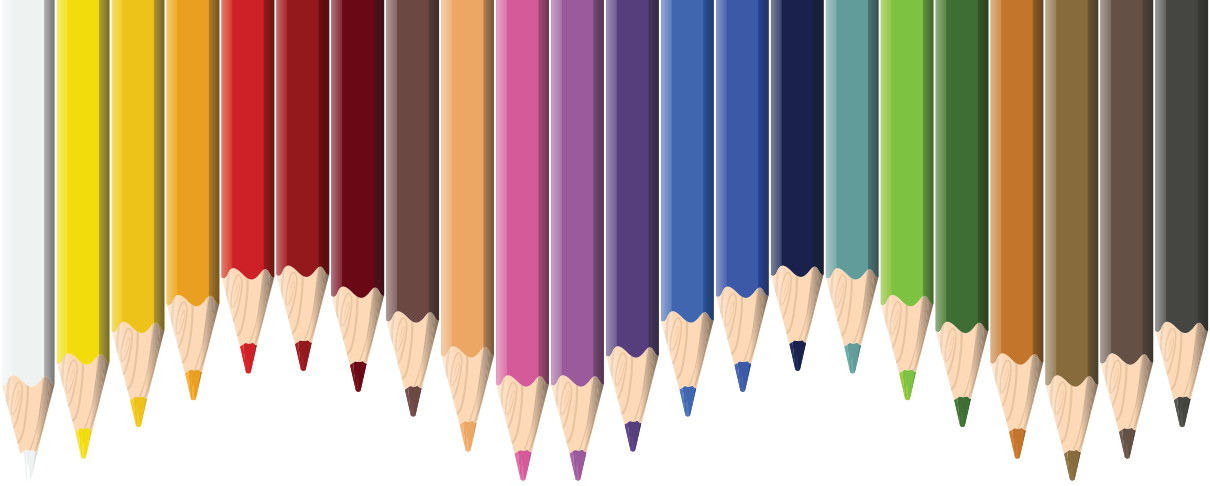

Chapter 14

CURRENT DESTINATION MANAGEMENT APPROACHES IN OUTDOOR RECREATION AND SPORTS TOURISM

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Introduction

The roots of the tourism industry began to take shape in the UK with the transport revolution and Thomas Cook's first travel organizations. Over time, the industry has been transformed by industrial and technological innovations to become a sector that enables billions of people to travel globally. The economic contribution and potential of countries such as Turkey in this field shows how tourism is shaped by taking into account not only economic but also socio-cultural and environmental dynamics. In this context, outdoor recreation areas are atthe center of sports tourism and offer future opportunities and potential innovations. Concepts such as digital transformation, sustainability andinnovative sports activities highlight how these areas have and will continue to add value to both tourists and the local economy. This chapter aims to raise awareness of the role of outdoor recreation areas in sports tourism, the opportunities and potentials they may face in thefuture, the importance of destination management in sports tourism andinnovative perspectives of the field.

Definition of Outdoor Recreation and Sports Tourism

Outdoor recreation and sports tourism is a set of activities carried out by individuals using natural or artificial open spaces for physicalactivity, entertainment and recreation. In this context, recreation includes activities with individual and social benefits such as reducing stress, promoting a healthy lifestyle and increasing social interaction. Sports tourism, on the other hand, refers to an area where tourism is supported and developed by using sports as a tool. This type of tourisminvolves individuals traveling to different geographical regions to participate in sports activities, participating in sports-related activities and benefiting from touristic services in the process. Outdoor recreation and sports tourism represent a multidisciplinary approach that aims to enhance the physical, mental and social well-being of both individualsand communities. These concepts have the potential to enrich touristicexperiences by supporting individuals' active lifestyles with the opportunities offered by nature. Examples of common sports tourism activities in the world are as follows;

- **Marathons and Half Marathons:** Organized in big cities or tourist areas, marathon and half marathon events combine participants' interest in sports and the desire to visit tourist attractions. Examples include the New York Marathon or the Paris Half Marathon.

- **Golf Tourism:** Famous golf courses and tournaments encourage golf lovers to travel to various parts of the world. For example, the Masters Tournament at Augusta National Golf Club is a major eventfor many golf enthusiasts.

- **Mountaineering and Trekking:** Mountaineering activities such as climbing Everest in the Himalaya or trekking in the Alps are popular destina-

tion areas for tourists in search of adventure.

- **Water Sports** Coastal areas around the world are popular destinations for water sports such as surfing, diving and sailing. Forexample, Hawaii is favored for surfing and the Caribbean islands fordiving.

- **Football and Other Sporting Events:** International sporting events such as major soccer tournaments, Olympic Games or World Championships cause fans and sports fans to travel to certain regions.

- **Sports Camps and Trainings:** Camp or training programs in specific sports encourage individuals to travel to develop their skills and experience different cultures at the same time.

These examples illustrate the wide range of sports tourism and how tourism is promoted in different sports. In the modern age, the acceleration of life, technological innovations and the increase in workintensity have a profound impact on the lives of individuals. In this fast-paced life, it is critical for people to maintain and improve their physical, mental and emotional balance (Fromm, 1987). In this context,recreation is a set of activities that aim to enable individuals to rest, have fun and contribute to their personal development by utilizing theirfree time efficiently. Individuals care not only about their inner world but also about social interactions. After basic physiological and securityneeds, the need for social connections emerges; individuals seek commitment and social acceptance. Leisure time represents the time outside of compulsory activities such as work or education. Recreational activities that enable individuals to regain their physical and mental energy are at the center of this process. In this context, recreation can be considered as a way of self-expression, rest and spiritual renewal. Experts define recreation as a result of the individualfeeling better, creative use of time and a tool for the development of theindividual's potential (Karaküçük, 2008; Mirzeoğlu, 2003; Gray, 1990).Recreation is a concept that includes activities that individuals choose to utilize their free time in a fun and productive way and that are suitablefor their own characteristics and interests. With this perspective, recreation activities encourage individuals to achieve their personal goals, to be satisfied and to participate in voluntary activities (Güngörmüş & Yenel, 2020).

Sports tourism, which emerged with the combination of sports and tourism, is gaining momentum worldwide and especially in Turkey (Taleghani and Ghafary, 2014). Sports tourism is one of the critical components of the tourism sector globally and in Turkey. Sports activities contribute to both the physical and cultural development of individuals and offer pleasant experiences in touristic activities (Alaeddinoğlu & Komşu, 2017). In addition, the activities brought by sports encourage communities to come together, create a peaceful atmosphere and reinforce understanding. In this context, sport and tourism come together through many processes of change and

integration. Sporting events trigger economic growth and progress. The two sectors also come together in the creation of major organizations and sporting events. There is a clear and rapidly growing intersection between sport and tourism. As these two global industries expand in their respective fields, their mutual interests are evolving and expanding together. Activities such as sport events, organizations and participation constitute common platforms where sport and tourism acttogether (Akyol & Akkaşoğlu, 2021).

