

The Evaluations and Researches in Social Sciences and Humanities



Editors

Assoc. Prof. Dr. Mehmet Sarioglan
&
Dr. M. Fatih Sansar

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PREFACE

The phenomenon of social sciences can be expressed as a dynamic process, mainly because it is an academic discipline focused on people and society. Today, with the rapid spread of globalization and information technologies, it has accelerated the transformation of the lifestyles of individuals and, accordingly, societies. In line with these data, the rapid transformation of the life dynamics of individuals and societies required up-to-date approaches to social sciences. As the basic dynamics of current approaches, it has come to the fore in science branches such as family, children, social perception, literature, art, communication, production management, tourism, religion and finance.

In this context, up-to-date approaches in different disciplines have been determined by very valuable authors. In addition to studies such as its effects on banking, financial systems and tourism studies during the Covid-19 period, it is included in publications on basic human sciences such as history, geography, music and theology. It is thought that the chapters in the work will make great contributions to the scientific literature, scientists and related sectors.

September 2021

Assoc. Prof. Dr. Mehmet SARIOGLAN

Dr. M. Fatih SANSAR

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CHAPTER I

THE EFFECTS OF COVID-19 PANDEMICS TO TURKEY'S TOURISM: A RESEARCH ON THE INTERBANK CARD CENTER DATA

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1. Introduction

Human history is full of epidemics that have caused the deaths of millions of individuals. These are relatively ancient epidemics such as the Black Plague (14th century) and the Spanish Flu (1918-20), as well as recent outbreaks of SARS, avian flu, and swine flu, MERS and Ebola, respectively. All these epidemics have caused significant effects on people's lives (Alaeddinoğlu & Rol, 2020). However, the New Coronavirus (COVID-19) pandemic, which affected the whole world, first appeared in Wuhan, China in December 2019 and whose effects are still ongoing, is the largest epidemic in human history to date.

Although the COVID-19 pandemic is a health-related problem, it has also caused significant economic problems all over the world (TURSAB, 2020). It has deeply affected global trade and especially tourism and caused great damage (Aydın & Doğan, 2020). The tourism industry is among the three most revenue generating industries in the world economy, along with petrochemicals and automotive (Met and Sarioğlu, 2010; 201). Closing borders and cancelling

flights globally; At the national and local levels, travel bans, curfews, restrictions on the activities of food and beverage businesses, capacity reduction or closure of hotels have caused great damage to tourism in all countries.

Turkey as well as in other tourism pandemic Covid-19 countries has deeply affected the tourism sector. Tourism, which is the sector of Turkey's most competitive and most foreign exchange earnings. It accounts for approximately 8% of the total employment in the country. Tourism has a macroeconomic effect on a total output of 96 billion dollars, and with an average added value of 2.5%, it is the sector with the highest development potential in the country. 5% of the fee payment has been made in Turkey, 2% of the total turnover of goods produced and 4% of tangible investment is realized in this sector (Spring and Ilala, 2020). Compared to other pandemics, the effects of the current pandemic Covid-19, which is currently spreading in the world and in our country, are still not clearly known. (Zeydan & Gürbüz, 2020). However, in terms of the tourism sector, which is so important for the country's economy, the epidemic has created negative economic impacts on accommodation businesses, travel agencies, transportation companies, food and beverage businesses, guides, suppliers, cafes and workers in the sector, and this negative situation still continues. In this context, in this study, stay active in the tourism sector in Turkey, airlines, travel and in terms of eating and drinking establishments with transportation, the credit card and its impact on the amount of the expenditure made through bank cards pandemic will be examined. In this sense, while determining the economic effects of the pandemic on tourism businesses to a certain extent, it will also be useful in revealing the income loss of the sector through officially registered expenditures. The aim of the study, which was compiled over the data obtained from second-hand sources, was to consider and examine the partial economic effects of the pandemic as of the first year.

2. Literature Review

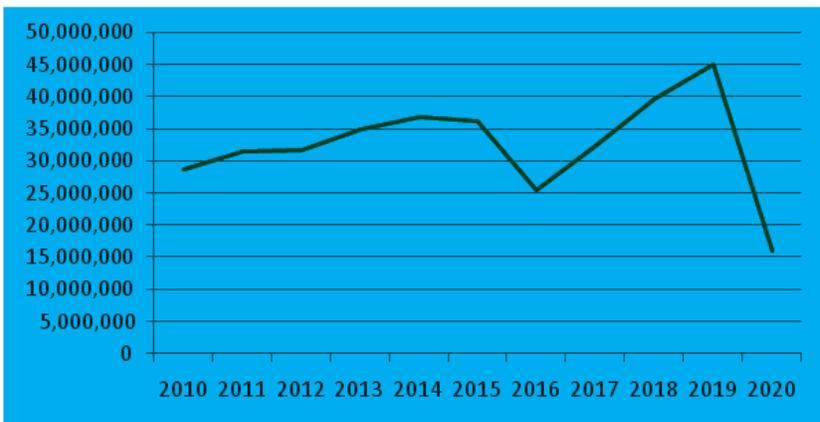
2.1. Covid-19 Pandemics and The Effects On Turkey's Tourism

The tourism industry is very sensitive to crises of different origins, such as natural disasters, epidemics, economic and political crises, and terrorism. Therefore, tourism is one of the first and most severely affected sectors by Covid 19. As it is known, one of the first measures against the pandemic was to close the borders and limit human mobility. The fact that the demand for tourism is not

one of the basic and essential needs and can be postponed has also increased the coefficient of the sector to be affected by the crisis (Yaşar, 2020). When the data such as population rates of countries, number of cases, death rates are examined, it is seen that the Covid-19 epidemic is more common in continents, countries and regions where human mobility is intense. The Mediterranean and European destinations, which are among the most important tourist regions of the world, have adversely affected the epidemic process, especially due to the tourism movements of the Central and North American destinations and the Asia-Pacific Region (ILO, 2020: 2; Yılmaz, 2020: 42, Akyol, 2020: 114).

Pre-pandemic period, the world's most visited tourist country in rising up to 6 Turkey is among the countries adversely affected by the epidemic process as in competitor countries. Turkish tourism, which broke a record by hosting around 45 million foreign tourists in 2019, the year before the epidemic, experienced a serious decrease since March 2020, when the pandemic began, and experienced a loss of 65% by 2020. In Graphic 1, the number of tourists by years is presented.

Graph 1. The Annual Number of Foreign Tourists' Visits in Turkey



Source: TUIK

Turkey has fallen below the figure for 2004 as the number of tourists accommodated in 2020. Because in 2004, Turkey in 2003, while this number around 17 million tourists visit took place as around 14 million tourists. Tourism revenues decreased by 65.1% in 2020 compared to the previous year and amounted to \$ 12 billion 59 million 320 thousand. The data impressively reveal the impact of the pandemic on Turkish tourism in international tourism

movements. The negative situation experienced in foreign tourism movements is also experienced in domestic tourism movements. When the first nine months of 2019 and the first nine months of 2020 are compared, it is seen that there is a decrease in domestic tourism movements. In Table 1, there is a comparison according to the data of the first nine months of the two years.

Table 1. 2019-2020 Annual (first 9 months) Domestic Tourism Movements

<i>Year</i>	<i>Number of Travel (Thousand)</i>	<i>Rate of Change (%)</i>	<i>Number of Overnights (Thousand)</i>	<i>Rate of Change (%)</i>
<i>2019 (9 months)</i>	<i>65 357</i>	<i>-2.2</i>	<i>546 230</i>	<i>-1.9</i>
<i>2020 (9 months)</i>	<i>35 658</i>	<i>-45.4</i>	<i>406 433</i>	<i>-25.6</i>

Source: TUIK

When the data of the first nine months of 2019 and 2020 are compared, there has been a -45.4% decrease in the number of travels in the first nine months of 2020 in domestic tourism movements. In the same period, a decrease of -25.6% is observed in the number of overnights. At this point, a decrease in the number of trips and overnight stays is observed. While local tourists travel less by about 45%, the decrease in the number of overnights remained around 25%. It can be said that during this period, the number of overnight stays increased while less travel was made.

2.2. Research on the Relationship between Pandemic and Tourism

Gössling, Scott, and Hall (2020) state that with widespread restrictions on community mobility, world tourism has come to a halt as of March 2020. In the study, it is stated that the effects of the epidemic on airline transportation, cruises and accommodation businesses are devastating. Akyol (2020) examined the views of university students studying tourism on the Covid-19 outbreak. According to the survey result of 19 outbreaks of Covid-tourism activities in Turkey, especially the economic point of view that the negative effects come to the fore. According to the results of the research, it is suggested that post-epidemic tourism businesses should focus on change, investment and mobile communication issues.

Foo et al. (2020) states that the pandemic has greatly adversely affected the tourism industry in Malaysia, especially airline and hotel businesses. In the study, it is argued that the incentive packages offered by the Malaysian government are

insufficient to ensure the sustainability of the tourism sector in Malaysia. Bahar and İlal (2020) stated that, according to the results of their study to determine the economic effects of the Covid-19 outbreak on the tourism sector, demand shocks caused by the epidemic will lead to employment and income losses in the tourism sector. Yenişehirlioğlu and Salha (2020) gathered by interviewing with people who have regular economic income and take regular holidays every year. As a result of the research; It has been determined that local tourists “mostly” cancel their reservations and will not take any vacation-related activities within a period of 3-6 months. It has been determined that they do not want to take a vacation in the summer of 2020, and if possible, people who will take a vacation will consider options such as summer houses, bungalows and highlands, where people have very little social distance. Silver and Hacıevliyagil (2020). They examined the relationship between the number of deaths and cases of Covid 19 and the stock market indexes in the tourism and transportation sectors that were most affected by the epidemic. As a result of the study, it was found that there was no significant relationship between the number of cases of the epidemic and the index series, while the number of deaths in the epidemic and the independent variables at the 5% significance level moved in the opposite direction together in the long term.

Bakar and Rosbi (2020) stated in their study that the pandemic caused a great panic among people, the supply-demand balance in the tourism sector was disrupted and as a result, if a solution to the virus is not developed, the sector will experience a serious economic collapse. Alaadinoğlu and Rol (2020) examined the relationship between epidemics and tourism in their studies, stating that the effects of the pandemic would be long-term, and they talked about the necessity of restructuring tourism. Şengel et al. (2020) examined conceptually the applicability of the “social distance” rule in tourism activities in the context of camping and caravan tourism, in which human relations based on close contact prevail. As a result of the study, they stated that camping and caravan tourism is an important alternative tourism type to be done by paying attention to the “social distance” rule in order to prevent the spread of the COVID 19 pandemic.

Çınar and Özkaya (2020) examined the effects of the pandemic on medical tourism. The findings of the study show that the pandemic creates damages that can be felt for a long time in the economies of the country and that the medical tourism sector is directly adversely affected by these damages. Yaşar (2020) researched the effect of the pandemic on the tendency of individuals to go on

vacation. As a result of the research, the fear associated with the pandemic leads the tourists to avoid crowded places and states that it creates differences in travel trends.

3. Research Method

The aim of this study is; determining the expenditures made in the fields of activity in the tourism sector through credit cards and debit cards between 2012 and 2020. Based on this, it is aimed to reveal what kind of effect the pandemic has on tourism expenditures. For this purpose, the data obtained from the Interbank Card Center (BKM) website were used. BKM was established in 1990 with the partnership of 13 public and private Turkish banks. The purpose of the activity, within the payment systems; To create, operate and develop systems, platforms and infrastructures that provide or support any kind of payment or money transfer without the need for cash (bkm.com). BKM's activities in order to meet the requirements established in card payment systems in Turkey are as follows (Kaya, 2009: 24):

- Clearing debts and receivables arising from card users' purchases between banks,
- Carrying out the authorization process between banks,
- Developing the procedures to be applied between banks in the credit card and debit card industry,
- Establishing domestic rules, to make decisions by carrying out studies to ensure standardization,
- Establishing relations with foreign organizations and commissions and representing its members in these organizations when necessary.
- Carrying out the transactions carried out by each bank from a single center in a safer, faster and less costly manner.

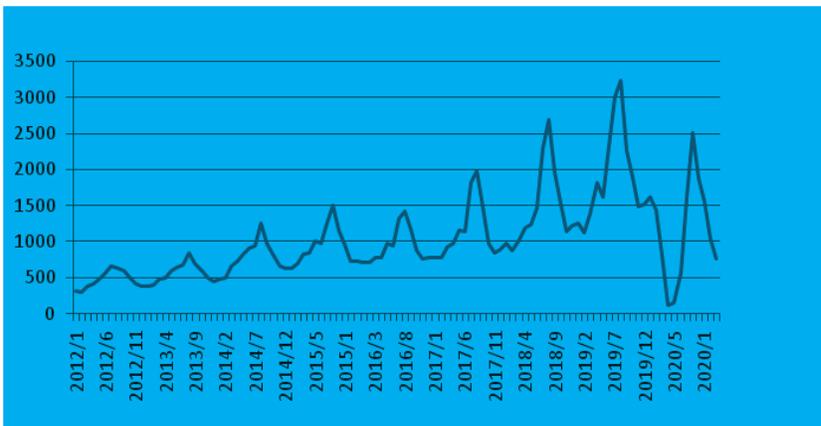
For the 2021 period, BKM I.C. banks partnership with Central Bank of the Republic of Turkey IC, Turkey Halk Bank IC, R.T. Ziraat Bank IC, Turkey Garanti Bank, Akbank Turkey IC., Turkey Is Bank, Yapi ve Kredi Bank IC, Turkey Foundations Bank Turk AP, QNB Finansbank , ING Bank I.C., Türk Ekonomi Bank IC, BKM IC. Its relationship with banks and financial institutions is maintained with 38 members and 7 service providers, as well as partnerships.

BKM, which provides information on credit and debit cards on a monthly basis, regularly provides information about the use of domestic and foreign cards, sectoral developments, and statistics of card payments made online, at home and abroad. For the purpose of this study, through BKM's website, expenditure data of the Accommodation, Travel Agencies and Transportation, Airlines and Food sectors were obtained through bank and credit cards. Since the relevant data were available on the website as of 2012, all of the data for these 9 years were used in the study. The expenditure amounts in the study are analyzed as the totals of debit cards and credit cards.

4. Findings

In this part of the research, card expenditure amounts for the Accommodation, Travel Agencies and Transportation, Airlines and Food sectors between 2012 and 2020 will be presented in graphs. When the expenditures related to the accommodation sector were examined first, it was determined that the expenditures based on the total of debit cards and credit cards increased 23% on average every year from 2012 to 2019. However, for the first time in 2020 from 2019, this rate has experienced a negative decrease of 40%. The annual development course of credit card purchases in the hospitality sector is presented in Graphic 2.

Graph 2. Hospitality Sector Expenditures (Million ₺)



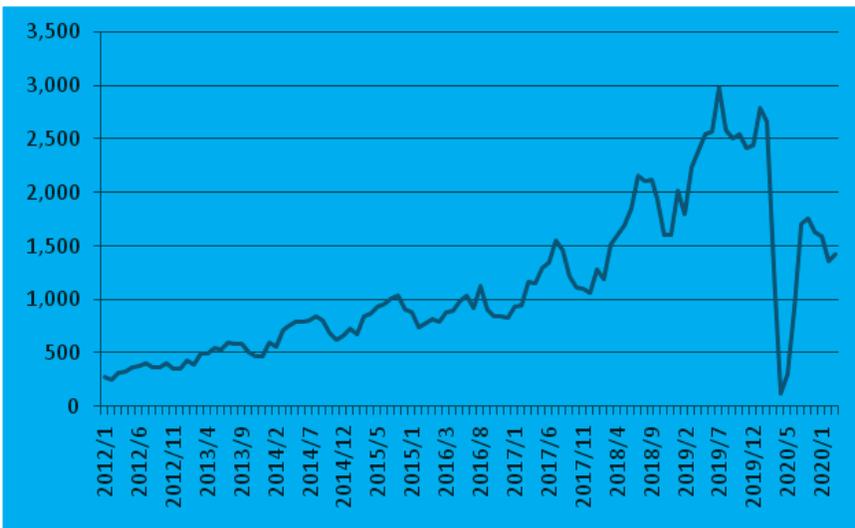
Source: Compiled from Interbank Card Center (BKM) data.

It is a well-known fact that the tourism sector is a sector with seasonal demand fluctuations. As can be seen in Figure 2, these fluctuations show a steadily increasing course until the beginning of 2020, when the pandemic period was

experienced. Considering April 2020, which can be considered as the lowest with an expenditure of 112 million TL, an expenditure loss of 94% was experienced compared to the April data of the previous year (1.822 Million₺). When the annual sectoral loss realized through card expenditures is analyzed in TL basis, for the accommodation sector, it is 8 Billion 908 Million ₺ compared to the previous year. Although it is seen that this situation reversed in the summer when the “new normalization” policy was implemented in the summer, it is observed to decrease again until the end of 2020.

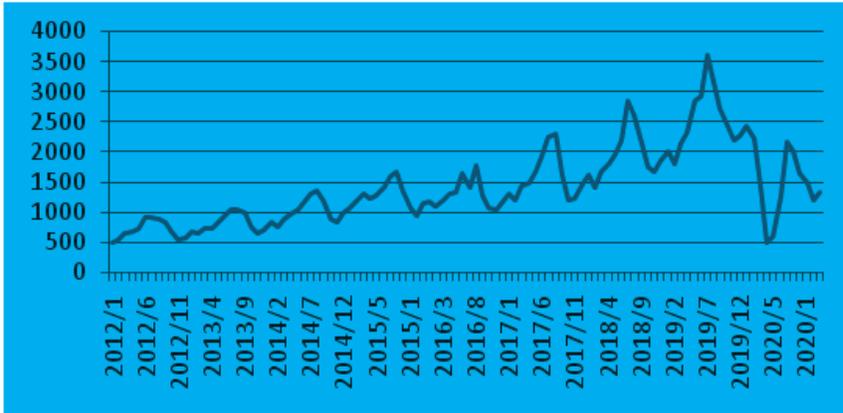
A similar situation is observed in the airline sector. It is seen that airlines’ expenditure amounts, which increased by 33% on average between 2012 and 2019, faced an average of 40% loss in 2020. The annual development course of credit card purchases in the airlines sector is presented in Chart 3.