The Importance of Resource Analysis in Outdoor Recreation and Sports Tourism

As Standeven and De Knop (1999) emphasize, sports tourism is central to the unique experiences that a region or destination offers. These unique experiences are shaped not only by the unique character of a region, but also by the sporting opportunities it offers. For example, many regions may have ideal conditions for hiking or cycling, but fewer specialized areas for activities such as skiing or rock climbing. Specificsporting venues, such as premier league stadiums, enhance a region's sports tourism potential through their environmental characteristics, transportation facilities and diversity of activities. One of the key dynamics of sports tourism is the willingness of individuals to travel to different locations away from home. This travel tendency stems from individuals' desire to experience different sports experiences and explore various destinations. In order to understand sports tourism in depth, various factors such as the physical infrastructure, accessibility and sporting opportunities offered by destinations need to be analyzed in detail. In addition, individuals' motivations to participate in such activities, personal values and interests are also important factors that reflect the complexity and diversity of sports tourism. Considering these reasons, it is important to evaluate sports tourism in accordance with the destination concept in order to shape the experiences ofindividuals, and in this direction, the elements that make up the field should be analyzed holistically but separately in detail and the analysis methods should be professional. In the studies conducted on this subject, it is of great importance to classify recreation areas and focus on the different characteristics of these areas. According to Boniface and Cooper (1994), a classificationmodel proposed by Clawson et al. (1960) categorizes a location based on its basic characteristics, size, intended use and degree of artificial development. This classification categorizes recreation areas into two main categories: user-oriented and resource-based areas. For example, user-oriented areas, such as urban parks or golf courses, often have artificial features, whereas resource-based areas, such as national parksor forests, which include activities such as blood, skiing and rock climbing, are resource-based areas, thus covering large tracts of land and emphasizing the availability of the quality of natural resources. Such classifications are also of great importance for recreation and sports tourism. Researchers have categorized tourism resources

into climatic, coastal, landscape and wildlife, historical and cultural, recreational and handmade products. Standeven and De Knop (1999) outline how Clawson's model can be specifically related to climatic resources in the context of sports tourism. For example, specific locations with suitable physical conditions for activities such as snow skiing are central to this classification. However, Clawson's model hasbeen criticized for not having a broad perspective to cover all recreationand sport activities. In particular, it is argued that the model does not fully reflect user-oriented resources and neglects areas that are more suitable for local use. Consequently, creating a comprehensive and academic classification model for sport and recreation areas requires an approach that takes into account different resources and user needs. This requires an integrated approach that brings together both physical geographical features and economic, social and political factors. According to Hall and Page (2002), in terms of the importance of distance and 'zones of influence' in terms of recreational resources, it isstated that national, regional, sub-regional, medium or local regional areas are important.

Sport has at its core the concept of challenge. This challenge can be in individual capacity, but can often be associated with natural and artificial resources (Haywood et al., 1995). Sport activities are differentiated at the recreational and competitive levels, and there are various environmental and resource requirements for their realization. For example, for recreational sports, open spaces such as local parks are critical, as they provide the infrastructure for sports activities. However, at professional or competitive sport levels, specialized areas with high quality resources are preferred. Areas with natural features, such as mountains, rivers or forests, provide an ideal base for many sports. In particular, these physical geographical features are central to disciplinessuch as orienteering, surfing, canoeing, climbing and skiing. Such sports centers can be classified according to both their environmental and characteristic locations in line with the Clawson model. High quality sport resources are usually concentrated in large urban centers.These resources are designed and built according to specific sporting needs and are also shaped by economic factors (Bale, 2003). In this context, social policy and tourism-related urban transformations are important factors influencing the distribution of sports centers (Henry, 2001; Law, 1992). For those who live in these sports centers, sports spaces have a user-oriented approach, while for those who have difficultaccess to such facilities or prefer to travel to these facilities, they show a dynamic structure.

A key feature in determining the value of particular resources is the ease with which potential users can travel to access them and the extent to which they can be accommodated at the destination. Sports tourism requires an in-depth analysis of accessibility, destination characteristics and economic impacts. Accessibility can be defined as the ease of transportation to sports fa-

cilities and tourist attractions. Veal (1987) focuses on how this accessibility affects travel costs, the time factor andhow distance affects participation. For example, the touristic attractiveness of the Alps and France's leadership in ski tourism is directly related to the accessibility and infrastructure of this region. Bale(2003) states that the accessibility of sports tourism destinations is linked to the physical and socioeconomic characteristics of the regionswhere the centers are located. Moreover, the preferences of tourists andathletes may vary depending on their travel motivations and the characteristics of the destination regions. In this context, Shaw and Williams (2002) revealed the differences in the economic and cultural structure of different resorts. While activity tourism and private clubs/organizations offer a wide range of activities to athletes and tourists, the location and characteristics of these centers also shape participants' preferences (Standeven and De Knop, 1999). Consequently, sports tourism and destination choice are based on the complex interaction of factors such as accessibility, infrastructure and regional characteristics, which helps us to understand the dynamics of sports tourism.

When the urban and economic impacts of sports tourism are analyzed, it is understood that the creation of sports facilities and infrastructure requires capital investment. Traditionally, governments have been moreinclined to invest in sports facilities, while in modern societies it is recognized that these investments are also necessary for tourism development. As emphasized by Weed and Bull (2004), large cities tend to have high quality sports facilities and increase tourism potentialby hosting national and international sporting events. Prominent cities invest heavily to support mega sporting events and infrastructure. For example, national stadiums and other sports facilities in different partsof London, for example, host national and international events. These events provide economic and social benefits by increasing the tourist attractiveness of cities. In particular, distinctive sporting events enhancethe image and recognition of cities, while contributing to the local economy and urban regeneration. According to Collins and Jackson (1999), events such as the 1996 Atlanta Olympics and the Barcelona Olympic Games have contributed greatly to the economic and urban regeneration of cities. Some cities have put sports tourism at the centerof their urban regeneration strategies and have achieved successful projects. For example, cities such as Manchester and Birmingham havepromoted urban regeneration through the development of sports facilities and events. These facilities have reshaped the image of the cities and increased their tourism potential. As a result, sports tourism and infrastructure investments contribute significantly to the economic,social and urban transformation of cities. Distinctive sporting events and facilities provide economic and social benefits by increasing the touristic attractiveness of cities. The costs, infrastructure improvementsand bidding processes required to host such major events make for tightcompetition between cities. In addition,

the task of ensuring the securityof the event is a huge responsibility. For example, for the 2006 FIFA World Cup, Sport England is known to have provided £3.4 million for the competition, with the full support of the government. Major sporting events have a direct impact on the cultural evolution of a city and investment in such sporting events makes a significant contribution to urban life. These events provide support in the areas of promotion, advertising, urban design, facilities, infrastructure and development at the local level, as well as increasing sports tourism opportunities withinthe city (Karaca, 2012).

As seen in the literature, sport is a cultural construct. Sport and tourism are therefore seen as part of cultural experiences. These two experiences, with their differences, can be combined according to the needs of individuals. Combining different cultural experiences offers aricher and more diverse experience for participants. The diversity and atmosphere of the places where sport is practiced can cause people to travel to different places for sport activities. For example, some cyclists prefer to cycle in different geographical areas. Famous sports facilities in cities can be an attractive destination for athletes and spectators. Where sport is popular, fashion, historical significance and other factors can also create attraction. However, sports venues can become increasingly similar. This similarity is related to increased international investment and the use of technology in sport. For example, modern sports facilities provide a more controlled and immersive environment in sport, reducing natural elements. These changes can lead to different experiences for sports tourists. For some, high-tech and controlled environments enrich the sporting experience, while others may prefer natural and less crowded venues. However, some note that such changes may alter the essence of sport. In sum, sport and tourism become attractive to people through cultural experiences and different venues. However, modernization and technology have the potential to change the experience and attractiveness of sport. The perception and experience of environmental settings created for participants and spectators of sports tourism are evaluated in different approaches in the literature. For elite athletes, specially designed venues that encourage optimal performance can enhance the appeal of sporting activities, while for other participants, the desire to compare their abilities with others can be central to the experience. For spectators, the preference for safe and accessible environments may encourage individuals to travel to experience these sporting events. However, in the literature, some researchers suggest that the lack of crowded stadiums or the presence of large sports arenas may negatively affect the attractivenessof the sport experience (Bale, 2003).

In conclusion, this section has analyzed the resources of sport tourism destinations, focusing on the various factors that influence their supply and quality. The resource requirements of different sports activities make it difficult to classify them into simple resource types, while somesports may prefer

natural or semi-natural environments, while others may be more compatible with built environments. However, the successof sports tourism is not only related to the availability of natural resources, but also to accessibility, promotion and the capacity to createattraction. Destinations that are accessible, cater to affluent markets andare effectively promoted have the potential to attract sports tourists. Major cities have become attractive for sports tourism due to their overall tourism infrastructure and accessibility. In particular, the growth of mega sporting events along with urban regeneration shows how critical such urban destinations are for sports tourism. Sports tourism ismore than just a tourism segment focusing on specific sporting activities; it is also an area where specific destinations stand out, making up a large part of the overall tourism product. In this context, these destinations can be considered not only as destinations for sportsactivities, but also as tourist areas that host various types of sports tourism.

Evaluation of Current Approaches in Sports Tourism and Outdoor Recreation from a Governance Perspective

Research by Bono i Gispert and Anton Clavé (2020) explored governance dynamics in depth. This study identified four key dimensions that can be effective in governing tourism: participation, coherence, know-how/quality and openness. The participation dimension supports governance by strengthening the relationship between sustainable development and active stakeholder engagement, while the consistency dimension emphasizes the control of procedures and outcomes for effective and efficient resource use. The know-how/quality dimension aims for continuous improvement and excellence, demonstrating the importance of quality and flexibility in tourism. Finally, the principle of openness is based on public information and transparency, indicating that public support is critical in tourism management (Bono i Gispert and Anton Clavé, 2020).

These governance dynamics are in line with the UNWTO (2020) tourism recovery guidelines. These guidelines encourage decision-making based on reliable data, developing strategies in line with sustainability principles, and driving lasting improvement across the tourism sector. Likewise, the European Union's NextGenerationEU1 program offers guidance on how to invest strategically in the tourism sector, with an emphasis on the principles of Green, Digital, Healthy, Strong and Equitable Tourism.

In the context of conflict and risk management, the governance model resembles a structure referred to as network governance. This structureprovides a flexible balance between competition and cooperation. Network governance emphasizes elements such as partnership,transparency and representativeness, indicating that coordination and cooperation between different stakeholders is critical in the tourism sector.

Other scholars, such as McCartney et al. (2021) and Gallego and Font (2021), argue that diversity and collaboration are fundamental to tourism resilience. Especially in times of crises and uncertainty, the need for data-driven technologies and resilient solutions increases. Thisemphasizes that tourism is not just an economic activity, but requires amultidimensional approach, such as sustainability, environmental protection and social welfare.

According to the ideas presented by Vargas (2020), smart tourism is a complex and adaptive process between interconnected tourism destinations. At the heart of this process, creative and smart economy perspectives play an influential role. In times of crisis, destinations develop strategies on how to cooperate within a complex system by making decisions in collaboration with the public and private sectors. Today, one of the most prominent trends in tourism governance is driven by pressures from the private sector, with an emphasis on campaigns aimed at providing financial support to companies operatingin this sector and building trust in tourist markets. However, in the current crisis conditions, there is a need to understand the changing behavior patterns of tourists and focus on demand management in this context. In this period of uncertainty, investments in data-driven and smart technologies are becoming increasingly important. The biggest challenge of the crisis is to strengthen governance, implement financialsupport and develop security-related strategies to minimize the negativeimpact of tourism and ensure a sustainable recovery.

As a result, global tourism dynamics since 2020 have necessitated a comprehensive approach to the sector, including not only economic but also environmental, social and cultural dimensions. To understand and manage this multidimensional nature of tourism, the public and privatesectors need to act in collaboration, develop data-driven strategies and adopt sustainable governance principles.

Destination Management and Current Approaches

Destination management encompasses conceptual areas at the foundations of interest tourism, enriched by natural, historical, culturaland recreational components. In the modern tourism market, destination management and marketing units are developing strategic approaches to understand the differences in tourist preferences and transform regional advantages into economic opportunities. While the tourism literature addresses destination management as a critical core theme, theconcepts of public and private sector cooperation in this process are alsonoteworthy (URL-1 2023). This approach, which embraces both economic dynamics and social interactions, requires continuous reviewand evaluation of effective management principles.

Destinations are specialized areas that offer a wide range of services and experiences to visitors, which makes them attractive (Çakıcı & Aksu, 2007).

In order for a place to be defined as a destination in termsof travel and tourism, it must have recreational and cultural facilities such as museums, parks and sports fields in addition to basic needs suchas transportation, accommodation, food and beverage facilities.

Globally, the tourism sector in Wales, for example, is economically vulnerable and largely made up of small-scale business units. The government's strategic direction in this area enables the tourism sector to respond effectively to key challenges. The establishment of the Welsh Assembly government in 1999 led to wider recognition of tourism and increased funding support. During this period, Wales developed a national tourism strategy and the Wales Tourism Board, with broad sector involvement, developed a forward-looking strategy. The strategy is structured around four key themes: competitiveness, quality, sustainability and partnership. Adopting a strategic approach to the tourism sector overcomes the sector's fragmentation and imbalances, ensuring a balanced approach to environmental, cultural and economic impacts. It also provides a roadmap for adapting to changing market needs, goal setting, sustainable development and effective partnership action. This approach aims to manage not only theeconomic, but also the environmental and social impacts of tourism in a balanced way. In a strategic approach to tourism, setting priorities, responding to market needs, using the right analysis to select the right targets, contributing to sustainable development and identifying partnership actions are considered to be very important criteria (Pride, 2002).

Destination management is the process of making a region, city or country attractive to tourists in the tourism industry, creating a sustainable development strategy for this region and implementing these strategies effectively. The concept of destination management canbe addressed with various approaches and dimensions:

1. **Strategic Approach:** In this approach, the long-term vision andgoals of a destination are determined. Considering economic, socio-cultural and environmental factors, it is planned which markets the destination will address, which touristic products itwill emphasize and which sustainability strategies it will adopt.