Graph 3. Airline Industry Expenditures (Million ₺)



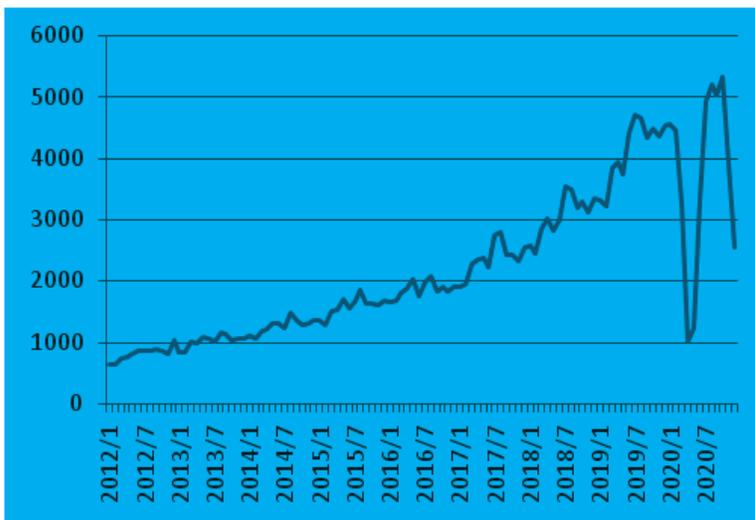
Source: Compiled from Interbank Card Center (BKM) data.

When Graph 3 is examined, in April 2020, when restrictions on countries and intercity travel were experienced, the lowest card expenditure amount was experienced with 115 million₺. This figure is 2 Billion 387 Million₺ in the previous year for the same month. Therefore, it is possible to talk about a serious loss of 200% or even a halt of the sector. Travel and transportation sector, another sector, shows a regular and periodic development in terms of expenditure as in other tourism sectors. The annual development course of credit card purchases in the travel and transportation sector is presented in Graphic 4.

Graph 4. Travel and Transport Sector Expenditures (Million ₺)

Source: Compiled from Interbank Card Center (BKM) data.

Similarly, as in other sectors, the bottom period in the travel and transportation sector is April 2020. However, it is possible to say that a significant recovery was experienced in all sectors in the months after April and the expenditure amounts increased again. The travel and transportation sector has experienced an annual average increase of 20% from 2012 to 2019, and a 40% decrease in card expenditure amounts in 2020. Compared to 2019, the travel and transportation sector has decreased by 12 Billion 190 Million ₺ in 2020.

Graph 5. Food and Beverage Sector Expenditures (Million ₺)

Source: Compiled from Interbank Card Center (BKM) data.

Finally, when the expenditures realized through card payment in the food and beverage sector are analyzed, it is observed that it lost 75% in April 2020 compared to the same month of the previous year. It is observed that card expenditures in the food and beverage sector have increased by an average of 2% per year from 2012 to 2019, with changes according to the seasons. As of 2017, the expenditure amounts, which increased by 3% each year, increased by 7% in 2020. While there was a 70% decrease in the 4th month of 2020, it showed a record increase of 168% in the 6th month. The start of the transition to the normalization period as of June can be shown as the reason for this situation. In general, there was a 5% more increase in card expenditures in 2020 compared to 2019.

5. Conclusion and Recommendations

The tourism sector has a very fragile structure against crises. Political, economic and political crises between countries, as well as internal disturbances and terrorist incidents in countries, national and global financial crises, pandemics and epidemics have always affected the tourism sector to this day. The Covid-19 epidemic, which first appeared in China in 2019 and whose effects are still continuing all over the world, is the biggest crisis for both the world economy and the tourism sector to date.

As the virus started to appear in other parts of the world except China and spread rapidly, countries started to close their border gates and curfews were imposed within the country. In many countries of the world, economic and social life has come to a standstill. Similar restrictions have also been adopted in Turkey as in other countries. In this case, one of the world's leading tourism destinations in Turkey tourism businesses that have been affected and continues to affect in a serious sense. In this study, accommodation businesses operating in Turkey, travel and transport companies, transport enterprises and food businesses made with terms of credit card purchases figures examined, pandemic has attempted to reveal the impact on credit purchases.

When the expenditures belonging to the accommodation sector are examined, there has been a negative decrease of -39% in the expenditures based on the total of debit cards and credit cards from 2019 to 2020. This situation can be explained by the restrictions applied across the country in the months coinciding with the period in which an increase in tourism expenditures is expected. When the annual sectoral loss realized through card expenditures is analyzed in TL basis, for the accommodation sector, it is 8 Billion 908 Million ₺

compared to the previous year. With the world's becoming a common market and the increase in global business travel and touristic travel, airline transportation (Sariođlan & Yabacı, 2018), which has become the most used transportation route, has increased by an average of 33% each year, and has experienced an average of 40% loss in 2020. In April 2020, the lowest card expenditure amount was experienced with 115 million₺ and a serious loss of nearly 200% occurred compared to the same period of the previous year. The research findings coincide with the research findings that Gössling, Scott and Hall (2020) stated that the effects of the epidemic on airline transportation and accommodation businesses were devastating. Also, Foo et al. (2020) pandemic airline and hotel businesses in Malaysia negative impact on the results of the study indicate that, in the airline business hotels in Turkey and is valid.

In the continuation of the research results, it was determined that there was a 40% annual decrease in the travel and transportation sector, and a 10% loss in the food and beverage sector, when the expenditures made through card payments were analyzed. The results of the research are Bahar and İlal (2020), the studies in which the demand shocks caused by the epidemic will lead to employment and income losses in the tourism sector, the studies of Bakar and Rosbi (2020), indicating that the supply-demand balance in the tourism sector is disturbed and Çınar and Özkaya ' (2020), which states that the pandemic creates damages that can be felt for a long time in the economies of the country.

The first of the limitations of this research is that the analysis performed on the sectors is limited to only credit card and debit card expenditures. Cash expenditures were not included in the study. In future studies, the effect of the pandemic on cash purchases can be investigated. Another constraint is that sectoral expenditures are limited only to domestic expenditures. International tourism expenditures can also be researched.

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CHAPTER II

SUPPLIER SELECTION IN FOOD AND BEVERAGE BUSINESSES WITH TOPSIS METHOD

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1. Introduction

Recently, the increase in people's income level (Beauge, 2012) led to such behaviours as eating behaviours for pleasure, the increase in the influence of chain restaurants in the sector, and the ease of investing in the field, have made it very difficult to achieve competitive conditions and customer satisfaction in the restaurant business (Sariođlan & Bostan Sariođlan, 2012; Barber, Goodman & Goh, 2011). Increasing competition conditions have created the need for businesses to provide better service so that they do not lose customers and even attract new customers to the business (Sariođlan & Sezen, 2020; Solmaz & Solmaz, 2019). Restaurant businesses also try to improve their service quality in procurement, preparation and presentation in order to ensure customer satisfaction (Sariođlan et al., 2020; Yılmaz, 2007: 6). The performance of a supplier determined by an enterprise directly affects the service to be offered to customers and their satisfaction (Deveci, 2020; Weber, Current & Benton, 1991). When viewed from this aspect, it is inferred that supplier selection is crucial for a business (Sariođlan, 2017; Porter, 2000).

Nowadays, businesses plan their actions within the scope of strategic management, implement them and evaluate their results (Dinçer, 1991: 34). In these matters, the companies also carry out certain selection activities as a strategic management action. Selection of suppliers (Weber, Current & Benton,

1991: 2) that will provide the raw materials to be used in production is one of these selection activities (Lee & Billington, 1992: 66). That enterprises make an ideal supplier selection ensures that the raw materials can be supplied continuously and constantly, in the desired quantity and quality (Soner & Önüt, 2006). However, choosing the right supplier has become an important problem for businesses (Ghodsypour & Brien, 1998: 199). Businesses that are aware of the importance of supplier selection use various criteria in supplier selection (Vonderemse & Tracey, 1999: 33). From this point of view, it is clear that supplier selection is a multi-criteria decision-making problem (Arıkan & Küçükçe, 2012). Multi-criteria decision making (MCDM) methods are widely used to solve this problem (Özbek, 2016).

2. Conceptual Framework

2.1. Multi Criteria Decision Making (MCDM) Methods

Multi-criteria decision making (MCDM) methods have been a solution that businesses frequently use to make decisions (Ishizaka & Nemery, 2013: 5). In this section, among the methods used in supplier selection (Sarıođlan & Arslan, 2020); analytical hierarchy process, analytical network process, PROMETHEE method, VIKOR method, ELECTRE method, TOPSIS method, decision tree method and data envelopment method are mentioned.

2.1.1. AHP (Analytic Hierarchy Process)

The AHP method developed by Saaty in the 70's (Gençer & Selçuk, 2019: 46). This technique is frequently used in complex problems where there are more than one criteria in terms of quality and quantity (Esen, 2008). AHP method is easy to understand and apply by businesses. With the help of this method, the decision-making problems can be solved by creating main and sub-criteria (Tam & Tummala, 2001).

The process of seeking an answer to a problem within the scope of AHP starts with determining the criteria and their sub-criteria that will solve the problem. At this stage, firstly the desired goal is determined and then the ways that can be used to achieve this goal are decided. Later, possible alternatives to these ways are determined (Saaty, 1980). By forming pairwise comparison matrices, the lower and upper-level elements are compared with each other (Saaty, 2008: 85). In the next phase, normalized matrices are made to give

percentage weight to the criteria. Meanwhile, consistency rates are calculated in order to measure the consistency of the criteria. In the last stage, the weight of the criteria and sub-criteria are determined and the alternative way with the highest value is found and the decision is made (Saaty, 1980).

2.1.2. ANP (*Analitic Networks Process*)

Like the analytic hierarchy process, the analytical network process is also a decision-making process that includes the sub-criteria of more than one quantitative or qualitative criteria (Ömürbek, Üstündağ & Helvacioğlu, 2013). The analytical network process method is one of the most widely used MCDM methods currently (Dağdeviren & Yüksel, 2007/1). ANP, like AHP, is a MCDM method created and developed by Saaty (1980) (Dağdeviren & Yüksel, 2007/1: 101-102). However, ANP's superior side over AHP is that ANP allows determining the interaction between the sets created by the criteria. Two types of interaction occur, namely in-group and out-group interaction. While intra-group interaction expresses the interaction created by the elements in the same set, out-group interaction refers to the interaction between elements in different sets (Meade & Sarkis, 1999: 246). In the ANP method, problems are identified in all aspects and shown in the form of a network. The relationships between complex decisions and their characteristics can be determined by ANP (Dağdeviren, Dönmez & Kurt, 2006: 248).

2.1.3. ELECTRE (*ELimination Et Choix Traduisant la Realite*) Method

The ELECTRE method which was first asserted by Bernard Roy in 1966 and emerged as a result of Bernard Roy's work in 1968 (Roy, 1994: 17), is one of the best methods that can be used by businesses when choosing suppliers (Supçiller & Cross, 2011). In this method, evaluation factors are created and comparisons are made among options. In the ELECTRE method, the decision matrix is formed in the first step. Then, the data in this matrix is standardized and a standard decision matrix is formed. Later, harmony and incompatibility sets are determined, harmony and incompatibility matrices, harmony-incompatibility matrices and total dominance matrices are constructed. Finally, decision points are listed depending on their level of importance (Pang, Zhang & Chen, 2011: 894-900).

2.1.4. PROMETHEE (Preference Ranking Organization Method for Enrichment Evaluation) Method

Developed by Brans in 1982, the PROMETHEE method (Dağdeviren & Eraslan, 2008) is an effective ranking method used in supplier selection (Supçiller & Cross, 2011). As a multi-criteria decision-making method, PROMETHEE (Ömürbek & Şimşek, 2014), enables the determination of partial and base priorities by taking into account the different functions of the options and thus provides the decision-maker to make a detailed analysis. The PROMETHEE method was developed in order to eliminate the difficulties in the implementation phase of other prioritization methods, has become a frequently used method in issues such as procurement, stock management, resource utilization. This method is carried out in 7 steps: forming the data matrix, creating the functions for criteria, constructing the common preference functions, determining the preference indices, determining positive and negative priorities for options, detect partial and base priorities for them (Dağdeviren & Eraslan, 2008: 70).

2.1.5. VIKOR (Vise Kriterijumska Optimizacija I Kompromisno Resenje) Method

The VIKOR method was introduced by Opricovic (1998) and is a multi-criteria decision-making method developed as a result of the studies conducted by Opricovic and Tzeng (2004) (Opricovic & Tzeng, 2007). The method above mentioned allows for ranking and selecting among options. By this mean, it enables the decision-maker to produce compromise solutions to problems (Opricovic & Tzeng, 2007). The main purpose of this method is to find ideal positive and ideal negative solutions to solve a problem. For this method, while the ideal positive solution expresses the highest solution value, the ideal negative solution indicates the opposite situation (Chu et al., 2007).

2.1.6. Decision Tree Method

The decision tree method is a procedure that is frequently used as a data mining technique, used in classification and estimation (Maimon & Rokach, 2010). With this method, categorical variables are classified and estimated more easily and quickly than modelling techniques such as regression analysis and artificial neural networks. This method is aimed to make the most correct decisions by creating a flow chart similar to the tree structure (Yu et al., 2010: 1637).

A decision tree is made up of a root node and internal nodes. At this point, the root node has no input, and each internal node receives an input. Nodes whose output is received as input with another node are named test node and nodes that produces outputs that do not input to another node are called leaf nodes (Maimon & Rokach, 2010). Internal nodes of the decision tree represent tests performed on attributes, branches represent test results and each node class tag represents leaves. (Onan, 2015).

2.1.7. Data Envelopment Analysis

Data envelopment analysis was first used by Charnes, Cooper, and Rhodes in 1978 (Charnes, Cooper & Rhodes, 1978). Charnes et al. Developed this system to evaluate the efficiency of decision-making units that provide similar goods and services (Banker & Thrall, 1992). The data envelopment method differs from other methods in that it enables evaluation even in cases where inputs and outputs are too high. In this method, similar inputs are used to evaluate the effectiveness of decision points responsible for delivering a certain amount of output. In this method, the result obtained by dividing the weighted sums of output by the weighted sum of input is the main efficiency criterion in the analysis (Gökçalp, Soylu & Aş, 2010: 9).

2.1.8. MOORA (Multi Objective Optimization for Ratio Analysis) Method

MOORA, a multi-purpose optimization method first designed by Brauers, is a technique that is used in solving decision problems that occur during production (Brauers, 2004). This method can be easily applied to multi-dimensional decision problems (Ertuğrul & Deniz, 2018: 247). In this respect, it has been used quite frequently in different decision-making problems (Chakraborty, 2011: 1155). The basis of this method is based on ratio analysis. In this context, a lot of preliminary information is classified (Brauers & Zavadskas, 2006). Besides, the MOORA method enables precise and logical decisions to be made by reciting the options in order to solve problems in decision-making (Stanujkic et al., 2012).

The MOORA method starts with the creation of a decision matrix that shows the performance of different options. For the second phase, a certain ratio system is created by comparing the performance of one option with the other options. Numbers with different qualities are standardized by evaluating the numerical performance of the options. The selection is made by ordering these numbers from maximum to minimum performance (Brauers & Zavadskas, 2006; Chakraborty, 2011).

3. Literature Review

When the literature is reviewed, it is seen that the TOPSIS method is used alone or in combination with other methods. Although TOPSIS is widely used in economic fields, it is also used to make decisions in many areas such as the tourism, furniture, food and beverage industries.

Nilashi et al. (2019) In their study called “A Hybrid Method with TOPSIS and Machine Learning Techniques for Sustainable Development of Green Hotels Considering Online Reviews”, they tried to identify the factors affecting customers’ choices of green hotels providing spa services with a hybrid model that also uses multi-criteria decision-making methods. In this study, one of the multi-criteria decision-making methods, TOPSIS was used.

Lupo and Bellomo (2019) tried to develop a new multi-criteria decision-making tool by integrating the DINESERV model with the TOPSIS method in order to evaluate campus restaurant services. As a result of this study that conducted at Palermo University, it has been observed that the method applied effectively reveals the strengths and weaknesses of campus restaurant services.

Kwok (2019), aimed to determine the necessary criteria using the TOPSIS method in order to assist people in choosing a hotel.

Certa et al. (2018) tried to prioritize the risk factors involved in smoked salmon production by making use of the HACCP (Hazard Analysis and Determination of Critical Control Points) system in their study. For this purpose, by using the TOPSIS method, they have found *listeria monocytogenes*, benzopyrene and other polycyclic aromatic hydrocarbons released during the fuming phase to be the most critical dangers for the health of consumers.

Pahari et al. (2018) stated in their study named “An Online Review-Based Hotel Selection Process Using Intuitionistic Fuzzy TOPSIS Method” that websites have a very important effect on customers’ hotel selection. In the study, using the data on the tripadvisor.com website; Hotels are ranked based on location, services, food quality and price. The fuzzy TOPSIS method was used to make this ranking.

Zengin (2017) used one of the multi-criteria decision-making methods, TOPSIS in his study named “TOPSIS Method in Landscape Planning and the Example of Erzurum” which aims to determine the use of sustainable ecological zones. Thereby, the possibility of using the TOPSIS method in landscape planning has been presented. As a result, it has been determined that the utility of the TOPSIS method for landscape planning is quite high.

Tekez and Barker (2016), have tried to determine the effectiveness of the use of the TOPSIS method in the selection of suppliers of a furniture company in Turkey. As a result of the research, it was determined that the TOPSIS method is an effective tool in this regard.

Şimşek, Çatır, and Ömürbek (2015) evaluated five main criteria and twenty sub-criteria to determine the best supplier for six hotel facilities. As a result of this evaluation that used the TOPSIS method, it was concluded that the most important criterion for the selection of suppliers is the price of goods and/or services. Apart from that, respectively; It has been determined that the service quality of the supplier, its reputation in the sector and its logistics facilities are the determining criteria in the selection of the supplier.

Selim et al. (2015) in their study named “A Dynamic Maintenance Planning Framework Based on Fuzzy TOPSIS and FMEA: Application in an International Food Company” organized a machine maintenance planning application to reduce and stabilize maintenance costs in production enterprises. Within the scope of this application, machine maintenance priorities were determined and the Fuzzy TOPSIS method was used for the determination process.

Öztürk et al. (2014) obtained different fruit juice mixtures with various mixtures in their work titled “Physicochemical, functional and sensory properties of mellorine enriched with different vegetable juices and TOPSIS approach to determine optimum juice concentration”. They used the TOPSIS method to determine the best concentration of these mixtures. Red cabbage juice has been found to be the ideal choice in terms of consistency and taste.

4. Method

4.1. *Supplier Selection with TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) Method*

It is called the decision-making process to find the best option among all in accordance with the available data. The decision-maker in the decision-making process often oscillates between multiple and contradictory options. In these cases, Multi-Criteria Decision Making (MCDM) methods are used to find the best option precisely and clearly (Stanujkic et al., 2012). MCDM methods are used in a wide variety of fields such as management, economy, and construction (Brauers et al., 2008: 128).

In the selection of suppliers, the decision-maker has to evaluate more than one criteria impartially and accurately in order to choose the most suitable supplier. To make this the best tools to use are MCDM methods (Çakın, 2013: 339). Also, when deciding on the selection of suppliers, the capabilities, strengths and weaknesses of the options in terms of quality and quantity should be meticulously examined (Tekez & Bark, 2016: 56).

TOPSIS method has also been one of the MCDV approaches that have been used commonly for supplier selection process nowadays (Özçakar & Demir, 2011). TOPSIS method was developed as one of the MCDM by Hwang and Yoon (1981). In this method, options are ranked by determining both the closeness of the options to the ideal solution and the distance to the ideal negative solution. While making a decision, the closest option to the ideal solution is determined and the most beneficial option among the options is chosen (Hwang & Yoon, 1981). In another definition, TOPSIS is defined as choosing the best option by ranking the alternative options from the best to the worst in accordance with the specified criteria depending on the case dealing with (Olson, 2004).

Chakraborty (2011) examined the ideal multi-criteria decision-making methods used in supplier selection and analyzed them by tabulating them. The data related to this study are expressed in **Table 1**.

Table 1: Performance of the Most Appropriate MCDM Methods Used in Supplier Selection

Selection Method	Calculation Time	Difficulty	Mathematical Calculation Density	Stability	Structure of The Outputs
MOORA	Very little	Very simple	Minimum	Well	Quantitative
AHP	Too much	Very hard	Maximum	Poor	Combined
TOPSIS	Medium	Hard	Average	Average	Quantitative
VİKOR	Little	Simple	Average	Average	Quantitative
ELECTRE	Much	Hard	Average	Average	Combined
PROMETHEE	Much	Hard	Average	Average	Combined

Reference: Chakraborty (2011)

As it was stated in **Table 1**, it can be seen that MOORA, AHP, TOPSIS, VIKOR, ELECTRE, PROMETHEE methods are used extensively in supplier selection. However, the MOORA, VIKOR and TOPSIS methods come to the fore when the situations such as calculation time, simplicity, mathematical calculation density, stability and structure of the outputs of these methods are examined. This situation has caused TOPSIS to be widely used for supplier selection.

TOPSIS method is a multi-criteria decision-making method that was developed by Chen and Hwang in 1992, based on the studies conducted by Hwang and Yoon in 1981. The method is based on the principle of obtaining the furthest and the closest results from the options to make a specific choice (Yurdakul & Tansel, 2003: 11). TOPSIS method generally consists of the following stages (Ballı & Körükoğlu, 2009; Certa et al., 2018):

Stage 1: The goals are determined first and the decision matrix is formed. In this context, options are determined in the form of “ a_1, \dots, a_n ” and listed one under the other. For these options, criteria are determined in the form of “ y_{1k}, \dots, y_{nk} ”.

Stage 2: In this stage, the normalized decision matrix is constructed. Thus, the values given over the criteria are normalized and each criterion is evaluated with the same coefficient. In this context, The square root of the sum of the squares of the scores or properties of the criteria is calculated. This process is shown in the formula below.

$$Z_{ij} = \frac{y_{ij}}{\sqrt{\sum_{i=1}^n (y_{ij})^2}} \quad i=1, \dots, n; j=1, \dots, k$$

Stage 3: At this stage, the elements in the normalized decision matrix are weighted under the personal opinions of the decision-maker and a weighted standard decision matrix is constructed.

$$X_{ij} = w_j \cdot z_{ij} \quad i = 1, \dots, n; j = 1, \dots, k$$

(w_j weight of each j . criterion)

Stage 4: Ideal V^+ and ideal V^- points are defined. In this way, by determining the maximum and minimum values shown by each column, ideal positive and ideal negative solutions are determined.

$$m^* = [x_1^*, x_2^*, \dots, x_k^*] \text{ (maximum values)}$$

$$m^- = [x_1^-, x_2^-, \dots, x_n^-] \text{ (minimum values)}$$

Stage 5: After the ideal points are defined, the distance between the options is calculated. In this regard, initially, the distance to the maximum ideal point is found.

$$S_i^* = \sqrt{\sum_{j=1}^k (x_{ij} - x_j^*)^2} \quad i=1, \dots, n$$

Stage 6: At this stage, a formula similar to the distance to the maximum ideal point formula is used to determine the distance to the minimum ideal point.

$$S_i^- = \sqrt{\sum_{j=1}^k (x_{ij} - x_j^-)^2} \quad i=1, \dots, n$$

Stage 7: In the last stage, the scoring and ranking of the options are clarified and their relative proximity to the ideal solution is calculated.

$$C_i^* = \frac{S_i^-}{S_i^- + S_i^*} \quad 0 \leq C_i^* \leq 1 \quad i=1, \dots, n$$

In this study, the most suitable suppliers for a food and beverage establishment were tried to be selected by following the above-mentioned stages.

4.2. Selection of Food and Beverage Business Suppliers with TOPSIS

Method

4.2.1. Purpose and Scope

In this study, it was aimed to determine the usability of the TOPSIS method for the supplier selection process in the food and beverage industry. This study is also important in terms of establishing a system of criteria based on numerical data in the supplier selection carried out by food and beverage facilities. In this context, this research was conducted in a restaurant located in the Malazgirt district of Muş city. The inputs to be used in selecting suppliers with the TOPSIS method were obtained by interviews had with the business owner. Alternative suppliers were chosen in accordance with the opinions of the business owner. The restaurant’s menu contains many items such as soups, main courses, appetizers,

desserts, soft drinks, oven dishes, stove dishes, pizzas. Therefore, in line with the opinions of the business owner, separate suppliers were selected in the fields of “Grocery Supplier, Butcher Products Supplier, Greengrocer Products Supplier and Frozen Food Supplier”. Therefore, supplier selection for each group is handled under separate headings. The decision-maker business owner has chosen three alternative suppliers for each supplier group. The names of these suppliers were coded and included in the study. In addition, the decision-maker has determined separate criteria for each supply group and weighed these criteria according to their importance. Their total weighting coefficient is equalized to 1.

The limitation of the study is that the research was conducted on a single enterprise due to the COVID-19 pandemic. Due to this reason; duration, time and travel restrictions caused the research not to be conducted on a larger number of businesses.

4.2.2. Selection of Butcher Products Supplier With TOPSIS Method

In order to determine the best butcher products supplier for the business, the criteria that the business owner deems important about butcher products and which butchers will be selected based on these criteria have been determined. The weights were given to the criteria according to their priority in the way the sum of them will be equal to 1.

Table 2: Scoring Butcher Supplier Alternatives, Criteria and Criteria Weights

	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
Competence	0.34	0.28	0.17	0.14	0.7
Criteria	Cost	Quality	Hygiene	Qualified Staff	Storage
Butcher 1	3	5	4	5	5
Butcher 2	4	4	2	3	4
Butcher 3	5	3	1	2	2

Then, in accordance with the criteria in the table created, butcher products suppliers were scored. The owner has rated the suppliers between 1 and 5 according to their competence in these criteria. In this context, for corresponding criteria, while scoring close to 1 indicates an inadequate situation, scoring close to 5 indicates a positive situation.

Table 3: Normalized Decision Matrix for Butcher Suppliers

	Cost	Quality	Hygiene	Qualified Staff	Storage
Butcher 1	0,424264	0,707107	0,872872	0,811107106	0,745356
Butcher 2	0,565685	0,565685	0,436436	0,486664263	0,5962848
Butcher 3	0,707107	0,424264	0,218218	0,324442842	0,2981424

These scores were then normalized. The normalized version of these values is shown in **Table 3**.

Table 4: Weighted Values of Butcher Suppliers According to Criteria

	Cost	Quality	Hygiene	Qualified Staff	Storage
Butcher 1	0,148492	0,19799	0,148388	0,113554995	0,5217492
Butcher 2	0,19799	0,158392	0,074194	0,068132997	0,4173994
Butcher 3	0,247487	0,118794	0,037097	0,045421998	0,2086997

Then the obtained normalized values were arranged according to the weights given to the criteria by the decision-maker. The data regarding to this situation are given in **Table 4**.

Table 5: Ideal Negative and Positive Values
Regarding the Criteria of Butcher Suppliers

	Cost	Quality	Hygiene	Qualified Staff	Storage
V+	0,247487	0,19799	0,148388	0,113554995	0,5217492
V-	0,148492	0,118794	0,037097	0,045421998	0,2086997

After creating the weighted scores of alternative butcher products suppliers for each criterion, the ideal positive and ideal negative solution of each criterion was determined, as shown in **Table 5** below.

Table 6: The Most Ideal Butcher Supplier

	Si+	Si-	Pi	Sort
Butcher 1	0,09899	0,34828	0,77867	1
Butcher 2	0,14992	0,22241	0,59735	2
Butcher 3	0,34828	0,09899	0,22133	3

After determining the ideal positive and ideal negative solutions, in line with these values, the distance of alternative suppliers to the maximum ideal and

minimum ideal point was determined. As stated in **Table 6**, at the last stage of the calculation, the closeness of the butcher product suppliers to the ideal solution was determined and suppliers listed from the closest to the furthest solution. As a result of these calculations, it was concluded that “Butcher 1” would be the most suitable option for the restaurant business being studying on.

4.2.3. Selection of Grocery Product Supplier With TOPSIS Method

Firstly, in order to choose the most suitable grocery product supplier, the decision-maker determined which criteria are important in this field and which suppliers to choose among all.

Table 7: Scoring Grocery Product Supplier Alternatives, Criteria and Criteria Weights

	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
Competence	0.34	0.28	0.17	0.10	0.11
Criteria	Cost	Quality/ Brand	Packing	Product Variety	Storage
Grocery 1	3	4	3	3	4
Grocery 2	5	5	5	5	5
Grocery 3	4	3	3	3	4

The decision-maker then scored the grocery product suppliers between 1 and 5. While scoring close to 1 indicates an inadequate situation, scoring close to 5 indicates a positive situation for the particular criterion. In addition, as shown in **Table 7**, the weights were given to the criteria according to their priority by the decision-maker in the way the sum of them will be equal to 1.

Table 8: Normalized Decision Matrix for Grocery Product Suppliers

	Cost	Quality/ Brand	Packing	Product Variety	Storage
Grocery 1	0,424264	0,565685425	0,457496	0,457495711	0,5298129
Grocery 2	0,707107	0,707106781	0,762493	0,762492852	0,6622662
Grocery 3	0,565685	0,424264069	0,457496	0,457495711	0,5298129

Then, according to these scores, the values were normalized as shown in **Table 8**.

Table 9: Weighted Values of Grocery Product Suppliers According to Criteria

	Cost	Quality/ Brand	Packing	Product Variety	Storage
Grocery 1	0,148492	0,158391919	0,077774	0,0640494	0,3708691
Grocery 2	0,247487	0,197989899	0,129624	0,106748999	0,4635863
Grocery 3	0,19799	0,118793939	0,077774	0,0640494	0,3708691

Normalized values are arranged in **Table 9** according to the weights shown in **Table 7**.

Table 10: Ideal Negative and Positive Values
Regarding the Criteria of Grocery Product Suppliers

	Cost	Quality/ Brand	Packing	Product Variety	Storage
V+	0,247487	0,197989899	0,129624	0,106748999	0,4635863
V-	0,148492	0,118793939	0,077774	0,0640494	0,3708691

The weighted values of the grocery product suppliers according to the criteria are shown in Table 10 to indicate the ideal and negative solution value.

Table 11: The Most Ideal Grocery Product Supplier

	Si+	Si-	Pi	Sort
Grocery 1	0,15645	0,0396	0,20198	3
Grocery 2	0	0,17082	1	1
Grocery 3	0,14775	0,0495	0,25094	2

As it can be seen in **Table 11**, the closeness of the grocery product suppliers to the ideal positive and ideal negative solution was determined, and in line with these data, the highest ideal value among the options was calculated. By these results, which supplier to choose decided by listing the grocery product suppliers. In this context, it has been concluded that by taking full points in all criteria set by decision-maker, therefore, being on “0” distance to the ideal positive solution the grocery product supplier named “Grocery 2” found to be the most suitable option.

4.2.4. Selection of Greengrocery Products Supplier With TOPSIS Method

In this section, the stages of the decision-maker to select the greengrocery product supplier are examined. In this context, the decision-maker has determined 3 options of greengrocers and determined certain criteria to make the right choice among them.

Table 12: Scoring Greengrocery Product Supplier Alternatives, Criteria and Criteria Weights

	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
Competence	0.29	0.24	0.21	0.18	0.8
Criteria	Cost	Quality	Hygiene	Shipping	Storage
Greengrocery 1	4	3	3	3	3
Greengrocery 2	3	4	5	4	4
Greengrocery 3	5	3	3	2	5

The weights were given to the criteria according to their priority by the decision-maker in the way the sum of them will be equal to 1. The decision-maker then scored the greengrocer products supplier between 1 and 5. In this context, while scoring close to 1 indicates an insufficient situation, scoring close to 5 indicates a favourable situation for the particular criterion.

Table 13: Normalized Decision Matrix for Greengrocery Product Suppliers

	Cost	Quality	Hygiene	Shipping	Storage
Greengrocery 1	0,56569	0,5145	0,4575	0,55709	0,4242641
Greengrocery 2	0,42426	0,68599	0,76249	0,74278	0,5656854
Greengrocery 3	0,70711	0,5145	0,4575	0,37139	0,7071068

After scoring the grocery options according to the criteria, these scores were normalized. The data regarding the calculation in question are given in **Table 13**.

Table 14: Weighted Values of Greengrocery
Product Suppliers According to Criteria

	Cost	Quality	Hygiene	Shipping	Storage
Greengrocery 1	0,19799	0,14406	0,07777	0,07799	0,2969848
Greengrocery 2	0,14849	0,19208	0,12962	0,10399	0,3959798
Greengrocery 3	0,24749	0,14406	0,07777	0,05199	0,4949747

Normalized data were rearranged according to previously determined weights. The arranged data are shown in **Table 14**.

Table 15: Ideal Negative and Positive Values
Regarding the Criteria of Greengrocery Product Suppliers

	Cost	Quality	Hygiene	Shipping	Storage
V+	0,24749	0,19208	0,12962	0,10399	0,4949747
V-	0,14849	0,14406	0,07777	0,05199	0,2969848

After creating the weighted scores the ideal positive and ideal negative solution of each criterion is shown in **Table 15** below.

Table 16: The Most Ideal Greengrocery Product Supplier

	Si+	Si-	Pi	Sort
Greengrocery 1	0,21753	0,05591	0,20447	3
Greengrocery 2	0,14	0,13228	0,48582	2
Greengrocery 3	0,08774	0,22136	0,71615	1

After determining the proximity of greengrocer businesses to ideal positive and ideal negative solutions, the distance of alternative suppliers to the maximum ideal point and the minimum ideal point according to certain criteria was determined according to these values. Finally, the suppliers of grocery products are listed as shown in **Table 16**, starting with the one that is closest to the ideal solution and scoring respectively. As a result of the calculations made, the supplier named “Greengrocery 3” has become the most ideal supplier in terms of supplying greengrocer products.

4.2.5. Selection of Frozen Food Products Supplier With TOPSIS Method

In this part, 3 frozen food suppliers have been analyzed using the TOPSIS method in order to select the choose ideal supplier of frozen products such as frozen potatoes and chicken. In this context, the criteria suppliers need to meet are stated in **Table 17**.

Table 17: Scoring Frozen Food Product Supplier Alternatives, Criteria and Criteria Weights

	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial
Competence	0.34	0.24	0.22	0.12	0.8
Criteria	Cost	Cold Chain (Procurement, Availability etc.)	Quality	Packaging	Variation
Frozen Food 1	5	2	4	5	3
Frozen Food 2	4	3	3	4	4
Frozen Food 3	3	4	4	5	4

The weights were given to the criteria according to their priority by the decision maker in the way the sum of them will be equal to 1. Later, in line with these criteria, frozen food supplier businesses were scored between 1 and 5 by the decision maker according to their ability of meeting the criteria. In this context, a value close to 1 indicates an inadequacy in terms of the corresponding criterion, while a value close to 5 indicates that the supplier is capable for that criterion.

Table 18: Normalized Decision Matrix for Frozen Food Product Suppliers

	Cost	Cold Chain (Procurement, Availability etc.)	Quality	Packaging	Variation
Frozen Food 1	0,707107	0,371390676	0,624695048	0,615457455	0,4685213
Frozen Food 2	0,565685	0,557086015	0,468521286	0,492365964	0,624695
Frozen Food 3	0,424264	0,742781353	0,624695048	0,615457455	0,624695

After scoring, these ratings are normalized in **Table 18**.

Table 19: Weighted Values of Frozen Food Product Suppliers According to Criteria

	Cost	Cold Chain (Procurement, Availability etc.)	Quality	Packaging
Frozen Food 1	0,247487	0,103989389	0,106198158	0,086164044
Frozen Food 2	0,19799	0,155984084	0,079648619	0,068931235
Frozen Food 3	0,148492	0,207978779	0,106198158	0,086164044

Normalized data are rearranged according to their weight points given to the criteria and shown in **Table 19**.

Table 20: Ideal Negative and Positive Values Regarding the Criteria of Frozen Food Product Suppliers

	Cost	Cold Chain (Procurement, Availability etc.)	Quality	Packaging	Variation
V+	0,247487	0,207978779	0,106198158	0,086164044	0,4372865
V-	0,148492	0,103989389	0,079648619	0,068931235	0,3279649

After the weighted value calculations are made, the ideal positive and ideal negative solution values of the criteria are given in **Table 20**.

Table 21: The Most Ideal Frozen Food Product Supplier

	Si+	Si-	Pi	Sort
Frozen Food 1	0,15088	0,10393	0,40788	3
Frozen Food 2	0,07846	0,13078	0,62505	1
Frozen Food 3	0,09899	0,15417	0,60896	2

In the last stage of the decision-making process, the closeness of the supplier options to the ideal negative and positive solution was determined and the ideal

solution values were found. Accordingly, the ideal frozen food supplier has been determined by ranking the options by their scores. After calculations made, “Frozen Food 2” found to be the most suitable supplier in this field.

5. Conclusion and Suggestions

When the literature is reviewed and the statements of the food and beverage operator interviewed in the study are taken into account, it is understood that the main condition of the profitability and customer satisfaction of a food and beverage establishment is to work with a good supplier. Accordingly, food and beverage businesses should pay attention to supplier selection in order to offer the products on the menu to their customers in the best possible way. Considering the variability in the sector and the expectations of the customers, this choice should be made with multi-criteria decision-making techniques based on numerical calculations, without leaving it to chance.