2. **Marketing and Promotion Approach:** This perspective focuses on the promotion and marketing of the destination. Identifying target audiences, planning how to reach them and promoting the destination effectively are the main elements of this approach.

3. **Sustainability Approach:** Sustainability is of paramount importance in modern destination management. In this approach, strategies are developed for the long-term health andattractiveness of the destination by balancing environmental, economic and socio-cultural impacts.

4. Stakeholder Approach: The participation and cooperation of different stakeholders (local people, businesses, non- governmental organizations, etc.) is essential for the successful management of the destination. This approach aims to create a common vision and strategy by taking into account the needs, concerns and expectations of all stakeholders.

5. Technological Approach: Today, the role of digital technologies is increasing. Technological innovations such as smart cities, digital marketing strategies, artificial intelligence- supported services can be used effectively in destination management to enrich the tourist experience.

The concept of destination management includes a variety of approaches and strategies to maximize the tourism potential of a region,develop it sustainably and market it effectively. The combination of these approaches ensures that a destination is managed successfully andsustainably.

In conclusion, destination management plays a critical role in the practice of sustainable tourism, taking into account economic, cultural and social dimensions. In particular, we are witnessing how the tourismsector in Wales has been transformed in the presence of strategic approaches and effective guidance. In this context, a holistic approach to tourism, with not only economic but also environmental and social dimensions, is key to the future success of the sector.

Sustainability in Sports Tourism Destination Management Basic Approaches

The sustainability of a destination can be established through balanced management between the quality of life of local residents and the experience expectations of visitors. This is a complex process that encompasses the environmental and social dimensions of the destination. Travel in particular is a major contributor to global climate issues, accounting for around 8% of carbon emissions. Therefore, the travel industry has a great responsibility to address this problem. Design management and data-driven approaches are critical to advance sustainability. Given the complexity of tourism, we need to adopt 'good'management practice by considering all aspects. According to the World Travel & Tourism Council's "A world in motion" report, a significant proportion of travelers are leaning towards sustainable traveloptions. This emphasizes the need for destinations to remaincompetitive in the future by focusing on the principle of sustainability (URL-2 2023). A data-driven approach stands out as the most effectiveand efficient method to achieve sustainability goals. Although many international companies and tourism destinations describe themselves as "data-driven", they have not fully grasped the potential of data in thecontext of sustainability and inclusiveness. This is where management and strategic approaches are crucial. Data can play a vital role

in the process of creating a comprehensive sustainable transition strategy for destination management organizations (DMOs). If we combine this data with design management approaches, we can put the issue in a much broader and more comprehensive perspective (URL-2, 2023; URL-3, 2023).

Sports tourism is a dynamic sector that should be managed with a sustainable tourism approach by making the best use of the natural, cultural and recreational resources offered by destinations. In this context, the main approaches that should be adopted for sports tourismto ensure sustainability in destination management are as follows:

1. Environmental Sensitivity: Adoption of sustainable infrastructure and management practices to minimize the impact of sporting events on the natural environment and maintain ecosystem balance.

2. Economic Contribution: Planning and organizing sports tourism events to make a sustainable contribution to the local economy; supporting the economic development of local businesses and communities.

3. Community Participation: Encouraging local communities to take an active role in the planning and management of sport events; preserving and maintaining local cultural and social values.

4. Education and Awareness: Supporting sports tourism activities with educational programs aimed at raising awareness on sustainability among locals, visitors and other stakeholders.

5. Long Term Planning: Planning and managing sports tourism activities with a long-term perspective, focusing on long-term sustainability and regional development goals rather than short- term gains.

In conclusion, sustainability in sports tourism destination management requires an integrated approach with environmental, economic and social dimensions. Adopting these basic approaches will contribute to the sustainable and inclusive management of sports tourism both todayand in the future.

Challenges in Sports Tourism Destination Management Approaches in Outdoor Recreation Areas

Outdoor recreation regions are ideal destinations for sports tourism with their natural beauty, historical heritage and variety of sports activities. However, there are a number of challenges in sports tourism destination management in such regions.

1. Protection of Natural and Cultural Resources: Open space recreation areas require the protection of natural and cultural resources. Sporting events and the increasing influx of tourists can damage ecosystems and erode local cultural values. Therefore, management strategies in line with sustainability

principles should be adopted.

2. Inadequate Infrastructure and Resources: Excessive visitor density may cause existing infrastructure and resources to become inadequate. Lack of capacity in transportation, accommodation and other services can negatively affect the tourist experience and threaten the sustainability of the region.

3. Social and Cultural Interactions: Interactions between tourists from different cultures and local communities can lead to a lack of understanding and potential conflict. Cultural education and awareness programs are necessary to manage such interactions and create a positive interaction environment.

4. Governance and Cooperation: Sports tourism destination management in open space recreation areas requires the involvement of multiple stakeholders (local governments, private sector, non-governmental organizations, etc.). It is difficult to balance the interests and perspectives of different stakeholders and create an environment of effective cooperation.

Hence, sports tourism destination management in outdoor recreation areas faces various challenges. Integrated and strategic approaches needto be adopted to overcome these challenges and create a sustainable tourism practice. Academic literature is an important resource for understanding these challenges and developing solutions, but practical applications should also be constantly reviewed and improved.

Destination safety and quality management are critical to the sustainability and success of the tourism sector. Here are a few examples of academic knowledge on these topics:

Destination Security:

- Risk Management: It is essential to identify, assess and managepotential risks in destinations. This can include a wide range ofrisks such as natural disasters, health crises, terrorism or political instability.
- Security Infrastructure: Establishing and maintaining an effective security infrastructure in destinations is critical for visitors and local residents to feel safe.
- Crisis Management: It is important to be prepared for unexpected events or crisis situations and to develop an effective crisis communication strategy.

Quality Management:

- Service Quality: To improve the tourist experience, the quality of services offered in destinations should be continuously reviewed and improved.
- Sustainability: Quality destination management should embrace the

principles of environmental, economic and socio-cultural sustainability.

- Certification and Standards: Compliance with international and national quality standards can increase the competitiveness of destinations and reassure tourists.

Academic Studies and Research:

- Academic studies in tourism assess the effectiveness of strategies, policies and practices in destination safety and quality management.

- Case Studies: Case studies on safety and quality management in different destinations provide practical learning and best practices for industry professionals and academics.

Training and Capacity Building:

- Training programs for tourism workers and local authorities are critical to raise awareness and adopt best practices in destinationsafety and quality management.

In conclusion, destination safety and quality management are essential elements for the successful and sustainable development of the tourismsector. These issues should be managed effectively through continuouseducation, research and strategic planning.