TOPSIS method, which is one of the multi-criteria decision-making techniques, is used to solve decision problems in many sectors. In this study, the TOPSIS method was used in the supplier selection of a food and beverage business. In this context, suppliers of “butcher products”, “greengrocer products”, “frozen food products” and “grocery products” were evaluated separately. Separate criteria were determined for all supplier groups in accordance with the opinions of the decision-maker, and by using the TOPSIS method one of the suppliers was chosen among 3 for each group.

According to the opinions of the decision-maker, it has been determined that the most important preference criterion for all supplier groups is the “price” offered by the suppliers to the food and beverage business. The quality of the suppliers’ products has been the second most important decision criterion for the decision-maker after the price. Apart from these, it has been seen that the other factors that the business owner generally takes into consideration when making a choice are hygiene standards and the logistics adequacy of suppliers.

In the study, three options were picked to choose the most proper butcher supplier for the decision-maker. These supplier options were listed in order of importance by TOPSIS method, respectively taking into account the criteria of “price”, “quality”, hygiene, “qualified personnel” and “storage”. As a result of the ranking, it was concluded that the supplier named “Butcher 1” is the best supplier in its group.

In order to choose the ideal grocery products supplier, three of them have been picked. These suppliers have been evaluated using respectively “price”, “quality/brand”, “packaging”, “product diversity” and “storage” criteria according to their importance. In this context, the supplier named “Grocery 2” has been found as the ideal option

To choose the ideal greengrocer products supplier, three of them have been picked. These suppliers have been evaluated using respectively “price”, “quality/brand”, “packaging”, “product diversity” and “storage” criteria according to their importance. In this context, the supplier named “Greengrocery 3” has been found as the ideal option

In the last part of the supplier selection, it has been tried to determine the best frozen food supplier for the business. For this reason, three suppliers determined and they have been evaluated using respectively “price”, “cold chain (Supply, Availability, etc.)”, “quality”, “packaging” and “diversity criteria. As a result of this evaluation, it was concluded that supplier “Frozen Food 2” is the most suitable frozen food for the food and beverage business.

When all these results are taken into account, it is understood that the TOPSIS approach is an ideal decision-making method that enables food and beverage businesses to make both useful and accurate decisions to select suppliers. However, this study was conducted during the COVID-19 pandemic. This situation has obliged this work to be done with only one business. Therefore, it will be better in terms of generalizability of the results to be carried out with more than one food and beverage establishment in future studies. Besides, in order to see the benefit of the TOPSIS method in the selection of suppliers, it will be useful to follow the previous and next situations of the food and beverage business with various analyzes.

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CHAPTER III

REFLECTIONS OF COVID-19 PANDEMIC PROCESS ON TOURISM STUDIES

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1. Introduction

The tourism sector is a developed sector to meet the needs of people based on temporary movements. Accommodation to meet these needs (Korinth & Ranasinghe, 2020; Lai & Wong, 2020; Wang et al., 2021), transportation (Estrada et al., 2020; Hossain, 2021; Piccinelli et al., 2020), food & beverage (Maliszewska et al., 2020; Bucak & Yiğit, 2021) and is a sector that serves in many areas and is adversely affected by events such as pandemic. However, at the end of 2019, “Covid-19”, a disease that can be fatal and incurable, spread rapidly all over the world due to the movement of people. Its effects are still visible, and therefore people have temporarily stopped moving. This situation directly affected the tourism sector negatively.

This pandemic process, which is called the coronavirus or Covid-19 of the tourism sector and affects the mobility of people due to its spread around the world, is being studied by many scholars (Iacus et al., 2020; Anguera-Torrell et al., 2020; Cai et al., 2021. ; Kim et al., 2021). In other words, as the mobility of people has come to a standstill, the situation of the actors serving in the tourism sector has beginning to be examined simultaneously by academicians.

It is important that academic studies in the tourism sector and the field of tourism proceed in parallel with each other. Only in this way, tourism sector actors can access more in-depth information about the general situation of the tourism sector, adapt themselves, or develop a new vision.

Ensuring that the tourism sector survives this pandemic process with less damage is related to the work of academicians in the field of tourism. In this sense, a holistic perspective by examining the titles and keywords of the

researches of tourism academics since the pandemic process is necessary and important at this point. This study was carried out in order to reveal the most frequently used concepts and hidden situations that need to be investigated by evaluating academic studies in the field of tourism.

2. Literature Review

Coronavirus or Covid- 19 is a disease that causes respiratory illness with symptoms such as cough, fever and, in more severe cases, difficulty breathing and even death. To stop the spread of this disease, many countries are implementing a lockout procedure to break the chain of infection for this new disease (Bakar & Rosbi, 2020). With this disease affecting the general population of the world, the tourism sector is heavily affected by the pandemic due to international travel bans and severe restrictions on meetings and community mobility (Gössling et al., 2021). In other words, the population's mobility is blocked due to the highly contagious coronavirus. This situation seriously has harmed the tourism sector. Coronavirus or Covid-19 or Pandemic are raised serious questions about the survival of the industry today and in the future (Kaushal & Srivastava, 2021).

With this disease, tourism scholars turn their attention to tourists (Qui et al., 2020) and investigate issues that such as tourist satisfaction (Hong et al., 2020), tourist psyche (Kock et al., 2020), sentiment (Flores-Ruiz et al., 2021) or anxiety (Zenker et al., 2021), tourist behavior (Wen et al., 2021; Sánchez-Pérez et al., 2021), future tourist behavior (Wachyuni & Kusumaningrum, 2020), the choice of tourist journeys (Roman et al., 2020), tourist travel risk (Nazneen et al., 2020), tourist well- being (Yang & Wong, 2021), tourist loyalty (Cai et al., 2021).

Another issue that attracts the attention of tourism scholars on the pandemic process is the tourism industry. Such as impact of Covid-19 on travel and tourism industry (Rutynskyi & Kushniruk, 2020; Škare et al., 2021), economic impact (Barua, 2020) within the scope of GDP and Trade (Maliszewska et al., 2020). Finally, in the pandemic process tourism scholars have investigated the other issues on tourism. Perceived risk and booking intention (Pham Minh & Ngoc Mai, 2021), robotics adoption for tourism sector (Zenh et al., 2020), cruise tourism (Renaud, 2020), sustainable tourism (Chang et al., 2020).

3. Methodology

Covid- 19 has changed the situation about the tourism sector so have changed academic research about tourism. This situation is important because the tourism

sector and academic studies in the field of tourism are parallel to each other. If we are understanding academic studies about tourism, we are understanding the tourism sector and we can look at the tourism sector in a holistic way. Because of reason, this research has focused on academic research about tourism and has used qualitative research methods.

Academic studies about tourism were collected from the online library that in Usak University, Turkey (<https://kutuphane.usak.edu.tr/>). Using the keywords “Covid- 19 and tourism” a total of 413 academic studies were retrieved from 06 March 2021 to 04 April 2021.

A content analysis approach was used for data analyze. Firstly, these academic studies about tourism and Covid-19 have collected both titles and keywords. Separately two table have established for titles and keywords. After having removed the punctuation marks and numbers for two tables; a) Titles Table was generated 3394 words, b) Keywords Table was generated 3363 words. A word cloud has been created through the Word Clouds website for “Title and Keywords”.

4. Findings

4.1. Word cloud about titles

Word cloud about titles on tourism academic research studies were made through the Word Clouds website. Titles about word cloud on tourism academic research studies were illustrated Figure 1.

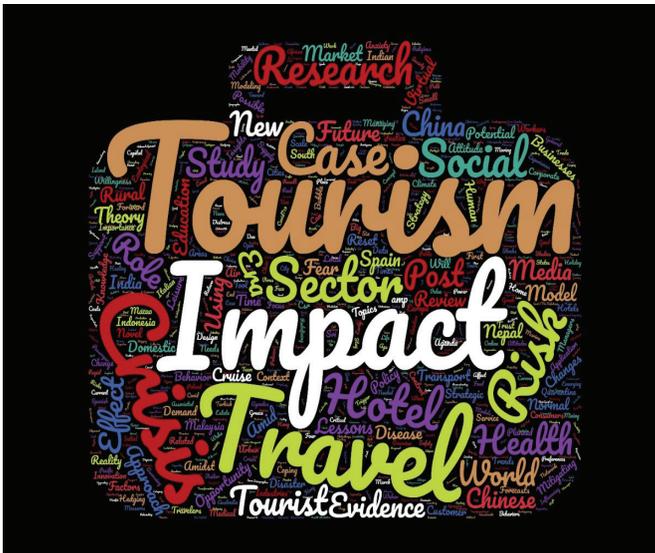


Figure 1. Titles about word cloud on tourism academic research studies

content analysis was conducted for the titles and keywords of academic studies in the field of tourism. The most basic finding of the study is that the Covid-19 pandemic situation is reflected in tourism academic studies in terms of both titles and keywords.

When the tourism academic studies conducted during the Covid-19 pandemic process are examined in terms of titles; a) the effects of the pandemic process, b) the effects of the pandemic process on the travel and hospitality industry, c) the management of the crisis situation arising during the pandemic process, d) and studies on how to save the tourism sector have intensified.

When the tourism academic studies conducted during the Covid-19 pandemic process are examined in terms of keywords; a) how the travel situation is affected during the pandemic process, b) how this crisis situation should be managed, c) the risk situation of the industry affected by the coronavirus, d) the managerial approaches in the pandemic process, e) the risk situation of the tourism sector, f) how it affects social life It is seen that the studies are concentrated in order to express.

5.1. Limitations and future studies

Using a single address to collect data in this study can be considered a limitation of the study. However, this constraint may be an opportunity for future studies. As a result, researchers can make a more detailed examination by expanding the data collection network. On the other hand, academic studies in the field of tourism can be examined using different methods.

It has been observed that there are few studies on some important situations within the scope of the study. For example; Contribution to literature can be made by investigating such as the effects of sustainability, economy, behavior, marketing, strategy on the tourism sector during the pandemic process. In this way, they can contribute to the sector in terms of ensuring the sustainability of businesses in the tourism sector, revealing negative economic effects, and developing marketing strategies by detecting tourist behavior.

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CHAPTER IV

ANATOLIAN FAIRS (PANAYIRS) IN THE OTTOMAN PERIOD: THEIR DISTRIBUTION AND MAIN CHARACTERISTICS

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1. Introduction

The history of trade and shopping, which have profoundly affected economies, societies and cultures throughout history, is very colorful. Probably one of the most interesting examples regarding the history of trade is fairs, which used to gather buyers and sellers from various backgrounds for trade purposes at certain times of the year. Examples of fairs that occasionally made their way into international arena thanks to their effective functions are found in a variety of nations and cultures throughout history.

The term fair (*panayır*) in Turkish is etymologically similar to ‘panêgyris’, a Greek word that refers to periodic markets in the Greco-Roman world. Such markets regularly organized along with religious festivals were called panêgyris (Ful, 1988: 44). *Panayır* was derived from the word ‘panêgyris’, meaning ‘holy day, ritual, festival’ in Greek and includes periodically-organized major markets where merchants from distant countries used to gather. It is known that markets preliminary to panayırs were established during religious holidays in the Mesopotamia Valley, Syria, Palestine and Arabia in the B.C. period; even the

Phoenicians with their colonies in the Western Mediterranean participated in the commercial relations at these panayırs (Akarpınar, 2004:27). Similarly, panayırs were organized in Ancient Greece and Rome to exhibit the goods produced by the people and to promote trade (Erdoğan Kaçan, 2016:124). Over time, the expansion of cities and economic movements entailed trade with distant places; thus, panayırs, which have survived today, allowed for the production, marketing, sales connections of various goods.

Fairs had their golden age in medieval Europe. One of the first fairs in this regard is the one held in 957 in Portus near Bruges, which was a major commercial city north of the Alps (Benevolo, 2006: 65). Towards the end of the twelfth century and in the thirteenth century, a major commercial event witnessed the development of the European character of the trade revolution: the Champagne fairs. The Champagne fairs were held in the towns of Lagny, Barsur Aube, Provins and Troyes one after another throughout the year (Goff, 2008:134). The Champagne fairs were available all year long because they were successively held. Merchants used to move from one fair to another, bringing their goods with them. Seasonal fairs in England, France, Belgium, Germany and Italy represented a step towards permanent and regular trade (Huberman, 2013:33). The subsequent changes and developments slowly eradicated these well-established fairs, which paved the way for the birth of modern ‘exhibitions’ and ‘expo fairs’ in Europe and the United States. A new era featuring international exhibitions and fairs began in the world. Yet, despite all the changes and transformations on a global scale, ‘commodity and animal fairs’ in many countries of the world dominated by rural economy and social life have preserved their traditional nature due to variety of functions and cultural harmony and survived today as long-lasting trade and entertainment organizations.

Examples of fairs that became widespread in Europe in the Middle Ages were found in the Seljuks and later in the Ottoman lands. In the process of Turkification of Anatolia, large bazaars and fairs (panayırs) were established in addition to caravansaries and inns built in Anatolia due to increased international trade volume during the Seljuk period (Erdoğan Kaçan, 2016:124). In the thirteenth century, panayırs large enough to be international attracted attention in the Seljuk country in Anatolia, standing at an important crossroad of ancient trade routes connecting Asia and Europe. These large panayırs, where merchants from all over the world met, were called ‘Yabanlu’ in Anatolia (Sümer, 1985:16;

Satoğlu, 2002:463). International panayırs such as Yabanlu Bazaar (today's Pazarören, Kayseri) and Ziyaret Bazaar (today's Osmanpaşa, Yozgat) were organized back then (Sümer, 1985:16; Özcan 2006: 209-210; Şahin, 2014:11-14). Among other panayırs held in the Seljuk period, there were Karahöyük Bazaar and İskîyân/İskoyân Bazaar located on the trade route in the Roman period between Tunguzlu and Konya in the Byzantine-Seljuk border region, Alâmeddin Bazaar near Konya Ladik, Dunaysar Bazaar in Mardin, Âzîne/Cuma Bazaar in Amasya, Pınar Market in Isparta Eğirdir, Yılğün Bazaar in Konya Ilgın, Boyabat Bazaar in Sinop, Ayvas Bazaar in Tokat and Yapraklı Bazaar in Çankırı (Özcan, 2006: 209-212).

There is no information on the existence of panayırs in the early periods of the Ottoman Empire. However, while the first examples of panayırs of the Ottoman Empire in Rumelia and the Balkans date back to the Middle Ages, panayırs were already available in Anatolia in the mid- sixteenth century. The earliest panayırs in the Ottoman Empire were mostly found in Rumelia and the Balkans, which are not a territory of today's Turkey. The earliest one among panayırs is known to be the Piriştine (Kosovo) panayır, which was bi-annually held since the conquest of Prishtina (1448)¹.

It seems reasonable to assume that the Ottomans embraced and popularized these examples of panayırs, which they encountered in Anatolia, in Rumelia and in the Balkans by recognizing the importance of their commercial and economic functions. Indeed, there were a few panayırs in Anatolia until the nineteenth century. In fact, not a single panayır was organized in most regions (Özkaya, 2010:74). Evliya Çelebi, a prominent seventeenth century Ottoman explorer, mentioned a total of twenty five panayırs in his book *Seyahatnâme* (Book of Travels) and only three of them were in Anatolia; more specifically, they were organized in Silivri, Apolyont and Lüleburgaz. The earliest few examples of panayırs in the Ottoman period date back to the sixteenth century: Lüleburgaz (Matschke, 2011:115), Avdancık²; Seyidgazi, Nazilli and Alaşehir (Faroqhi, 2006,164-165). The number of panayırs significantly increased in the eighteenth century and became widespread in many parts of Anatolia after the first years of

¹ BOA, AE.SABH.I., 64/4467, 1782.

² The Registry Book of the Hüdavendigâr Vilayet reported the following information on the Avdancık Village: "Karye-i Avdancık ki Beğlü derler...ve panayır dururmuş, fi sene." (It is called the Village of Avdancık or Beğlü... and there was a panayır since time immemorial." This means that a panayır has been long held in the Avdancık Village. The Avdancık Village still exists in the district of Osmangazi, in the province of Bursa.

the nineteenth century. A considerable body of literature among the studies on panayırs or publications offering various information on panayırs in Turkey has focused on various historical periods in the Pre-Republican period. Anatolian panayırs in the Seljuk period as well as the Balkans and Rumelia panayırs and Anatolian panayırs in the Ottoman period are among the panayırs addressed in the relevant literature (Kayaođlu, 1981; Sümer, 1985; Kúpeli, 1999; Ően, 1996; Erdođru, 1994; Erdođru, 1996; Erdođru, 1999; Farođhi, 2000; Özcan, 2006; Dođru Kozlubl, 2011; Ülgen, 2012; Erdođan Kaçan, 2016; Ünal, 2016; ÇalıŐkan and Sönmez, 2018a; ÇalıŐkan and Sönmez 2018b).

2. Purpose and Method

This study seeks to determine the periodic and spatial distribution of the panayırs held in Anatolia during the rule of the Ottoman Empire and to discuss their main characteristics notable in archival documents and reference sources. The main data of the study are based on the documents in the Turkish Presidency State Archives of the Republic of Turkey, Department of Ottoman Archives (BOA) and the Devlet Salnames (State Yearbooks). Firstly, the archival documents which mentioned a panayır, either directly or indirectly, were chronologically listed. In addition to these documents, the information presented by numerous researchers on the Anatolian panayırs of the Ottoman period were included to the literature review in this study. A map was designed to show the spatial and temporal distributions of the Anatolia panayırs between the sixteenth century and the early twentieth century based on the date of the earliest document on the panayırs. The information available in the BOA as well as in the literature were compiled to develop an inventory of the Anatolia panayırs in the Ottoman period.

The information obtained through the review of the BOA are presented in the table. The table includes either the information in the BOA document available for each panayır as the reference source or the references previously mentioned by the researchers regarding the panayır concerned. It clearly shows the periodic distribution of the panayırs on the map based on the date of the earliest document on the panayırs in Rumelia and the Balkans in the Ottoman country. Remarkably, some of these panayırs survived for a long time and even in the following centuries.

The research area covers the area within the borders of the Republic of Turkey. Most of the Turkey's land (97%) is located in Asia. Since the First Turkish Geography Congress (1941), Turkey's land in Asia has been called "Anatolia."

A small part (3%) of its area is in the European Continent. That is, the research area covers both Anatolia and the Eastern Thrace region, which encompasses the European part of Istanbul. Thus, we considered it appropriate to include the word “Anatolia” to the title of the research, as this word traditionally represents a geographical location. This study drew on two separate maps covering the research area. The first of these maps outlines the Anatolian highways in the Ottoman period, allowing us to identify the connections of the settlements, where panayır were held, with the road system. The second map shows the locations of the panayır identified in this study and listed in a table. These maps clearly demonstrate the periodic distribution of the panayır recorded in the archival documents based on the earliest date they were held.