Outdoor Recreation Zones Future Opportunities and Potential Innovations in Sports Tourism

The tourism industry started in the UK in 1830 with the transportation revolution and gained momentum with Thomas Cook's travel organizations. The industry has historically been transformed by industrial and technological innovation, and the role of innovation became evident as the number of global tourists increased from 25 million to 1.4 billion in 1950. With the evolution of motor, biomedical and communication technologies, the impact of digital technologies has increased since the 2000s, and concepts such as artificial intelligence, big data and the Internet of Things have transformed the industry. Witha global size of $10 trillion, the tourism industry is an important sourceof employment, contributing to 10% of the global economy. In the caseof Turkey, in 2019, the economic size of tourism accounted for 11% ofthe country's GDP, contributed to 10% of employment and ranked among the world's most visited destinations (URL-1, 2023). In the mid-20th century, the boom in tourism made recreational areas around the world ideal venues for sporting activities, offering attractive and uniqueexperiences for visitors. Especially regions with high tourism potential,such as Turkey, have been at the center of this movement with their natural beauty and historical richness. Turkey's economic data in 2019shows that tourism's contribution to the country's economy is not only an economic dimension, but also a cultural and social transformation. In the

future, with the impact of digitalization and technological innovations, outdoor recreation zones and sports tourism will become even more integrated. AI-powered guidance systems, virtual reality andaugmented reality experiences and other digital innovations will offer visitors unprecedented experiences. However, it is of utmost importance that this transformation is in line with the principle of sustainability and that natural and cultural heritage is protected and passed on to future generations. In this context, shaping the sector with innovative and sustainable approaches will play a critical role in both stimulating economic growth and preserving the natural balance. Outdoor Recreation Zones are an important factor shaping the future dynamics of sports tourism. They can be defined as places where natural beauty, sports activities and tourist experiences converge. Among the opportunities of the future, the impact of digitalization andtechnological innovations stands out prominently. Technologies such as virtual reality and augmented reality are expanding the boundaries ofsports tourism by offering unique experiences to visitors. Furthermore,through sustainable tourism practices, outdoor recreation areas are becoming places where environmental and social responsibility are combined. This contributes to both the conservation of natural resources and the economic development of local communities. In terms of potential innovations, innovative sports and recreation activities can increase the attractiveness of the area. For example, new activities such as extreme sports, adventure trails or wellness activitiescan attract tourists. In conclusion, outdoor recreation zones will play an important role in the future of sports tourism, which will have a sustainable, innovative and technologically rich future.

Figure 1. *Trojena Ski Resort in Saudi Arabia (URL-4, 2023).*

As an example of the most recent structures for innovative sports tourism destinations, Saudi Arabia's initiative to build the world's first ski resort despite its desert climate demonstrates the future potential and innovative approaches to sports tourism. Compared to traditional sportstourism destinations, such an initiative is both surprising and offers a new vision of how travel and sports experiences can be transformed. The Trojena ski resort, built under Saudi Arabia's Neom megacity project, is planned not only as a sports resort, but also as a tourist destination integrated into the economic, cultural and social dynamics of the region. This approach shows that sports tourism is not only a concept focused on physical activity, but is also seen as a strategic tool for regional development, diversified tourist experiences and sustainable economic growth. Trojena's capacity to host the 2029 AsianWinter Games is an example of how regional and international sportingevents can act as a catalyst for tourism and regional development. Suchmegaprojects show how future sports tourism structures can be enrichednot only by natural advantages, but also by innovative architecture, technological integration and multidimensional tourist experiences.

Conclusions and Suggestions for Current and Future Destination Management for Sports Tourism in Outdoor Recreation

Outdoor recreation and sports tourism play an increasingly important role in the tourism industry. Historically, the evolution of the concept of destination management reflects how the tourism industry has been shaped and what strategic approaches have been adopted. Today, with the impact of transportation, communication and digital technologies, the tourism industry has become a critical player for the global economy. The future of sports tourism in outdoor recreation areas is always open for development. Especially regions with natural, historical and cultural values are becoming attractive for tourists. Considering the special interest tourism values for sports tourism, there is a wide range of stakeholder-specific planning that needs to be considered. However, in order to fully utilize this potential of sports tourism, it is necessary to adopt effective destination management strategies.

Recommendations:

1. Technological Innovations: Digital technologies are one of themost effective tools used in destination management. Technologies such as artificial intelligence, big data and the internet of things can be used to better understand tourists' needsand offer them personalized experiences. In this way, the problem of tracking regional and company-based financial dataof sports tourism data can be eliminated.

2. Sustainability: Sustainability for open space recreation areas should be addressed in both its environmental and economic dimensions. Strategies

should be developed to protect natural resources and support the economic development of local communities. In this process, expectations from local people and tourism agencies should be targeted by considering regional resource values.

3. Education and Awareness: Destination management professionals and local communities need to be trained to fully exploit the potential of sports tourism. It is also important to raise awareness among tourists and locals about the socio-cultural impacts of this type of tourism.

4. Collaborations and Partnerships: By establishing collaborations between different sectors, academic institutions, local authorities and the private sector, it can strengthen the role of sports tourism in destination management.

5. Marketing and Promotion: The sports tourism potential of outdoor recreation areas should be publicized to a wider audience through effective marketing strategies and promotional campaigns targeting target audiences.

In conclusion, destination management for sports tourism in outdoor recreation is an issue that will become even more important in the future. The above-mentioned recommendations outline the steps that should be taken to make the most of the opportunities in this area.

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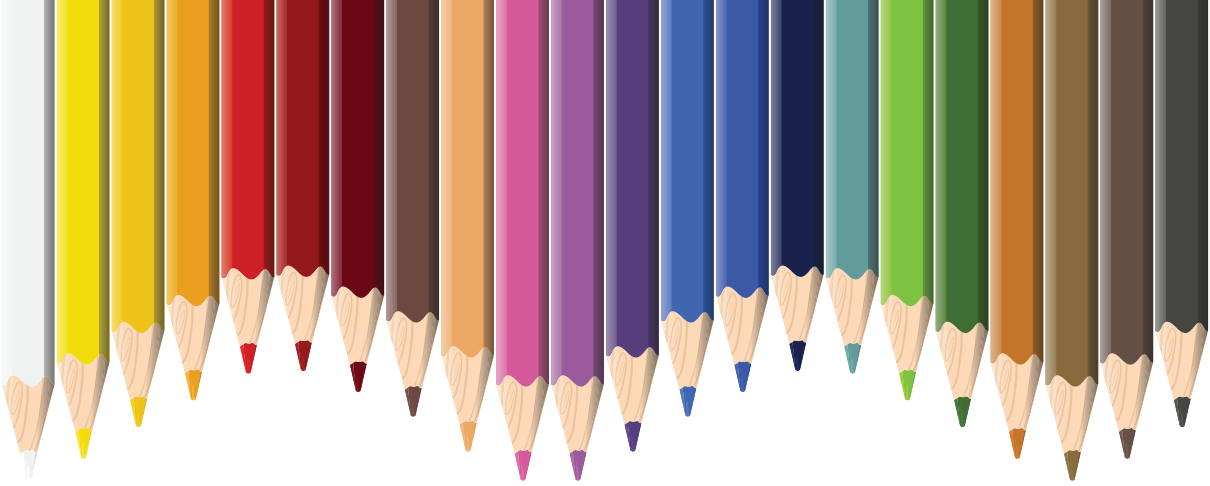

Chapter 15

SOCIAL MASCULINITIES AND FEMININITIES IN THE CONTEXT OF MIGRANT LABOR: NUSAYRIS' (ARAB ALEVIS') MIGRATION FROM ANTAKYA TO SAUDI ARABIA

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I dedicate this work to my father, Fikret Paşa, who worked as an "expatriate" and migrant worker in Saudi Arabia for thirty years, and to my mother, Kevser Paşa, who raised me and my siblings as a "left behind" and who is a care worker for our family –us and her own mother and father- and also who is a field worker.

1 INTRODUCTION

This study aims at focusing on the Arab Alevis –Nusayris- who migrated from Turkey's Antakya Province to Saudi Arabia. Inspired by the concept of "German Turks" (Korkmaz, 2021; Suavi, 2019), the concept of "Saudi Nusayris"[1] was developed by me. As a result of the bilingual Nusayri's (Arabic and Turkish) migration to Saudi Arabia for purposes such as finding a job and working, the categories of femininities and masculinities that are socially constructed and observed by me will be interpreted methodically in the context of the feminist method, self-reflexivity, and gender sociology according to Robert William Connell's category of "marginality" (Connell, 2017: 13–16, 251-275, 353). There are few studies in the field that are about migration from Antakya to Saudi Arabia, so the context cannot be kept comprehensive. Some issues, such as the fact that migrant workers stay abroad for long periods of time, that the native languages of the immigrants and their acquaintances who remain behind are Arabic, and that the war that broke out in Syria in 2011 reduced the migration rates, have narrowed the scope of the study. Having "advantages" such as being an observer and researcher "from within the society," having many of my relatives, including my own father, living in Saudi Arabia as migrant workers for many years, and knowing Arabic as well as Turkish, with the aim of broadening the narrowed scopes of the study again and contributing to the field, are other goals of this study.

Gender Sociology and the Feminist Method methodologically and conceptually enable us to address different femininities and masculinities and to evaluate the discriminations, inequalities, and transformations that occur in society from a sociological perspective. Gender Sociology has evaluated these processes with the need for "a paradigm change that fills social gaps" (Ecevit, 2011: 6-7). This need, with a new perspective criticizing the patriarchal system, contributed to the development of the feminist method and created many new discussions. Many concepts, such as categories of femininity and masculinity, patriarchal fractures and oppressions, war, migration, economy, law, politics and gender relations, and heteronormativity, have been discussed thanks to this method. In addition to this method, the self-reflexivity method will be used. In my opinion, the researchers have overtones of their ideas, emotions, the environment in which they grew up, and socio-cultural values. They are affected by these overtones. This situation, also defined by Yağmur

1 This concept will be used as "Arabistancı Nusayriler" in Turkish versions.

Nuhrat as "being one's own data," refers to the method of self-reflexivity (2020: 134). I myself find it necessary to discuss the environment that I have observed since my childhood, following the method of self-reflexivity.

The reason why this study is limited to the province of Antakya is due to the fact that, as a researcher, the region I have observed and interpreted since my childhood—Antakya and Samandağ District[2]—has been limited to this region within the framework of my living space. The majority of the fathers of my classmates in primary and secondary school, some of my classmates (with their families), the fathers of my friends from my high school class, many men from my own family, relatives, and acquaintances went to Saudi Arabia as migrant workers, and the majority of women were "left behind." It has caused me to think about this issue for many years. During this thought process, the observations and comments I gained as a "left behind[3] will be presented in this study.

This study aims to interpret the reasons and consequences of migration from Antakya to Saudi Arabia. As a result of this interpretation, also about Germany, which once received intense labor migration from Turkey, it was inspired by the definition of "German Turks" (Korkmaz, 2021; Suavi, 2019). The fact that there was an intense labor migration from Antakya to Saudi Arabia led me to think about the reasons and consequences that I could define as "Saudi Nusayris" based on this inspiration. Based on this definition, it can be claimed that the social reflections of migration affect femininity and masculinity differently. Since men are generally associated with the gendered role of "breadwinner," social masculinities have been able to reveal more intersecting results with migration in line with this purpose.

Arab Alevis (Nusayris) are an ethno-religious community that lives in a wide geography, including countries such as Egypt, Syria, Lebanon, Turkey, and Argentina (Et-Tavil, 2015; Doğruel, 2009; Mertcan, 2015; Paşa, 2019). Arab Alevis generally live in Antakya, Adana, and Mersin provinces in Turkey. Arab Alevis living in Antakya can migrate to Saudi Arabia and work there as migrant workers for many years. This situation has increased due to reasons such as the "labor demands of Middle Eastern countries" such as Saudi Arabia, the shift of the route of migration from the West to the Middle East with the economic transformations since the 1950s and especially after 1973, and the change in the demands of the countries affected by the crisis due to the

2 "As in Hatay in general, 69.6% of those who migrated abroad in Samandağ are those who went to Saudi Arabia. As of 2011, it has been determined that a total of 13,720 people immigrated to this country from Samandağ district […].When the distribution of the remaining immigrants is examined, it is seen that 7.9% of people migrated to Germany (1,565 people), 6.4% to Qatar (1,273 people), and 5.9% to Kuwait (1,170 people) (Cengiz and Çetin, 2016: 131).

3 My father himself worked as a migrant worker in Saudi Arabia for 30 years. While this process dates back to the years before his marriage, it continued until I was 18. My uncle (my father's brother) and his family, my uncles (my mother's brothers), and my cousins immigrated to Arabia as workers. Many people I know continue to work there after my father retired and returned from Saudi Arabia.

geographical impact of the oil sector and market (Cengiz, 2012: 60–62; Kurtuluş, 1988: 290–295). Saudi Arabia offers advantages to Nusayris, whose native language is Arabic, both in terms of language and job opportunities.

The majority of the population going as migrant workers consists of men. Saudi Arabia's limitation of immigrant recruitment to the male workforce affects this situation (Abadan-Unat, 2002: 86; Çiçek, 2011: 61–62; Kurtuluş, 1988: 293-295). Single men generally migrate for purposes such as establishing a home and family, learning a profession to sustain their lives, and saving money. Although married men have similar goals, they usually have to leave the women they are married to and their children, if any, in Turkey. Women and children rarely migrate with the immigrant men due to restrictions on their needs, such as obtaining a visa, living in a foreign country, going to school, and socializing. These situations have similar consequences for both single and married men. There may be situations such as men being "expatriates," having to leave their families, including their mothers and fathers, behind, or making short-term visits to Turkey.

In this study, men's migration to Saudi Arabia to find a job and work will be evaluated as a "manly duty" categorized by gender roles. It can be interpreted that the forms of masculinity constructed by these and similar "masculine duties" are socially constructed. Social practices such as being a working man, migrating to an unknown country, and living there as an "expatriate" are compatible with Connell's category of "marginality" (Connell, 2017: 13–16, 251-275, 353). Similarly, roles such as expectations from women left behind, marriage styles, their care labor, and performance of domestic labor can also be identified with Connell's category of "marginal femininity" (Connell, 2017: 275, 353); these categories will be tried to be interpreted within the context of migration.