Similar examples of ‘fairs’ (panayır), which are the mere focus of this study, are called ‘county fair’ or ‘rural/village fair.’ These events are called ‘commodity and livestock panayır’ or simply ‘panayır’ in the Ottoman period and today’s Turkey as well. Therefore, the term ‘panayır’ is used in this study on the Ottoman Period to refer these events.

3. Some determinations about some main characteristics of Anatolian fairs in the Ottoman period:

3.1. Considerations Taken in Organizing Panayır

Foremost among the motivations of organizing a new panayır in the Ottoman Empire were the development of trade and the requests of the regional merchants and their community. Indeed, the letter sent from the Hüdavendigâr Vilayet to Istanbul regarding the organization of a panayır in Bursa emphasized that merchants and their community had a hard time as no panayır was held despite a large number of people from various regions visiting Bursa during the spring and autumn seasons and that it would be reasonable to organize a panayır named Teşrifîye for fifteen days in September, when the crops were thriving.³ A similar request was made for Maraş and Eskişehir panayır as well. The requests for organizing a panayır in the area called Küçükgöl in Maraş for seven days between June 1st and 8th with the belief that it would be of great benefit to the development of trade and to the local merchants and the public⁴ and another panayır in Eskişehir for fifteen days starting from September 20th were deemed

³ BOA, ŞD., 1534/30, 1870.

⁴ BOA, ŞD., 2214/24, 1875.

relevant and these two panayırs were held.⁵ In 1904, Çorum Sancak (Sub-province) submitted a similar request. The local residents and merchants, stating that they raised all kinds of animals in their region but had to visit remote areas to sell their animals, complained about the increased costs generated by this. They articulated that trade of leather, wool, mohair, garments and upholstery and handicrafts produced from animals is as important as trade of animals themselves. Thus, the request made by the local residents and merchants, who indicated that a panayır to be annually organized from May 2nd to 15th would provide a significant income, and their request, was deemed appropriate and approved.⁶

Another consideration in organizing panayırs is the connection of the area of panayırs with the road routes. For example, organization of a panayır in Havza town in Sivas for fifteen days between May 15th and 30th was proposed on the grounds that the town was located on the Bağdad road route⁷; likewise, it was considered reasonable to hold a panayır in Kırşehir, which connected the roads between Ankara, Yozgat, Kayseri, Nevşehir, Ürgüp, Aksaray and Koçhisar, from July 15th to the end of August to trade all kinds of animals and goods. It was further mentioned that trade of many products such as carpets, rugs, fleece, mohair, cheese, oil besides animals was suitable specifically for this panayır.⁸

Yet another consideration taken by the Ottoman Empire is interest in the rebuilding of panayırs, which were previously established but abandoned for various reasons including changes in road routes over time, conditions of war, etc. A great example of this is the rebuilding of the abandoned fairgrounds, which were constructed for the panayır held in previous years around Sarıoğlan Village in Belviran District of Konya Province.⁹ Similarly, the inhabitants of Ayvacık District submitted an application to the state in 1903 for the reconstruction of the panayır, which had been founded around the Gemedere River, four kilometers from the town, until 1878, because of its benefits to regional trade.¹⁰

Although the above-mentioned requests for organizing panayırs were mostly accepted by the Ottoman administrators, there were some requests rejected. For example, the request to organize a panayır in the town of Tekfurdağı

⁵ BOA, Y.A.RES., 46/28, 1889.

⁶ BOA, İ.DH., 1425/25, 1904.

⁷ BOA, Y.A.RES., 61/7, 1892.

⁸ BOA, İ.DH., 1449/38, 1906.

⁹ BOA, C.BLD., 125/6237, 1843.

¹⁰ BOA, DH.MKT., 709/50, 1903.

(Tekirdağ) in 1846 was rejected for it would be disadvantageous to the panayırs in the surrounding districts of Uzuncaabad, Çırpan and Zağra-i Atik.¹¹

3.2. *Duration of Panayırs*

How long panayırs would run for depends on their function and scale as well as their role in the series of panayırs. While the panayırs with great economic and commercial importance run for a longer period, panayırs around small settlements suffering from transportation problems such as religious and animal panayırs were usually organized daily or for three days. The panayırs in Lüleburgaz, Kadirkavağı, Tokat, Zile, Gerece, Pınarbaşı, Alıpınarı and Beylikova were generally established for a period of fifteen days. For a certain period of time, some of the religious panayırs, for example Tefaver panayır of the Armenian community, lasted for eight days¹². Also, it was recorded in the archival documents that the Greek community submitted a request to extend the period of the panayır in Çamlıköşk-Beşiktaş Ayazma from three days to one week.¹³

The requests on the successive organization of panayırs and the changes in their dates were also taken into consideration. Indeed, the merchants complained about the decision regarding the opening of panayır of Biga in August, rather than June, in 1836. In their complaint, they mentioned that the panayırs in Çan (May 21st), Gönen (June 1st) and Balıkesir (June 11th) were organized one after the other for a long time, which was very advantageous for them. According to them, if the opening date of the panayır in Balıkesir was moved to August, this would increase the costs of the merchants, who had to take their goods to their own lands and bring them back; thus, they demanded that these three panayırs were established as usual on the old dates.¹⁴

3.3. *Announcement of Panayırs and Ensuring Participation in Panayırs*

The announcement of the panayırs to the public and merchants, besides their opening and the decision on how long they would last, was a consideration for the state in the Ottoman period. The state used to send letters to the regional administrations in the regions where the panayırs would be established and

¹¹ BOA, A.MKT.MVL., 2/21, 1846.

¹² SDAO, 1877.

¹³ BOA, ZB.627/85, 1907.

¹⁴ BOA, C. İKTS., 25/1222, 1836.

announce the dates of the panayır to the public through such letters. For instance, the state informed about the opening of a panayır between August 1st and 15th in the region named Kilaz Köprüsü near İzmit and requested the announcement of this panayır to the public in Ankara so that those interested in could visit it.¹⁵ It is remarkable that orders were sent to the administrators in Yanya, İzmit, Yenişehir and Üsküp to ensure the participation in the panayır to be opened in Tekirdağ.¹⁶ The state also particularly announced the information on the opening or ending of the panayırs through newspapers. The fact that the panayırs in Çan and Biga in 1866 ended without any problems was announced in Takvim-i Vekâyi, that is the official gazette of the Ottoman Empire.¹⁷ Also, the opening of a panayır in Kastamonu in August, 1872 was announced to the public through newspapers.¹⁸

At times, panayır traders traveled great distances to participate in panayırs. For example, some merchants brought their goods from Damascus, Aleppo and Diyarbakır to a panayır in Balıkesir¹⁹ whereas the merchants in Mudanya carried their goods to Uzuncaabad Panayır.²⁰ The archival document dated 1836 is on the announcement of the opening of the panayırs in Çan, Gönen and Balıkesir to those in Damascus, Aleppo, Diyarbakır, Tokat, Bursa, İzmir, Manisa, Denizli and Siroz.²¹ This means that some well-known panayırs at a scale suitable for international trade were attracted by merchants from considerable distances.

The Ottoman rulers also made great efforts to ensure participation in the panayırs. One of the main issues was the deployment of additional ferry trips to the fairgrounds besides the safe travel of the people going to the panayırs by land. The demand by the administrators in the district of Çatalca for additional ferry trips were made from Istanbul, Tekirdağ and Bandırma for the panayır in Silivri, which was established in September, 1917, was accepted²² and the requests of the Armenians to organize a ferry trip from İzmit and Tekirdağ to the panayır they organized in Samatya on the occasion of their religious days were also deemed reasonable and accepted.²³

¹⁵ BOA, İ.MVL., 104/2286, 1847; BOA, A.MKT.UM., 96/8, 1847.

¹⁶ BOA, A.MKT.UM., 62/64, 1851.

¹⁷ BOA, A.MKT.MHM., 359/45, 1866.

¹⁸ BOA, MF.MKT., 3/103., 1872.

¹⁹ BOA, C. ML. 780/31859, 1808.

²⁰ BOA, C. İKTS, 36/1763, 1796.

²¹ BOA, C. İKTS., 25/1222, 1836; BOA, C. İKTS., 29/1444, 1836.

²² BOA, DH. UMVM., 75/50, 1917.

²³ BOA, DH.MKT., 1730/9, 1890.

3.4. Location of the Panayırs

Many of the Ottoman archival documents contain the names of the locations used for panayırs. As a panayır needed to be on large and open lands, public spaces and town squares generally accommodated panayırs. It is remarkable that the panayır in Tokat was organized in front of the Meydan Mosque (Şen, 1996:20); the panayır in Ankara was established at the Kışla Square²⁴; the panayır in Kastamonu was at the Kışla-yı Hümayun square (Erdoğan, 1999:72-73); the Ali Pınarı panayır was organized near the gardens of the same name²⁵; the Niksar panayır was set at the entrance of the Hamidiye Bridge²⁶; the panayır in Bolu was near the hot springs²⁷ and the panayır in Mürefte was organized at the Yalı square.²⁸ Panayırs were organized occasionally in farms (Torbalı)²⁹ and sometimes on plateaus visited by thirty to forty thousand people every year (Çambaşı Highland)³⁰ or near hot springs like in Bolu,³¹ Havza³² and Hamamayağı-Ladik³³ in Sivas.

Some panayırs that have survived from the Ottoman period to the present day are still organized in the same region. According to the document dated 1903, it was decided that the panayır in Ayvacık (Çanakkale) was established in the vicinity of the Gemedere River (Tuzla Creek).³⁴ This panayır is still being established in the same location, near the Gemedere River.

Considering that the panayırs lasted for days, water availability was very important for both cleaning and other activities in the panayırs. This is the reason why some of the panayırs were set near baths and hot springs as well as on riversides. Indeed, it is striking that spatial organization and planning was made even for the panayırs in the eighteenth century and engineers were sent to some panayırs to organize various construction works (shops, bridges, pavements, fountains, etc.).³⁵ The Kaymakam (district governor) commissioned

²⁴ BOA, A.MKT.MHM., 417/25,1868.

²⁵ SDAO, 1877.

²⁶ BOA, BEO., 1900/142448, 1902.

²⁷ BOA, ŞD., 1642/16, 1874.

²⁸ BOA, DH.MKT.1932/58, 1892.

²⁹ BOA, DH.MKT., 1932/58, 1892

³⁰ BOA, ŞD., 1826/12, 1871; BOA, İ.DH., 1425/18, 1904.

³¹ BOA, ŞD., 1642/16, 1874.

³² BOA, Y.A.RES., 61/7, 1892.

³³ BOA, DH. MKT., 559/10, 1902.

³⁴ BOA, ŞD., 1586/13, 1903.

³⁵ See. (Şen1996). Şen offers extensive information in the archival documents on the works of the Ottoman State regarding the establishment of panayırs.

the construction of 940 shops in the area where the panayır in Yapraklı, Çankırı was organized in 1857, which significantly indicates the commercial scale of the panayır.³⁶

3.5. Ensuring Safety at Panayırs

Notably, many institutions cooperated with each other for the security of the Ottoman panayırs. Kavas (guards), soldiers of Zaptiye, Kır Serdarı (chief of rural police), soldiers from army units and occasionally volunteer groups from the public used to gather to protect the goods and belongings and to ensure security. Appointed by the regional administrators, 'Ağa's (notables of districts) were responsible for the order in panayırs and the security of the merchants. As seen in many examples in the archival documents, great importance was attached to the safety of the traders visiting local panayırs; indeed, law enforcement officers were allocated for this purpose and the groups of merchants were accompanied by police officers during their arrival and departure to panayırs. As the safety and security of life and property of merchants involved in panayırs was guaranteed by the state, the regional administrators were constantly warned about that and relevant measures were taken. Hence, İbrahim Ağa, Muhtesib (the inspector of marketplace) of Biga and Kavasbaşı (Headguard) Hüseyin Ağa were assigned to protect the merchants visiting the panayırs in Çan and Biga as well as the goods and belongings in these panayırs in 1849; also, the administrator of the district of Çan was warned to pay attention to the mentioned issues.³⁷ To that end, soldiers deployed to protect the Bahr-i Sefid Strait (The Dardanelles) as well as Zaptiye soldiers were assigned to the aforementioned panayırs as well.³⁸

The number of the Zaptiye soldiers to be assigned was decided by the written requests from the local people and the salaries of those to serve during panayırs and the temporary duty order were given directly by the central office. The Zaptiye soldiers and officers in the panayır of Çankırı Yapraklı received a salary of 11.447.5 *kuruş* (piastre),³⁹ Twenty cavalry and one Kır Serdarı were temporarily assigned to the panayır in Zile, Amasya with a salary of one hundred *kuruş* and 250 *kuruş*, respectively.⁴⁰ Similarly, upon the request from the local

³⁶ BOA, A.MKT.UM, 268/62, 1857.

³⁷ BOA, MVL., 76/75, 1849.

³⁸ BOA, A.MKT.MHM., 187/76, 1849.

³⁹ BOA, C.İKTS., 38/1880, 1841.

⁴⁰ BOA, İ.MVL., 429/18849, 1860.

people for the panayır in Çan and Biga in 1863,⁴¹ two sergeants with a salary of 140 kuruş and 18 Zaptiye soldiers with a salary of one hundred kuruş were appointed to these panayırs.⁴² When it was felt that there was a weakness in security, volunteers from the local people were assigned, as in the panayır held in Biga in 1866.⁴³

It is notable that great attention was paid to the safety and satisfaction of the merchants in the panayırs of the Ottoman period and measures taken were particularly intended to the prevention of banditry. The bandits, who seized the goods of four merchants returning from the panayır in Balıkesir, were captured in Çorum;⁴⁴ the thieves who stole from the panayır in Silivri were caught and imprisoned.⁴⁵

It was the responsibility of the regional administrators to ensure the safety of the merchants not only during the panayır, but also after the panayır, when the merchants travel to the another panayır or their homes. The letter of thanks sent by the merchants to Hasan Pasha, Mutasarrıf (Governor) of Biga, mentioned that after the panayır in Çan and Biga in 1861, the merchants were accompanied by guards to the borders of the Sancak of Karesi for the panayır in Gönen.⁴⁶ Similarly, after the panayır in Biga in 1866, some of the merchants were accompanied by panayır guards to the borders of the Karesi Sancak for the panayır in Sarıköy (Gönen) while the others were safely taken to the Pier of Karabiga in the company of guards to travel to their hometown, Tekirdağ.⁴⁷

The archival documents emphasized the panayırs of the Christian community were crowded and much attention was paid to the security in these panayırs. It was reported that the necessary measures were taken and 3 surveillants were assigned due to the stampede and crowd caused by the panayır of Aya Yani Church (Hagios Ioannis Church) in Kalamış.⁴⁸ Besides, the travel of the Christian community in groups from one place to another for panayırs was subject to permissions. A letter sent from the Kala-i Sultaniye (Çanakkale) to the Dâhiliye Nezareti (Ministry of Interior) with an encrypted correspondence stated that “it is informed that fifty to sixty people from the islands of Bozcaada

⁴¹ BOA, A.MKT.MHM., 261/30, 1863.

⁴² BOA, MVL., 647/82, 1863.

⁴³ BOA, A.MKT.MHM., 359/45, 1866.

⁴⁴ BOA, C.ZB., 41/2019, 1819.

⁴⁵ BOA, A.MKT.MVL., 74/76, 1855.

⁴⁶ BOA, A.MKT.UM., 485/19, 1861.

⁴⁷ BOA, A.MKT.MHM., 359/45, 1866.

⁴⁸ BOA, Y.PRK.ZB., 8/78, 1891.

and Imroz (Gökçeada) will visit the three-day-long panayır named Aya Yorgi (Hagios Georgios), which has been held in the town of Erenköy for a long time” and requested the authorities “to provide information on whether people travelling from such islands by sea were permitted or not.”⁴⁹

3.6. Reasons Preventing the Organization of Panayırs

Panayırs, which were traditionally established every year at certain times in Anatolia or in Rumelia, had to be cancelled for some years due to exceptional reasons such as war and infectious diseases. Sometimes, panayırs were closed as merchants failed to participate. There were times when panayırs were cancelled due to the lack of security in the region, but they were re-organized as scheduled before once safety was assured (Şen, 1996:77). For example, the statement sent from the Biga Mutasarrıflık (Governorship) to the Ministry of Interior underlined that the panayır in Ayvacık could not be established for twenty five years after 1878, damaging the economy of the local people.⁵⁰ Another important reason for postponing panayırs was infectious diseases. The central administration, attaching great importance to the risk of the spread of animal diseases, canceled most of the panayırs against the risk of cattle plague that affected the country in 1906 and warned some of them against such risk. In fact, the telegram sent from Sadâret (Prime Ministry) to the Biga Mutasarrıflık on 30 May 1906 communicated that the decision to cancel the panayırs this year due to cattle plague across the country and also informed that as the plague did not affect Biga, the panayırs in Çan and Biga could be established under the responsibility of Biga and the panayır in Ayvacık could be opened as usual. In the same telegram, the people were also requested not to import or export animals into or out of areas affected by disease.⁵¹ Later, the Council of Biga wrote to the Ministry of Interior regarding this warning on 8 June 1906 and conveyed their thanks for approving the opening of the panayırs in Çan and Biga, emphasizing that the administrative borders were taken under control to prevent the import of animals from the areas affected by the plague to the panayırs in Çan and Biga.⁵²

It is obvious from the correspondence in 1908 that the Ottoman rulers were right to do these warnings. The assessment of the Ministry on this issue

⁴⁹ BOA, DH. ŞFR., 425/80, 1912.

⁵⁰ BOA, DH.MKT., 709/50, 1903.

⁵¹ BOA, BEO, 2839/212856, 1906.

⁵² BOA, DH.MKT., 1088/84, 1906.

reported that the plague in the district of Biga lasted for two years but was largely under control thanks to the measures taken. Yet, the Ministry found it unfavorable to resume the panayırs in Çınar and Biga. Indeed, the plague still continued in the towns of Balya and Edremit in the Karesi Sancağı and preventing the import of animals from these towns was not considered possible. For that reason, it was decided not to open the panayırs to prevent the recurrence of this plague⁵³ and this decision was notified to the Biga Mutasarrıflığı on 1 June 1908.⁵⁴

3.7. *Traditional and Sports Activities*

Panayırs are open-air activities offering a variety of entertainment as well as trade. Foremost among these activities that flourished from the beginning of the twentieth century, there were horse races, like those held in Akşehir,⁵⁵ Kırkpınar,⁵⁶ Aziziye-Pınarbaşı⁵⁷ and Samsun⁵⁸; velespit (bicycle) races in Kırkpınar⁵⁹ and oil wrestlings in Akşehir,⁶⁰ Tosya,⁶¹ ² It was also noted that there were competitions for stallions, oxen and horses, other than oil wrestlings, in Akşehir.⁶³ Such activities promoted the participation of the panayır-visitors and also significantly increased the tax revenues of the state and municipalities. Indeed, the concern caused by the prohibition of horse races and oil wrestlings, which were pre-scheduled in the panayırs of Semavine and Kırkpınar in the province of Edirne in 1902, is clearly evident in the letter from the province of Edirne to the Ministry. For the purpose of asking permission to resume the above-mentioned activities, this letter mentioned that nobody wanted to participate in the tender for the panayır due to the prohibition of horse races and wrestlings and the state would be deprived of a tax income of 7000 to 8000 kuruş if the panayır was cancelled.⁶⁴

⁵³ BOA, DH.MKT., 1252/30, 1908.

⁵⁴ BOA, DH.MKT., 1258/29, 1908.

⁵⁵ BOA, İ.DH., 1397/18, 1902.

⁵⁶ BOA, DH.MKT., 488/25, 1902.

⁵⁷ BOA, İ.DH., 1410/35, 1903.

⁵⁸ BOA, DH.MKT., 953/55, 1905.

⁵⁹ BOA, DH.MKT., 488/25, 1902.

⁶⁰ BOA, DH.MKT., 2538/73, 1901.

⁶¹ BOA, DH.MUİ., 125/35, 1910.

⁶² BOA, DH.MKT., 488/25, 1902.

⁶³ BOA, DH. MKT., 2538/73, 1901.

⁶⁴ BOA, DH.MKT., 488/25, 1902.

3.8. Taxes Collected at Panayırs

One of the significant aspects of the Ottoman period panayırs is the taxes. The incidence of different taxes at each panayır and their imposition by different authorities indicate the lack of a common tax policy (Küpelı, 1999:493). The state either received this tax through its own officer or included this taxation to the system of tax farming. These taxes varied depending on the type of panayır and had different forms such as *serçin* (a tax collected from per slaughtered animals), *yular* and *damga rüsûmu* (halter and stamp tax), *duhan rüsûmu* (tobacco tax), *gümrük rüsûmu* (customs duty), *kantar and bac rüsûmu* (weighing dues and market tax), *çalgıcı and oyuncu ruhsatiye tezkereleri rüsûmu* (permission certificate of musician and performer tax), *at and ester pazarı rüsûmu* (a tax of horse and mule bazaar), *tahmis rüsûmu* (coffee tax), *sergi rüsûmu* (a tax collected from market stalls) etc. For example, the goods brought by the merchants in Mudanya to the panayır in Uzuncaabad were counted at the Customs of Mudanya and a customs tax of 1054 *kuruş* 43 *akçe* (silver coin) was collected.⁶⁵ In addition to these taxes, regular taxes such as *panayır resmi* (panayır tax), *avâid*, (subscription or revenue tax), and *ruhsâtiye* (a tax on work permits) as well as irregular taxes such as *jizya* (poll-tax) were collected. These taxes at panayırs were collected in return for the rent and the expenses of the officers assigned to the security of the merchants (Şen, 1996:87; Erdoğan, 2016:138); the salaries of the physician appointed to the district of Çan⁶⁶ or of midwives and vaccination officers in Erzurum⁶⁷ could be covered from the taxes collected at panayırs in that region.

A quite interesting example of these taxes collected at panayırs in Anatolia is the tax named *Çılbr*⁶⁸, which has not been mentioned in the literature to the best of our knowledge. The document dated 1903 reported that this tax collected in the panayır of Çan was the subject of complaints. The reply letter from the Biga Mutasarrıflığı to the Sadâret stated that the *Çılbr* tax of 3 *kuruş*, collected from the tax payer for the municipality in addition to the tax levied on each of his animals, had long been a tax exclusive for panayırs.⁶⁹

65 BOA, C.İKTS., 36/1763, 1796.

66 BOA, ŞD., 1583/20, 1903.

67 BOA, DH.İD., 31/22, 1913.

68 'Çılbr' refers to the chain or rope attached to the ring of the halter of the farm animals under the chin.

69 BOA, BEO., 2223/166683, 1903.

The merchants often complained about the variety and high rates of taxes collected at panayirs, and regional administrators were authorized to make requests for the non-payment of taxes. For example, the Council of Izmit requested from the Ministry of Finance not to collect taxes on the goods brought to the panayır held in the area of Kilaz, Izmit for promoting and ensuring participation in the panayır, but this request was rejected.⁷⁰

4. Anatolian Panayirs and Their Distribution in the Ottoman Period

The review on the Ottoman archival documents, the Devlet Salnames and the relevant literature yields the information that there were a total of 105 Anatolian panayirs in the Ottoman period. With further assessment of the Provincial Yearbooks and access to new archival documents, the number of the panayirs held in the Ottoman Period will undoubtedly increase. Only two of the identified panayirs date back to sixteenth century. Also, six of them date back to seventeenth century whereas eight can be traced back to eighteenth century. It is notable that the panayirs in the Ottoman country were most common in the nineteenth century (a total of fifty four panayirs) and in the beginning of the twentieth century (thirty five panayirs).

Table 1: Panayirs Mentioned in the Archival Documents and Reference Sources Analyzed in this Study (Listed by Chronologically)

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
1	Avdancık Village (Bursa)	Held in the mid- sixteenth century	Barkan and Meriçli (1988:16-17).

70 BOA, A.MKT.MHM., 1848.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
2	Bergos, Pürgaz (Lüleburgaz)	1572, Seventeenth century, 1784, 1847, 1876, 1901, 1903.	1572 (Matscke, 2011: 115); Seventeenth century (EÇS, Sixth Book, Volume 1: 236); 1784, (Şen, 1996: 20); 1901, Hijri 1319 Salname of Province of Edirne (Kanal, 2016, 166); SDAO, 1847; SDAO, 1877; DH.MKT. 671/47, 1903.
3	Hacı İsa (Sarıköy/ Gönen)	1658	Küpelı, (1999).
4	Seyyidgazi (Eskişehir)	Sixteenth and seventeenth century	Faroqhi, 2006: 164-165.
5	Alaşehir		
6	Nazilli		
7	Apolyont (Uluabat)	Seventeenth century	EÇS, Fifth Book, Volume 1: 385.
8	Silivri	Seventeenth century, 1721, 1840, 1844, 1847, 1861, 1886, 1905, 1917	Seventeenth century (EÇS Sixth Book Volume 1: 236); İE.ML. 90/8470, 1721; MKT. 15/10, 1844 (Şen, 1996: 73); SDAO, 1847; MKT. MHM. 235/93, 1861; DH.MKT. 1364/103, 1886; DH.MKT. 1013/61, 1905; DH. UMVM. 75/50, 1917.
9	Gökçebey (Devrek)	First half of the 1700s	Çelebi, Z. (2005: 85).

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
10	Kızılcaviran Village Çermik/ Reşadiye	1759	Yediyıldız, 1985: 34.
11	Balıkesir	1765, 1816, 1817, 1835, 1836, 1847, 1850, 1877	C. ML, 14665, 1765 (Şen, 1996: 84); C.ML, 10138, 1816 (Şen, 1996: 23); C.ML, 8240, 1817, (Şen, 1996: 85); 1835, TKGMA, No. 152, Karesi Mufassal, p.23 (Erdoğan, 1996: 381-384); C. İKTS, 25/1222, 1836; SDAO, 1847; C.DM, No.600 20L, 1850 (Şen, 1996: 110); SDAO, 1877.
12	Yapraklı (Çankırı)	1767, 1847, 1848, 1852, 1856, 1857, 1864, 1867, 1875, 1877, 1886, 1909	AE.SMST.III. 2/64, 1767; İ.MVL, 1047, 1847; C.ML, 244/10155, 1848; MVL, 172/74, 1852; İ.MMS, 8/321, 1856; A.MKT.UM, 268/62, 1856; A.MKT.MVL, 94/9, 1857; A.MKT.MHM, 310/10, 1864; İ.MMS, 35/1424, 1867; ŞD, 2214/24, 1875; SDAO, 1877; MV, 9/66, 24-04-1886; DH.MKT, 2843/70, 1909.
13	Gerze (Sinop)	1772, 1916	AE.SMST.III, 74/5437, 1772; DH. UMVM, 136/60, 1916.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
14	Hamidiye (Çorlu)	1788	1788, TKGMA, No:74, Fatih Sultan Mehmed Han Evkafi, p.75 (Erdoğan, 1994: 101-102).
15	Türbedere (Çerkezköy)	1788, 1791, 1889, 1901-1902.	Record of the <i>panayır</i> in Hamidiye dated 1788: TKGMA, No:74, Fatih Sultan Mehmed Han Evkafi, p.75 (Erdoğan, 1994: 101-102); 1791, TKGMA, No:74, Fatih Sultan Mehmed Han Evkafi, p.75 (Erdoğan, 1994: 100); DH.MKT, 1652/148, 1889; 1901-1902, (Ekin and Kanal, 2014: 124)
16	Kadirkavağı/ Kadirkovanı (Eskişehir)	1793, 1889, 1890	1793, TKGMA, No:145, Sultanönü Mufassal, p.7, (Erdoğan, 1994: 82); Y.A.RES, 46/28, 1889; İ. DH, 1173/91708, 1890.
17	Şarköy	1812, 1901, 1902.	C.İKTS, 1265, 1812 (Şen, 1996, 18); 1901, 1902 (Ekin and Kanal, 2014: 124).
18	Tokat	1828	1828 (Şen, 1996: 20).

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
19	Çan	1835, 1836, 1849, 1860, 1861, 1863, 1864, 1865, 1866, 1900, 1903, 1905, 1906, 1908, 1911	1835, TKGMA, No: 152, Karesi Mufassal, p.23 (Erdoğan, 1996: 381-384); C. İKTS, 25/1222, 1836; MVL, 76/75, 1849; A.MKT. MHM, 187/76, 1860; A.MKT.UM, 485/19, 1861; A.MKT.MHM. 261/30, 1863; A.MVL. 674/68, 1864; A.MKT. MHM. 336/83, 1865; A.MKT.MHM, 359/45, 1866; DH.MKT, 2435/4, 1900; DH.MKT, 981/52, 1905; BEO, 2839/212856, 1906; DH.MKT, 1252/30, 1908; DH. İD, 102/11, 1911.
20	Gönen	1835, 1836	1835, TKGMA, No: 152, Karesi Mufassal, p.23 (Erdoğan, 1996: 381-384); C. İKTS, 25/1222, 1836.
21	Belviran, Konya	1843	C.BLD., 125/6237, 1843.
22	Zile	1844, 1847, 1851, 1852, 1853, 1860, 1875.	C.ML, 27757, 1853 (Şen, 1996: 23); SDAO, 1847; SDAO, 1851; 1852- Zile Panayır: İ. DH, 16539, 1853 (Şen, 1996: 103); A.MKT. MHM, 53/26, 1853; A.MKT. NZD, 305/55, 1860; ŞD, 2214/24, 1875.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
23	Buca (İzmir)	1846	A.MKT. 92/100, 1846 (Şen, 1996: 85).
24	Çatalca	1847, 1859.	SDAO, 1847; A.MKT.MHM, 166/87, 1859.
25	Tekirdağ	1847, 1851	1847, A.MKT.VL. 2/21, (Şen, 1996: 18); A.MKT.UM. 67/74, 1851.
26	Kilaz (İzmit)	1847, 1866	A.MKT, 96/8, 1847; A.MKT. MHM, 359/45, 1866.
27	Gümüşgan Maden-i Hümayunu (Kırşehir)	1848	MVL, 2113, 1848.
28	Biga	1849, 1860, 1861, 1863, 1864, 1865, 1866, 1877, 1900, 1906, 1908, 1911, 1915	MVL, 76/75, 1849; A.MKT. MHM, 187/76, 1860; A.MKT.UM, 485/19, 1861; A.MKT. MHM. 261/30, 1863; MVL, 674 /68, 1864; A.MKT.MHM, 336/83, 1865; A.MVL. 720/54, 1866; SDAO, 1877; DH.MKT. 2435/4, 1900; BEO, 2839/212856, 1906; DH.MKT, 1252/30, 1908; DH. İD, 102/1, 1911; BEO, 4338/325315, 1915.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
29	Gerede (Mahya)	1863, 1868, 1902, 1905, 1918	A.MVL, 657/88, 1863; 1868, TKGMA, No:35, Bolu Mufassal, Cilt: 1, p.140 (Erdoğan, 1996: 379-380); DH.MKT, 605/35, 1902; DH.MKT, 1015/52, 1905; DH. ŞFR, 91/219, 1918.
30	Amasya	1864, 1865, 1878	İ.MVL.519/23355, 1864; İ.MV, 23355, 1865, (Şen, 1996: 21); SDAO, 1878.
31	Pınarbaşı, Aziziye/ District of Sivas	1865, 1903	MVL. 713/2, 1865; DH.MKT. 691/36, 1903.
32	Sarıköy (Gönen)	1866, 1877	A.MKT.MHM. 359/45, 1866; SDAO, 1877.
33	Ankara	1868, 1878	A.MKT.MHM. 417/25, 1868; SDAO, 1878.
34	Sivas	1869	A.MKT.MHM. 431/25, 1869.
35	Şiranbul (Kars)	1869	A.MKT.MHM. 433/40, 1869.
36	Kastamonu	1869	1869, TKGMA, No: 143, Kastamonu Mufassal, Volume 1, p.30 (Erdoğan, 1994: 72-73)
37	Adana	1870	ŞD. 2115/39, 1871.
38	Alıpınarı (Diyarbakır)	1870, 1877	1870, TKGMA, No:155, Diyarbakır Mufassal, Volume: 3, p. 57 (Erdoğan, 1996: 355-356); SDAO; 1877.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
39	Teşrifiye-Atıcılar (Bursa)	1870	ŞD. 1534/30, 1870; İ.ŞD. 121/7218, 1870.
40	Çambaşı Highland-Ordu	1871, 1904, 1920	ŞD. 1826/12, 1871; DH.MKT. 862/79, 1904; ŞD. 1859/11, 1920.
41	Tarsus	1871	ŞD. 2115/39, 1871.
42	Ayandon (Stefan) Türkeli	1871	Yearbook of the Province of Kastamonu dated 1871 (Okur, 2019: 43).
43	Helaldı (Stefan) Türkeli	1871	Yearbook of the Province of Kastamonu dated 1871 (Okur, 2019: 43).
44	Barna Pier (Stefan) Türkeli	1871	Yearbook of the Province of Kastamonu dated 1871 (Okur, 2019: 43).
45	Çarşamba (Boyabat)	1871	Yearbook of the Province of Kastamonu dated 1871 (Okur, 2019:43).
46	Ayın Oyun (Boyabat)	1871	Yearbook of the Province of Kastamonu dated 1871 (Okur, 2019: 43).
47	Avloğuş (Boyabat)	1871	Yearbook of the Province of Kastamonu dated 1871 (Okur, 2019: 43).
48	Kırkkilise (Kırklareli)	1872, 1907, 1908	ŞD. 1907/27, 1872; Y.A.RES. 150/19, 1907; İ.DH. 1461/24, 1907; BEO. 3221/241545, 1908.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
49	Balçık (Saray/ Vize Kazası)	1874, 1877, 1889, 1891, 1901, 1910	1874 (Demirtaş, 2011: 46); SDAO, 1877; DH.MKT. 1652/148, 1889; Y.EE. 53/2, 1891; 1901 (Kanal, 2016: 166).
50	Bolu	1874	ŞD. 1642/16, 1874.
51	Ağurdağı-Karagöl /Küçükgöl (Kahramanmaraş)	1875	ŞD. 2214/24, 1875; TK.GM. IKP., 1/64, 1875
52	Bayırbaşı (Balçık)	1877	SDAO, 1877.
53	Hayrabolu	1877, 1901- 1902	SDAO, 1877; (1901-1902 Ekin and Kanal, 2014: 124)
54	Çorlu	1877	SDAO, 1877.
55	Karahisar-1 Şarki Çermik (Şebinkarahisar)	1877	SDAO, 1877.
56	Uzunköprü	1877	SDAO, 1877.
57	Manyas Kuş Panayırı	1877, 1882, 1892	SDAO, 1877; ŞD. 504/13, 1882; DH.MKT. 1958/102, 1892.
58	Manyas Işıklar	1870, 1877	Yearbook of Hüdavendigâr dated 1870, p. 141; SDAO, 1877.
59	Babaeski	1877, 1903, 1904, 1908	SDAO, 1877; İ.DH. 1410/36, 1903; BEO, 2102/157590, 1903; DH.MKT. 671/47, 1903.
60	Ankara (After the Panayır of Zile)	1883	SDAO, 1883.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
61	Eskişehir	1889, 1890, 1907,	ŞD. 1548/6, 1889; DH.MKT. 1702/111, 1890; DH.MKT. 1190/ 70, 1907.
62	Kocakır Livestock Panayır (Milas-Menteşe)	1890	ŞD. 1386/7, 1890.
63	Karabiga	1892	DH.MKT. 1958/102, 1892.
64	Havza (Samsun)	1892	ŞD. 1792/12, 1892.
65	Mürefte	1892	DH.MKT. 1932/58, 1892.
66	Sarayaltı (Manisa)	1895, 1896, 1900, 1901	ŞD. 1394/18, 1895; Y.A.RES.77/70, 1896; DH.MKT. 2414/42, 1900; BEO. 1613/120932, 1901.
67	Torbali	1896	İ.DH. 1334/16, 1896; BEO 794/59477, 1896.
68	Keskin	1896	Y.A.RES. 46/28, 1889.
69	Mardin	1897	DH.TMIK.M. 32/75, 1897.
70	Çerkeş (Çayır Panayır)	1898, 1899	İ.DH. 1360/58, 1898; BEO. 1253/93924, 1899.
71	Gümüşhane	1900	7 Haziran 1900-Servet-i Fünun (Bucak, 2011:72).
72	Yenice Village (Vize District)	1901	Yearbook of the Province of Edirne dated 1319, (Kanal, 2016: 166)
73	Kalivri Village (Malkara)	1901-1902	(Ekin and Kanal, 2014: 124)
74	Ilıca (Keşan)	1901, 1902	(Ekin and Kanal, 2014: 124)
75	İpsala	1901, 1902	(Ekin and Kanal, 2014: 124)

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
76	Zalef Village (Havsa, Edirne)	1901, 1902	(Ekin and Kanal, 2014: 124)
77	Kırkpınar	1902	DH.MKT. 488/25, 1902.
78	Sergen Village (Vize-Kırklareli)	1901	Yearbook of the Province of Edirne dated 1319, (Ekin and Kanal, 2016: 166)
79	Yenice Village (Pınarhisar)	1901-1902	(Ekin and Kanal, 2014: 124)
80	Akşehir	1901, 1904, 1907	DH.MKT. 2538/73, 1901; DH.MKT. 907/24, 1904; İ.DH. 1461/23, 1907.
81	Niksar	1902	BEO. 1900/142448, 1902, DH.MKT. 509/16, 1902.
82	Hamamayağı Kaplıca-Ladik	1902	BEO. 1927/144477, 1902; İ.DH. 1402/19, 1902.
83	Ayvacık	1903, 1904, 1906, 1908	ŞD. 1586/13, 1903; DH. MKT. 835/62, 1904; DH.MKT. 709/50, 1903; BEO. 2839/212856, 1906; DH.MKT. 1252/30, 1908.
84	Gelibolu	1903	DH.MKT. 768/2, 1903.
85	Çorum	1904	BEO. 2390/179226, 1904; DH.MKT. 843/84, 1904; ŞD. 1353/26, 1904.
86	Darıca	1904, 1906	ZB. 470/3, 1904; ZB.379/136, 1906

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
87	Samsun	1905, 1906, 1907, 1920	A.MKT. 953/55, 1905; BEO. 2595/194574, 1905; DH.MKT. 1446/7, 1906; DH. MKT. 1207/80, 1907; ŞD. 1859/28, 1920.
88	Kırşehir	1906	ŞD.1357/6, 1906; BEO. 2944/220757, 1906.
89	Beylikova/ Beylikahır (Eskişehir)	1907	BEO. 3119/233902, 1907; DH.MKT. 1190/70, 1907.
90	Söke	1907	BEO. 3141/235575, 1907.
91	Mustafakemalpaşa (Kirmastı)	1907	BEO. 3219/241355, 1907; İ.DH. 1461/22, 1907.
92	Kargı	1907	DH.MKT. 1167/82, 1907; ŞD. 1358/6, 1907.
93	Üçkapılı Highland (Nigde)	1907, 1908	DH.MKT. 1763/11, 1907; Y. A. RES. 156/67, 1908.
94	Pehlivanköy (Pavli)	1908	DH.MKT. 1227/73, 1908.
95	Marmara Ereğlisi	1909	BEO. 3544/265784, 1909.
96	Mameratülaziz (Elazığ)	1909	İ.DH. 1474/83, 1909; DH. MUİ. 133/60, 1909.
97	Bolvadin	1909, 1910	ŞD. 1607/27, 1909; BEO. 3764/282281, 1910.
98	Tosya	1910	DH. MUİ. 125/35, 1910.