2 SOCIAL MASCULINITIES IN THE CONTEXT OF SAUDİ NUSAYRI MIGRATION

Socially gendered roles can construct different masculinities and femininities. While these roles are constructed normatively, a hegemonic relationship may emerge between femininities and masculinities. For immigrant men, these hegemonic roles they adopt within the framework of male and female roles may emerge as problems they experience in the region they migrate to. Hegemony or hierarchy relations among masculinities may also differ due to situations such as the identity, class, and age of immigrant men. Situations such as getting used to and adapting to the region and encountering new masculinities and patriarchal codes can create vulnerability for men. Mehmet Bozok defines these processes as a "crisis of masculinity" that occurs when men experience loss of power, respect, and status as a result of encountering "disruptive contexts" (2019: 178–180). It can be interpreted that masculinity

crises are disappointments that occur as a result of men's relations with patriarchy being shaken or disrupted.

Situations such as immigrant men feeling that they are in the "position of women" as a result of the hierarchy of men in the immigrant region and sexist norms constructed as "women's role" can sharpen this process. Although they are known as jobs that include moral, emotional, and care labor, which are seen as women's duties, they have broader meanings conceptually. Tasks such as gardening and cleaning the stairs of men who migrate to European countries such as Italy are seen as reproductive labor (Gallo and Scrinzi, 2019: 2-3). While performing this labor in the context of migrant labor, men may assume that they are acting within the framework of "feminized roles." This situation causes men to experience a loss of status and respect and to be affected differently by patriarchal norms. Immigrant men experience similar masculinity problems within the framework of patriarchal norms, even if the places they work or the countries they come from are in different regions. The "masculinity" crisis of immigrant men may be shared by different experiences of fragile masculinity. "Saudi Nusayri" men who migrated from Antakya to Saudi Arabia will be evaluated in the context of this fragile and marginal masculinity.

Nusayri men migrate to Saudi Arabia for purposes such as "learning a profession," finding a job, and working. These men migrate with the social expectation of being the "founder of the family" and the person who takes care of the house and earns money. Saudi Nusayri men can generally work through a "bail" in Saudi Arabia, where they go to save money before marriage, to get a profession, and to get married when they return. Local bail is a type of profession in which they help migrant workers stay in Saudi Arabia in return for a certain amount of money. Bails, who receive the passports of migrant workers and deliver them at the time of departure, have the power to impose sanctions on migrant workers.[4] With this sanction power, these bails can sometimes lead to practices such as not handing over workers' passports, demanding large amounts of money from them, delaying exit procedures, or making re-entry processes difficult, and can establish a hierarchy over migrant workers.

These bails, which can be defined by Connell's category of "conservative masculinities" and collaborationist conventions, marginalize migrant workers (2017: 169). Marginal masculinity can become sharper in a country with more "strict" systems than Turkey. The legal system of the host country, working conditions, "hegemonic masculinity" (Connell, 2017: 267–275), and the authorities of collaborative masculinity can be considered examples that can sharpen the category of marginal masculinity through class and social discrimination. Examples such as the obligation to pray during prayer times

4 "Although it is not contrary to international immigration policies, it has many differences in force and is widely criticized by the authorities. the Bail System is the name of the legal system developed

and to close shops, especially for Saudi Nusayri tradesmen, and the control of socializing areas and choices such as alcohol consumption or meeting with a woman by moral police can expand the limits of this sharpening. As a result, men may experience practices such as social isolation, socializing in small groups and with people from their own country, and cultural alienation.

While for Saudi Nusayri men, the experiences of living away from the family, the idea of "fulfilling one's duty" for the family, and the "expectations of those left behind" are socially constructed, there may be patriarchal roles and pressures. Masculinity, as a construction based on "not revealing one's emotions," can perpetuate patriarchal roles. Social patriarchal judgments such as "men do not cry" or "they do not grin like a bizzle" are not only a construction that degrades women; they also appear as mechanisms that suppress men. Even though immigrant men are exposed to isolation and difficulties, they may not reflect their emotions due to social expectations. Feelings, ideas, and practices such as love, longing, loneliness, and socialization needs may remain in the background due to the perception of patriarchal masculinity. It is socially stolen men's thunder who are married and have children. The man who is away from the family loses his "control mechanisms," and marginal masculinity can be performed more because he experiences difficulties in carrying out patriarchal gender roles. For example, the remote "control" of a man who has to live a life away from the status of being the "head of household," "family man," and "head of the family" decreases.

Since the immigrant man is usually alone, he may have to exhibit practices that "transcend" gendered roles. For example, while domestic labor patterns such as cooking and cleaning are constructed as "women's duties" within the patriarchal system, the lonely man learns to perform these roles. This does not cause roles to change or patriarchal roles to be abandoned. These roles that men expect from women during short-term family visits were compulsorily maintained by them abroad. There may also be examples, such as the remarriage abroad of a man who did not migrate with his family. Men can establish their "second family" due to reasons such as the expectation that domestic labor is assumed to be women's duty and that they do not want to suppress performances such as sexuality.

Women can generally choose not to divorce due to reasons such as the financial dependence of the "left-behind family" on Saudi Nusayri men, the existence of constructions such as "boys will be boys" in patriarchal social perception, and the perception of honor having a patriarchal basis such as "women's obligation." Even though some men do not have a "second family" abroad, they can build similar patriarchal social perceptions through situations such as "cheating on their wives," and women's consent to "not divorce" is

by the Saudi Arabian government to keep migrant workers in the country under control.." (Doğandor, 2019: 79).

forced to be produced by patriarchal society. If the cheater is a woman, the man may be the one who prefers the divorce, based on the patriarchal understanding of honor. When a woman cheats, social practices such as social exposure of the woman and publishing videos may be involved. When a man cheats, practices of "covering up" and "persuading and suppressing the woman" can be put forward with patriarchal norms.

Saudi Nusayri men who can take their wives and children with them may be obliged to comply with the rules of the place they go to. For their children, "Turkish schools," which are only available in certain parts of the country, can narrow down the area of their work. Women's compliance with the "obligation to wear the chador" in social-public spaces and the "acceptance" of this by both men and women are constructed. For men, the "burden of taking their family with them" can be even heavier. Visa procedures, relations with bail, financial difficulties, finding a new house, and meeting needs may be in question.

As a result, the number of people going to Saudi Arabia as migrant workers decreased due to the outbreak of the Syrian War and Syria being one of the migration routes. In addition, the fact that the younger generations who prefer to study do not prefer abroad and immigrant work as a "way to acquire a profession" as much as the previous generation has also reduced migration. There are also situations and examples, such as Arab Alevism facing forms of violence because it is seen as an "ethno-religious minority" in Saudi Arabia. "Saudi Nusayris," who can be considered in the category of marginal masculinity, face difficulties due to the expectations of both the region they migrated to and their own society. Patriarchal social roles and cultural influences can oppress men, and men can sometimes cooperate with these roles and influences to oppress women. While the difficulties experienced by the man who lives as a migrant worker as an "expatriate" are in question, there may also be social pressures and difficulties for the "left-behind woman." This situation will be tried to be interpreted under the heading of "Social femininities in the context of migration.".