Item No	Name of the <i>panayır</i>	Years of establishment of the <i>panayır</i> according to the documents and the references	Documents and references for the <i>panayır</i>
99	Yozgat	1911	14 Eylül 1911-Servet-i Fünun (Bucak, 2011:91)
100	Köhne-i Kebir Karyesi (Sorgun)	1911	DH.İD. 31/14, 1911.
101	Çardak (Çanakkale)	1912	2 Nisan 1328/15 Nisan 1912, Bursa Gazetesi.
102	Karakilise (Hıms-Erzurum)	1913	DH.İD. 31/22, 1913.
103	Karacabey	1915	DH.EUM. 3.Şb. 6/19, 1915.
104	Dereyeri (Gerze-Sinop)	1916	DH. UMVM. 136/60, 1916.
105	Göhlisar (Tefenni)	1917	DH. UMVM. 108/66, 1917.

Although most of the panayırs mentioned in this study were commodity and animal panayırs, some religious panayırs of the Christian community were held in the Ottoman country. The Ottoman archival documents indicate that a total of thirty three religious panayırs were organized by the Armenian, Greek and Georgian Christian community. Most of them were established in the provinces of Istanbul, Tekirdağ, Çanakkale and Trabzon. It seems that such panayırs were mostly set in the settlements on near the Bosphorus, the islands of Istanbul, and around Bakırköy and Feriköy. Adding these thirty two panayırs with religious functions would increase the number of events referred to as panayır in Anatolia in the Ottoman period to 134. These panayırs were held in sacred areas or around the church; besides their religious functions, they were occasionally organized for social, cultural and entertainment purposes. These religious panayırs were resumed in the Republic period as well. According to Bozis (2011), they were discontinued after the incident that happened on 6-7 September 1955 in

Turkey (Bozis, 2011:48-49). Today, except for the two panayırs resumed by the Greek community in Bozcaada and Gökçeada, religious panayırs completely disappeared (Çalışkan, 2010:65-87).

It is difficult to determine the sects that held the Christian community *panayırs* mentioned in the Ottoman documents. As the documents mentioning these *panayırs* usually indicated the nationality of the communities that held the *panayır*. The documents sometimes only included limited information such as “there is a *panayır* of the Christians in the Ayamama Farm.”⁷¹ On the other hand, the *panayırs* that included the word Tefaver or Takav belonged to the Armenian community. Yet, as it is known, there were Catholic and Protestant communities besides Armenian communities, who were mostly Orthodox, in Anatolia. The *panayırs* organized around a water source considered sacred used to be known as the *Ayazma panayır*. Such *panayırs* were organized by Orthodox Greeks in Anatolia (Çalışkan, 2010:65-87).⁷² Although there is no information about the communities in the archival documents, it can be argued that the following *panayırs* belonged to the Orthodox Greek community: Balıklı (Istanbul), Tatavla (Istanbul), Yenimahalle (Göksu, Istanbul), Kalamış (Istanbul), Kandilli (Istanbul), Maydos (Canakkale), Erenköy (Canakkale). It seems that the “Rose Feast” *panayır*, frequently mentioned in documents, was an event organized by different communities. According to these documents, the Rose Feast *panayır* was celebrated by various churches such as the Georgian Church⁷³ in Feriköy- Çiftecevizler, the Frank⁷⁴ Church⁷⁵ in Makriköy in Sakızağacı, the French Church⁷⁶ in Fenerbahçe, the Frank Church⁷⁷ in Trabzon, etc. Even today, Hokekalsudé (The Coming of the Holy Spirit) in some Armenian churches in Turkey (e.g. the Surp Takavor Armenian Church-Istanbul) is one of the biggest feast of the church and also known as the Rose Festival.

⁷¹ Y.MTV. 167/9, 1897.

⁷² The most recent example of the *Ayazma panayır*s that survived today is the Bozcaada (Tenedos) *panayır*. See. (Çalışkan, 2010:65-87).

⁷³ Y.PRK.ZB. 22/73, 1899.

⁷⁴ The “Franks” were Catholics of French-Italian origin. The word Frank, which generally means “Western European” in the Ottoman Empire, is a term that encompasses Italians and French as well as Germans from the end of the 15th century, and other West European tribes from the middle of the 16th century (Encyclopedia of Islam, the item “Frenk”, <https://islamansiklopedisi.org.tr/frenk>).

⁷⁵ Y.PRK.ZB. 27/98, 1901.

⁷⁶ Y.PRK.ZB. 21/14, 1898.

⁷⁷ DH.MKT. 1269/56, 1908.

Table 2: Religious Panayirs in the Archival Documents and Reference Sources Analyzed in this Study (Listed by Chronologically)

Item No	Name of the panayır	Years of establishment of the panayır according to the documents and the references	Documents and references for the panayır
1	Takavor (Tekirdag)	1847, 1877; 1901-1902, 1909	C. DH. 12509, 1847 (Şen, 1996: 19); SDAO, 1877; 1901-1902, (Ekin and Kanal, 2014:124); DH.MKT. 2914/92, 1909).
2	Balıkli (Istanbul)	1847, 1848	1847, SDAO, 1847; İMV. 3024, 1848 (Şen, 1996: 11, 89).
3	Beyoglu (Istanbul)	1848, 1882	İMV. 3024, 1848 (Şen, 1996: 11, 89); SDAO, 1882.
4	Tatavla (Istanbul)	1848, 1882	İMV. 3024, 1848 (Şen, 1996: 11, 89); SDAO, 1882.
5	Kozlu (Istanbul)	1848, 1882	İMV. 3024, 1848 (Şen, 1996: 11, 89); SDAO, 1882.
6	Alemdağı (Istanbul)	1848, 1882	İMV. 3024, 1848 (Şen, 1996: 11, 89); SDAO, 1882.
7	Tarabya (Istanbul)	1848	İMV. 3024, 1848 (Şen, 1996: 11, 89)
8	Kuzguncuk (Istanbul)	1848, 1901	İMV. 3024, 1848 (Şen, 1996: 11, 89); Y. PRK. ZB. 28/117, 1901.
9	Yuhud Burgazı (Burgazada, Istanbul)	1848	İMV. 3024, 1848 (Şen, 1996: 11, 89).
10	Kadıköy (Istanbul)	1878	1878, SDAO, 1879.

Item No	Name of the panayır	Years of establishment of the panayır according to the documents and the references	Documents and references for the panayır
11	Makriköy (Bakırköy, Istanbul)	1878	1878, SDAO, 1879.
12	Güğercin, Yenimahalle (Istanbul)	1878	1878, SDAO, 1879.
13	Kınalıada (Istanbul)	1879	1879, SDAO, 1879.
14	Galata (Istanbul)	1879	1879, SDAO, 1879.
15	Narlı Kapı (Samatya, Istanbul)	1880, 1890	1880, SDAO, 1880; DH.MKT 1728/69, 1890.
16	Boyacıköy (Sarıyer, Istanbul)	1881	1881, SDAO, 1881.
17	Hasköy (Istanbul)	1881	1881, SDAO, 1881.
18	Arnavutköy (Istanbul)	1886	Y.PRK.ZB. 3/57, 1886.
19	Ortaköy (İstanbul)	1890	Y.PRK.ASK. 64/43, 1890.
20	Ermişe or Erişe Monastery (Izmit)	1891, 1904	DH. ŞFR. 151/9,1891; DH. TMIK. M. 184/2, 1904.
21	Aya Yani- Kalamış (Istanbul)	1891	Y.PRK.ZB. 8/78, 1891.
22	Göksu	1893	DH.MKT.137/1 (Çetin, 2013: 222)
23	Takov Armenian Church (Tekirdag)	1894	DH. ŞFR. 167/116; 1894.
24	Ayamama (Istanbul)	1897	Y.MTV. 167/9, 1897.

Item No	Name of the panayır	Years of establishment of the panayır according to the documents and the references	Documents and references for the panayır
25	Kandilli Aya Hristos Church (Istanbul)	1898, 1901	Y.PRK.ZB. 21/93, 1898; Y.PRK.ASK. 173/33, 1901.
26	Fenerbahçe (Istanbul)	1898	Y.PRK.ZB. 21/14, 1898.
27	Feriköy, Çiftecevizler (Istanbul)	1899	Y.PRK.ZB. 22/73, 1899.
28	Sakızağacı-Makriköy, (Istanbul)	1901	Y.PRK.ZB. 27/98, 1901.
29	Ayazma, Anadolu Hisarı (Istanbul)	1901	Y.PRK.ZB. 30/23, 1901.
30	Maydos Aya Yani - Eceabat Canakkale	1906	DH.MKT.1122/10, 1906.
31	Ayazma, Çamlıköşk Beşiktaş (Istanbul)	1907	ZB. 627/85, 1907.
32	Gül Panayırı (Trabzon)	1908	DH.MKT. 1269/56, 1908.
33	Aya Yorgi-Erenköy-Canakkale	1914	DH. ŞFR. 425 /80, 1912.

A map that outlines the highways in Anatolia during the Ottoman period clearly shows the relationship between the distribution of the panayırs and the road system (Figure 1). Indeed, most of the settlements hosting panayırs were on the Anatolian Right Arm route (Eskişehir, Seyitgazi, Bolvadin, Akşehir, Konya, Tarsus, Adana, etc.) and the Anatolian Central route (Bolu, Gerede, Yapraklı, Kargı, Amasya, Zile, Tokat, Sivas, Malatya, Diyarbakır, Mardin, etc.) as well

as on the Rumelia Left Arm route heading from Istanbul to the Balkans (Silivri, Malkara, Keşan, etc.), the Rumelia Central route (Silivri, Çorlu, Lüleburgaz, Babaeski, Edirne, etc.) and the Rumelia Right Arm route between Istanbul and Crimea (Çatalca, Vize, Kırklareli, etc.)⁷⁸

The main transport lines through which trade flowed also connected the settlements that hosted the panayır one after the other. It seems that transport links had a considerable effect on the distribution of the panayır. In this regard, it is striking that a panayır was established quite late in the province of Bursa, which was not located on the route of the main roads but was once the former capital of the Ottoman Empire and thus a vibrant trade center. In fact, the archival documents date the request to organize a panayır in Bursa back to 1870. The report from the Administrative Council of the Hüdavendigâr Vilayet to the Department of Internal Affairs of the Council of the State for the opening of a panayır in the city summarizes the relationship of panayır with the road system as follows:

Although many commodities are manufactured in Bursa, the area where the city is located is not much of a travel stop, so it has fallen further behind in trade... Road construction has started on Bursa from Gemlik and it will be completed in a few months. The road of Kütahya and Karahisar will be leveled soon as well...”

Figure 1: Main and Secondary Roads in Anatolia uring the Ottoman Period (A Simplified Drawing from Halaçoğlu, 2002).



⁷⁸ On the transportation and road system in the Ottoman period, see. (Halaçoğlu, 2002; Taeschner, 2010; Taştemir, 2012).



Figure 2: The Panayır Held in the Region of Atırcılar, in Bursa (Teşrifîye) in the Early 1900s (Source: Eski Yeni Bursa)

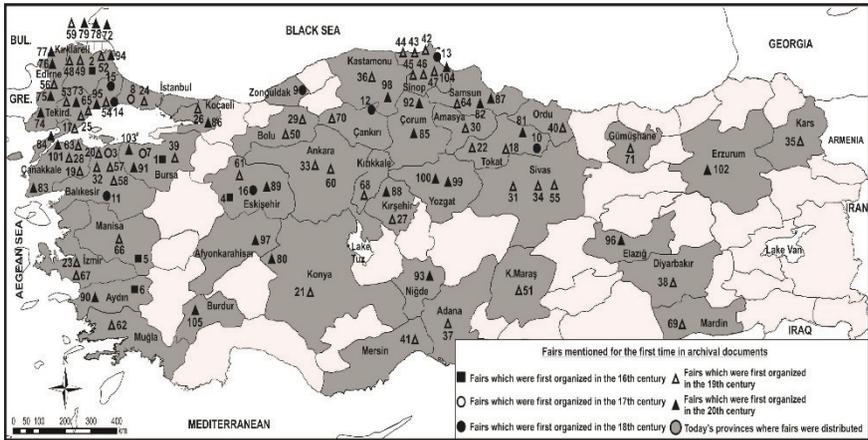


Figure 3: The Panayır Identified Based on the Archival Documents and their Chronological Distribution (Based on the Date of the Earliest Document where the Panayır is First Mentioned)

It is evident from the distribution of the panayır in the Ottoman period that most of the panayır were concentrated in the south and west of the area known today as the Marmara Region, especially in the Thracian Region. The panayır in the north of the Anatolia were concentrated along the Anatolian Central route in the central part of the Black Sea as well as in coastal settlements suitable for sea transportation. There are no, or very few examples of, panayır

in mountainous and non-accessible areas. Notably, there are large areas where no panayırs were held in the region in the West of the main road route between Bursa and Konya (the mountainous region in Central Western Anatolia) and in the Eastern Anatolia and Eastern Black Sea regions remaining outside the mountainous areas and main roads. Many settlements far from the main roads but with side roads also used sea transportation. For example, the merchants from Tekirdağ to the panayır in Biga used the pier in Karabiga.⁷⁹ Likewise, there was a demand for ferry services between Istanbul, Silivri, Tekirdağ and Bandırma during the panayır in Silivri.⁸⁰ It was recorded in another document that some of the merchants visiting the panayır in Silivri used sea transportation.⁸¹

5. Conclusion

Based on the current information, this study determined that there were a total of 105 panayırs held in Anatolia during the Ottoman period. The latest document among the analyzed documents dates back to 1917. As is known, the years 1919 and 1920 are the years when the War of Independence took place and the Republic of Turkey was founded in 1923. A similar study was conducted based on the Ottoman archival documents and other references and identified a total of 104 active panayırs in the Balkans and Rumelia under the Ottoman rule (Çalışkan and Sönmez, 2018a).⁸² The most recent document used in this study dates back to 1909. It is known that the Ottoman Empire began to lose its lands in the Balkans and Rumelia as of 1908.

There were twenty nine panayırs in the Balkans and Rumelia whereas only five panayırs were held in Anatolia until the end of the sixteenth century. From this comparison, it can be stated that the panayırs were widespread in Rumelia and the Balkans until the end of the seventeenth century and that the panayırs in Anatolia were organized mostly in the nineteenth century (Table 3).

⁷⁹ BOA, A.MKT.MHM., 359/45, 1866.

⁸⁰ BOA, HR.MKT., 310/18, 1859.

⁸¹ BOA, DH.MKT., 1363/103, 1886.

⁸² The earliest document in the mentioned study dates back to 1448 whilst the most recent one can be traced back to 1909.

Table 3: Distribution of the Number of Panayırs
Across Anatolia and Rumelia and the Balkans in the
Ottoman Country by Centuries (Çalışkan and Sönmez, 2018a)⁸³

Period	Anatolia	Rumelia and the Balkans
Until the end of the sixteenth century	5	29
Seventeenth century	3	14
Eighteenth century	8	10
Nineteenth century	54	32
Early twentieth century	35	19
Total number of panayırs	105	104

Some of the Anatolian panayırs mentioned in the Ottoman archival documents have been mentioned for numerous times in the records of various dates. This information is important in that it shows that some panayırs have been actively organized for centuries, albeit intermittently. Examples of such panayırs are the panayır in Silivri (Seventeenth century-1917), Yapraklı (1765-1909), Lüleburgaz (1572-1903) and Gerze (1772-1916), according to the oldest and most recent documents on the panayırs.

Even though the number of the panayırs in the Republic period increased during the 1940-1980 period, more than 190 panayırs have disappeared, especially in the period from 1980 to the present. ‘Traditional commodity and animal panayırs’ are today distributed across sixty one settlements in twenty provinces (Çalışkan, 2019:69). However, there are also examples of panayırs in Anatolia that managed to survive from the Seljuk period to the Ottoman period and from the Ottoman period to the present day. Indeed, the panayırs in Boyabat (Sinop) and in Pınarpazarı (Isparta) are examples of panayırs that survived from the Seljuk period to today. A total of nine panayırs survived from the Ottoman period to today and were identified as heritage panayırs: Pehlivan köyü (Kırklareli), Ayvacık, Çan (Çanakkale), Gönen, Manyas (Balıkesir), Söke (Aydın), Gerede (Bolu), Kargı (Çorum), Zile (Tokat).