3 SOCIAL FEMININITIES IN THE CONTEXT OF SAUDI NUSAYRI MIGRATION

The development of feminist movements and theories has made significant contributions to the inclusion of women in migration studies. With these contributions, important concepts such as "feminization of migration" have been introduced. . This notion has been effective in revealing very important discussions in the context of migration and its feminization, and studies criticize the ignoring of women as a large part of the migration process and immigrant labor (Küçük, 2022; Ünlütürk Ulutaş and Kalfa, 2009; Vause and Toma, 2015). Migration-related concepts such as the migration processes of

women, children, disadvantaged and ignored groups in terms of gender, LGBTI+ people, the dynamics of encountering discrimination, care labor, the entertainment industry, and sex work have been opened for discussion.

Categories of femininity can also be affected in different ways by the context of Nusayri migration from Antakya to Saudi Arabia. Since Nusayris are a social group with a "closed community organization," in Nusayri society, marriage outside the community is not socially "accepted." As a result, there may be social expectations from Arab Alevi people, such as the "requirement" of having Arab Alevi spouses, consanguineous marriages, arranged marriages, and child marriages (Paşa, 2019). While these outcomes were more likely in older generations, this rate has decreased today. The fact that Arab Alevi men are migrant workers affects the situation in which the woman they marry as an Arab Alevi is "selected" from their acquaintances, relatives, and connections. Patriarchal social perception can construct women who are "selected" through arranged marriages, when they are children, and from relatives as "controllable." This situation makes women who are "left behind," in Arabic terms such as "bringing up and raising according to their own will," controllable by mothers-in-law, patriarchal social norms, and masculinities who collaborate with "patriarchal bargaining," as Deniz Kandiyoti describes this situation in general (2012).

By instrumentalizing the family institution and perceiving it as a control mechanism, social femininity can be constructed with patriarchal norms such as "being responsible for the honor of those left behind," the woman left behind being in the position of "helper" in the extended family, and ensuring that the inheritance is not divided "thanks to" consanguineous marriages. These patriarchal constructions, which we can consider marginal femininities, can serve purposes such as making the "left behind women" care for their mother-in-law and father-in-law, as well as their children, perform domestic labor, and become "dependent on the family" by not being able to go to a job that would provide them with economic independence while doing these.

As a result of patriarchal mechanisms such as women's care work, domestic work, and subsistence labor being unpaid, women being insecure, and retirement opportunities being ignored, migrant workers are responsible for the family, while marginal femininities are made dependent on both the family and the migrant worker. Thus, there are mechanisms such as preventing divorce, eliminating the possibility of women being able to care for their children independently after divorce, and controlling women's sexuality.

The construction of femininity's ability to perform itself according to gendered expectations can be oppressive for marginal femininities. Women, who are generally "left behind," are expected to protect their honor, not go to the patriarchal norm of "excesses" determined by society in terms of dress

code, the roles they will adopt when attending social events such as weddings, etc., to restrict their socialization areas, and to "dedicate themselves" to their husband, family, and children as expected from them. They may have marginalizing "tasks," such as performing unpaid and insecure domestic labor. For example, women whose husbands are Saudi Nusayri migrant workers may face pressures such as "not over-decorating" when going to weddings, "paying attention to skirt length", "coming down to the stage 'far enough' to avoid being the target of gossip", and 'behaving politely' on stage. Despite social and emotional demands, women who are credited as migrant workers' spouses might make comparable "expatriate" men's sacrifices by making "sacrifices" for themselves and their children.

Failure of femininities as "those left behind" to make "sacrifices" in line with social norms can lead to consequences such as social isolation, being "labeled" by assuming that the patriarchal understanding of social honor is specific to women, and being exposed to similar forms of violence. Mechanisms used to control this patriarchal understanding of honor, such as arranged marriages and consanguineous marriages, can lead to results such as women cheating on their husbands after their husbands migrate abroad as workers and their "understanding of desire" changing with their own body and sexuality explorations. These can result in situations such as public exposure of women, social media exposure through videos, women being alienated from their children, and migrant workers demanding divorce. Since being the "bearer of honor" is accepted as a marginalizing role assigned to femininity, similar results do not arise for men. Women being cheated on by their migrant worker husbands may result in the perception that they should "accept" "their fate" or "submit" within the framework of patriarchal sexist roles. While marginal femininities are constructed as "silenceable," there may be both femininities and masculinities that oppose such patriarchal norms.

Along with these social roles, the roles of marginalized femininities continue to diversify. Women who are "left behind" as "wives" of migrant "Saudi Nusayri" workers may have to undertake the duties of being the "head of the family" within the nuclear family. Women who are able to care for children who do not have both parents, meet their needs, manage finances inside and outside the home, and perform similar roles can gain authority from time to time. Even though women who perform their roles by building emotional and physical "woman-like femininities" do not aim to resemble men, patriarchal social constructions can create a "manlike" discourse. In addition to carrying out processes such as domestic labor, care labor, and emotional labor, women can also have roles such as working in the field, caring for the families of migrant workers, and handling domestic labor. Although it is not a common situation for women to work "outside," this work can be considered a "necessity." This is not accepted as a separate work/work-earning; it can be accepted

as "support" to the family and the male worker.

The notion of Saudi Nusayri women migrating with men may cause them to face similar difficulties as men. Although the pressures and difficulties encountered in Saudi Arabia, where classical patriarchy patterns are socially determined by harsher rules, are similar, it can be interpreted that femininity is more exposed to social pressures. Forced "veiling" can create inequalities for "Saudi Nusayri" women, and their socialization and movement areas are narrowed "without a man next to them." The sanctions for "committing a crime" in matters such as protecting honor, drinking alcohol, and driving are much more severe for women. In Saudi Arabia, women are mostly responsible for domestic labor. Issues such as children's schooling, care, needs, and difficulties encountered with local bails in Saudi Arabia are valid for women as well.

4 CONCLUSION

Today, migration can occur as a result of many situations such as displacement due to wars, seeking security for political-economic-social reasons, and facing consequences such as food crises. Migrant labor can also be interpreted as a concept that creates processes such as "displacement" and "adaptation" to the place where it is migrated. As a result of this interpretation, Arab Alevis (Nusayris) were evaluated in the context of immigrant labor. The phenomenon of Arab Alevis (Nusayris) migrating from Antakya to Saudi Arabia allowed me to arrive at the definition of "Saudi Nusayris" as a stopping point, inspired by the description of "German Turks" (Korkmaz, 2021; Suavi, 2019). In line with this opportunity, migration has been interpreted in the context of masculinities and femininities.

When "Saudi Nusayris" migrated as migrant workers, social masculinities and femininities experienced "marginalizing" situations. Based on the definition of marginal masculinities and femininities, the reasons, processes, and consequences of experiencing this social phenomenon are discussed. In the context of migration, marginal masculinities and femininities may be exposed to some discrimination, pressures, and similar situations due to both the social conditions of the place where is gone and the social patterns of the place "left behind." "Social constructions, perceptions, and pressures" such as men's confrontation with gendered roles of being the "breadwinner" and women's expectations of fulfilling gendered roles such as being "left behind" and domestic or care workers can be cited as marginalizing examples. It can be concluded that Saudi Nusayri men and women, additionally "the left behinds" can share similar marginalizing processes. As a result of these, as the daughter of a Saudi Nusayri migrant worker man and a "left behind" woman, I present these observations to you.

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