Although some examples of ancient panayırs have survived until today, it seems that the historical and cultural heritage of these few examples have

⁸³ Source for the Balkans and Rumelia: (Çalışkan and Sönmez, 2018a). It is important to note on the documents which date back to the twentieth century in the mentioned study that the panayırs in the Balkans and Rumelia cover the period between 1901 and 1909 while the panayırs in Anatolia cover the period between 1901 and 1917.

not yet been recognized or simply neglected. These panayırs still mediate the conservation of traditional products and traditional activities in a traditional cultural atmosphere. Addressing these heritage values, which managed to survive from the Anatolian trade and cultural history to the present day, together with their historical and cultural context can allow them to gain new functions. Today, traditional panayırs that cannot keep up with the changes in trade, culture and technology are disappearing one after another. Promotion activities performed with a focus on the cultural and historical context and successful planning activities intended to attract tourists, can also help preserve some established panayırs with cultural functions as intangible cultural heritages and carry them into the future.

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Sadâret Mektubî Mühimme	(A.MKT.MHM)
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Şûrâ-yı Devlet	(ŞD)
Tapu Kadastro	(TK)
Yıldız Resmi Marûzât	(Y.A.RES)
Zaptiye	(ZB)

Periodical publication

Salname-i Devlet-i Aliyye-i Osmaniyye (SDAO)

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CHAPTER V

ISTANBUL AS A CITY OF TRANSFORMATION: DEINDUSTRIALIZATION AND FUNCTIONAL CHANGE¹

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1. Introduction

Istanbul is the most important city in Turkey in terms of function. The city served as a capital to great empires of the time such as Byzantium and Ottoman Empires and although it was not at the forefront of development compared to other provinces at the establishment of the Turkey Republic in 1923, it started to shine out in the middle of the 20th century. During the urban development of Istanbul, the dominance of the industrial function of the city was evident beginning from the last period of the Ottoman Empire. In the Tanzimat Period, industrialization initiatives occurring as a result of western reforms were even considered as an Industrial Revolution in the Ottoman Empire by historians (Clark, 1974). Limited breakthroughs in industrialization during this period tried to be maintained by several other laws such as Incentives on Industrialization Legislation in 1913, Incentives on Industrialization Ordinance in 1914, and other some other regulations introduced in 1917 (Toprak, 1985:1349). According to the industrial census made in 1915, 282 industrial facilities were identified in

¹ This study was conducted by expanding the relevant parts of the dissertation from 2018 titled as Deindustrialization and Spatial Change as an Implication of Economic Policies: Istanbul Example, which was written in the Geography Doctorate Program of the Institute of Social Sciences in Istanbul University.

the Ottoman Empire. 155 of these are in Istanbul (55%), 62 in Izmir (22%), and the remaining 65 are in other provinces that the census was conducted (Ökçün, 1997:13). In the early periods of the Republic, besides their insufficiency, the industrial legacy left behind was distributed unevenly in spatial terms. Another significant implication of the census was the fact that Istanbul was still maintaining its spot among the country as an industrial city in the early 20th century. After all, there was no systematic industrial legacy left behind to the republic after 80 years of industrialization attempts (İlkin, 1981: 93).

In the urban development of Istanbul, the influence of the industry began in the middle of the 20th century. The acceleration of industrialization initiatives after 1950 resulted in a rise in the number of factories in provinces such as Istanbul, Izmir, and Ankara (Sonmez & Ayik, 2019). Another advance that coincided with the same period had happened in the rural areas was mechanization which also led to a surplus of labor. Hence, a migration wave that has not been seen before in the history of Turkey took place from the rural areas towards the cities with grown industries. As a result of intense migrations and rapidly rising populations of cities, unplanned and irregularly developing squatter settlements have started to prevail over the textures of settlements. Industrialization-urbanization initiatives experienced almost a century later compared to the West is also the main source of our problems in current cities. Recent policies about the urban areas of Turkey are actually results of processes that took place in the 1950s. For example, renovation of squatter settlements with urban regeneration projects, deindustrialization efforts, large-scale infrastructure, and superstructure projects are the most prominent of these policies affecting the current urban spaces.

The basic approach in deindustrialization studies that drew the attention of researchers from various disciplines after the mid-1980s, is to act on macro panel data (Brady & Wallace, 2001; Brady & Denniston, 2006; Kollmeyer, 2009; Kollmeyer & Pichler 2013; Svilokos & Burin, 2017; Sarra, Berardino & Quaglione, 2018). Therefore, the analysis of the micro areas is mostly neglected by studies performed in higher scales involving unions of countries (OECD, EU). The difficulty of creating a data set for micro fields hinders understanding the transformations in spatial scale. In this study, deindustrialization activities that increased their impact after the 2000s and became evident with factory shutdowns were discussed. Deindustrialization that has progressed as a political intervention to the urban area in Istanbul is considered along with the post-

industrial functional transformations. The major goal of the study is to explore the influences of deindustrialization on the functional use of Istanbul. The main conclusion of the study is the fact that after deindustrialization, there has been a rise in financialization operations accompanied by large and medium-scale real estate investments in Istanbul. This process is not yet complete and can be weakened due to various financial crises from time to time. However, deindustrialization and financialization processes in the city are predicted to continue aggressively in the next decades.

The study begins with the introduction, in which the industrialization-urbanization process of Istanbul is going to be examined. The second part explains the method followed to identify the deindustrialization process in Istanbul. The third part is focused on the previous literature of deindustrialization, global deindustrialization periods, and the indicators used in deindustrialization are explained. In the fourth part, deindustrialization in Turkey is reviewed with macro-economic indicators, and based on the indicators, it is emphasized that substantial deindustrialization activities did not develop in Turkey. Finally, in the fifth part, the findings of the field studies conducted in Istanbul are analyzed. This section deliberates on the deindustrialization of Istanbul and its districts through the perspective of functional change in space. The study finishes with the conclusion part.

2. Materials and Methods

The major data source in the study is the field studies conducted in 2017-2018. Within the scope of the study, Istanbul is analyzed on the scale of districts. In the study, the deindustrialization of the districts was examined in 4 stages. The first stage is the literature review. At this stage, the history and development of each district were investigated and factories of the development period tried to be identified. Upon identification of the factories, they were chronologically ordered.

In the second stage, factories that meet these criteria were marked on the map using old satellite images and the Istanbul Metropolitan Municipality City Guide. At this stage, other possible factory areas in the investigated district were also tried to be identified. Locations of the factories obtained through both literature and satellite images are also listed according to districts. In the third part of the study that adopted as a method, the accuracy of the obtained

factory data was checked. In this phase, in addition to observations interviews were also made, and hence, not only the existing data on the factories were confirmed but also new factory areas were identified, completing the map. In the last stage, factories found in the previous steps were mapped by Geographical Information Systems. ArcGIS 10 program was utilized during mapping. During the deindustrialization at the district scale, the total number of factories that were shut down is 291 in Istanbul. The lands of shutdown factories are categorized as the areas that are turned into real estate investments, inactive or in ruins, culture-arts or congress areas, parks, public buildings, used for education, religion, and other functions, and finally as areas that will turn into real estate investments in future.

3. On Deindustrialization

Research on deindustrialization sped up in the last 30 years of the 20th century. In the classical development economy, specifically in the structuralist approach, the manufacturing industry has been considered as an engine for development. In this perspective, industrialization plays a key role in helping out emerging countries to reach the level of developed countries (Tregenna, 2016). Policies and approaches on the role of industry in development began to change since the 1970s, and a process in which the development of the services sector started to stand out has been experienced. The first explanation of the transition from the industry to the services sector started to appear in the literature in the 1940s, which also corresponded to the structural transformation in the economy. Clark (1940) stated that the transformation from industry to services was a natural process for the developed economies. In *The Condition of Economic Progress*, he emphasized the fact that the more the economy develops, the systematic transition from the manufacturing industry to the services sector will also occur based on the increasing demand (Clark, 1940). Overall, deindustrialization has been considered a normal process in developed economies due to the structural transformation in earlier studies (Rowthorn & Ramaswamy, 1997). From this point of view, despite the decline of industry in the shares of GDP, industrial productivity that stayed constant evaluated as a natural and positive result in developed countries.

Analysis of deindustrialization is a process shaped by complex and dynamic factors of today's world. Different parameters can be used to define deindustrialization. The decline in industrial employment and the GDP share of

industry, added-value (real or nominal) is often the principal indicator guiding researchers to analyze the process. Undoubtedly, the fact that industrialization has followed a different course in the historical process has not only affected the development level of countries today, but also the course of the deindustrialization in countries. In the relevant literature, deindustrialization in developed countries is defined on a positive developmental axis. The most critical part here is pinpointing the fact that in developed countries, deindustrialization is a natural outcome of economic growth and structural changes of the economy (Baumol, 1967; Rowthorn & Ramaswamy, 1997; Kandžija, Tomljanović, & Huđek, 2017). Clearly, these natural outcomes are closely linked with the economic structure in developed countries. Rising productivity despite the decline in industrial employment and its decreasing/stable share in GDP is the chief orientation of this type of deindustrialization and it is often referred to as relative deindustrialization (Kandžija, Tomljanović, & Huđek, 2017: 401). When the deindustrialization process described based on developed countries is applied to emerging countries, it is characterized with different outcomes. Especially the switching of the developing countries that did not experience fully effective industrialization into deindustrialization causes many economic, social, and spatial problems. The transition in economic structure is called premature deindustrialization (Shafaeddin, 2005; Dasgupta & Singh, 2006; Palma, 2014; Rodrik, 2015; Sumner, 2018) and becomes evident with its negative aspects. The key problem here is the transition from partial industrialization to financialization and services in developing or underdeveloped countries.

The early transformation of the industry that was seen in many Latin American and African countries does not stem from structural economic transformation as it is the case in developed countries. Most of the time, interventions of the policymakers is the main dynamic driving the deindustrialization processes in those countries. Principal causes of the process have arisen with the adaptation to neoliberal restructurings such as liberalization of the trade, liberalization of the markets, strict monetary policies, and most importantly financial liberalization (Tregenna, 2016).

Reasons of deindustrialization that was experienced in both negative and positive aspects can be categorized as internal and external factors (Krugman & Lawrence, 1993; Tregenna, 2016; Bernard, Smeets, & Warzynski, 2017; Kandžija, Tomljanović, & Huđek, 2017). Productivity, globalization (Alderson,

1999; Brady & Denniston, 2006), foreign direct investments (Kang & Lee, 2011), and the trade between north and south (Lawrance, 1983; Wood, 1991; Sachs & Shatz, 1994; Wood, 1994; Saeger, 1997; Kugera & Milberg, 2003) are among the most prominent internal and external factors. Despite recent studies indicating that internal factors affect the deindustrialization to a greater extent, external factors such as trade and foreign direct investments also have an impact on deindustrialization (Kang & Lee, 2011).

Among the internal reasons for the decreased industrial employment, productivity is one of the most outstanding causes specifically in developed countries (Kutscher & Personick, 1986; Rowthorn & Ramaswamy, 1997; Tregenna, 2011). The rise of productivity in the industrial sector has two types of outcomes in terms of employment. On one side, productivity growth offers the opportunity to produce industrial goods relatively cheaply, while on the other side it stimulates the demand (Kandžija, Tomljanović, & Huđek, 2017). Ultimately, fewer workers are required in the industry. Hence, the main indicator of deindustrialization, decline of employment in the industrial sector becomes noticeable in macro indicators. Another aspect of the discussions on productivity is the transition of labor within the context of technological innovations. The transition to knowledge-intensive production in developed economies has reduced the demand for labor-intensive workforce, which was accompanied by the emergence of deindustrialization studies referring to changes in the quality of labor (Frey & Osborne, 2013; Cohen & Kristal, 2015). The transition of the labor in this direction has led to labor-intensive and low-skilled jobs being identified with the South, whereas economic activities requiring higher skills such as strategic management, product development, R&D, and innovation with the North. The process that is also corresponding to the global relocation of production, has become more evident today with off-shore activities (Nicoud, 2008; Timmer et al., 2014; Dicken, 2015; Schindler, 2018; Pike, 2020). While the cheap labor provided by the South often appears to be the chief cause for the global relocation of production, the acquisitions in democracy and poor worker rights in the South can be considered as other reasons for the maximized profits of some companies. But the stability of these relocations is open to discussions. Today, the re-industrialization debates in populist politics that become evident with Donald Trump have the potential for changing the path of the deindustrialization processes. Additionally, both France and Denmark launched the Minister of Industrial Recovery and

Strategy for Denmark as a Production Country respectively, both in 2012. Countries are aiming for increasing the production of advanced technology in parallel with increasing the technology-related skills of workers and hence contributing to the re-industrialization with these strategies (Bernard, Smeets, & Warzynski, 2017).

One of the obvious trends that were seen after the deindustrialization is the transition towards the services sector in the economy. According to the studies considering deindustrialization processes as a natural result of structural development, expansion of the services sector was also quite natural. The hypothesis here is based on the assumption that the transition to the services sector will absorb the workforce dislocated from the industry. However, in those cases in which the hypothesis was not applicable, the deindustrialization manifested itself as an employment problem and as a boost of inequality within the society (Svilokos & Burin, 2017; Bernard, Smeets & Warzynski, 2017). Therefore, the deindustrialization emphasized mostly with its economic aspects in the literature is now also visible with its spatial, social, and cultural aspects within the society (Cowell, 2015).

Multiple effects of the deindustrialization mentioned above have necessitated the emergence of studies also on the micro fields. One of the studies in this sense was conducted by (Bluestone, 1984). In this study, while deindustrialization is evaluated with macro indicators on the American scale, it is also analyzed at the micro-level by studies on the states of Massachusetts, New York, Michigan, Ohio, Georgia, North Carolina, Texas, California. Today, the number of micro-scale studies conducted in order to analyze the deindustrialization processes is increasing. These studies stand out with their tendency to exclude the economic outcomes and instead emphasizing the analysis on micro-scales (Hobor, 2013; Ayik & Avcı, 2018; Ayik, 2018; Ayik & Avcı, 2020). Hence, an analysis performed at the micro-levels helps to underline the consequences of deindustrialization on regions and even cities of the country. Ayik & Avcı (2020) is one of the most up-to-date micro-level studies that discuss the results of deindustrialization on the urban functional transformation within the aspect of developing countries. In this study, the deindustrialization processes that occurred due to the shutdown of factories on Büyükdere Street, one of the oldest industrial areas of Istanbul, are discussed within the scope of changing urban functions. The authors evaluated the spatial and social side effects of deindustrialization with a micro field.

4. (De) Industrialization of Turkey in terms of Macroeconomic Indicators

While Turkey's GDP per capita was 4000 dollars in 2000, it almost had risen to 9000 dollars in 2019 (Figure 1). This corresponds to an approximately twofold increase. When we look into the 2000-2019 period in terms of economic growth, it is seen that Turkey was exhibiting a 4,9% growth on average. This value was 1.6% for the European Union (The World Bank, 2020a). It is obvious that the impact of the 2008 crisis is undeniable for both the GDP and the economic growth. Both parameters of Turkey in the following years were in a downward trend.

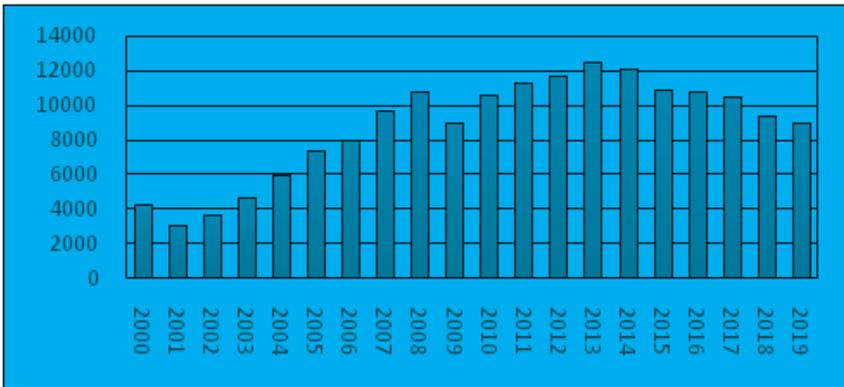


Figure 1: Evaluation of GDP per capita in Turkey during the 2000-2019 period (currency: US \$). Source: Author-generated by utilizing the data from The World Bank 2020 (a1).

One of the first factors to look for in terms of deindustrialization indicators is the transition trends among different sectors over the years. Based on the added value of the sectors in GDP, the share of agriculture regressed to 6% from 10% between 2000 and 2019. This ratio is 1.6% in EU countries in 2019. The share of the manufacturing industry remained constant at 18% over the same period. After showing a downward trend in 2008, the manufacturing industry achieved its lowest share in GDP with 15% in 2010. In accordance with the developing countries, the share of the services in GDP is rising. The contribution of services to GDP increased from 52% to 56% in the same period (The World Bank, 2020b). This rate is approximately 10% below of both the European Union countries and the world. It is not possible to obtain a meaningful indicator for Turkey when the deindustrialization is considered through the sectoral contributions to GDP. Even though there was a decrease in the manufacturing industry between 2008-

2010 in Turkey, it started to increase after the year 2011 (Figure 2). These values prove that indicators based on the contributions of different sectors to the GDP are not meaningful.



Figure 2: Gross Value Added by Manufacturing in the period 2000 - 2019 (% of GDP).

Source: Author-generated by utilizing the data from The World Bank 2020 (c).

Another macro indicator representing the change in the manufacturing industry is industrial production. When the industrial production of Turkey between 2000-2017 is evaluated and the 2008-2009 economic crisis period excluded from these years, an ever-increasing index of industrial production is observed (Figure 3). Therefore, getting through with the economic crisis in 2010 is accompanied by the increase of production in Turkey's manufacturing industry.

One of the main indicators of deindustrialization is the decline in the labor force employed in the manufacturing industry. In the studies conducted from the past to the present, it has been determined that there have been significant losses in manufacturing industry employment, specifically in early industrialized countries. However, for the case of Turkey, inadequate data sets are hindering the interpretation of indicators. The number of insured workers employed in the manufacturing industry between 2007-2019 provided by the Social Security Institution (SGK) gives some clues to explain the change in the manufacturing industry. It is understood that the first decline started with the 2008 crisis and the employment in the manufacturing industry fell slightly below 2.5 million in the following year of 2009. Nonetheless, the upward trend continued after 2010, and the number of insured workers registered in the manufacturing industry reached 3.6 million in 2019 (Figure 4). Therefore, rather than a decrease of the labor employed in the manufacturing industry, it is possible to speak of an increase in Turkey.

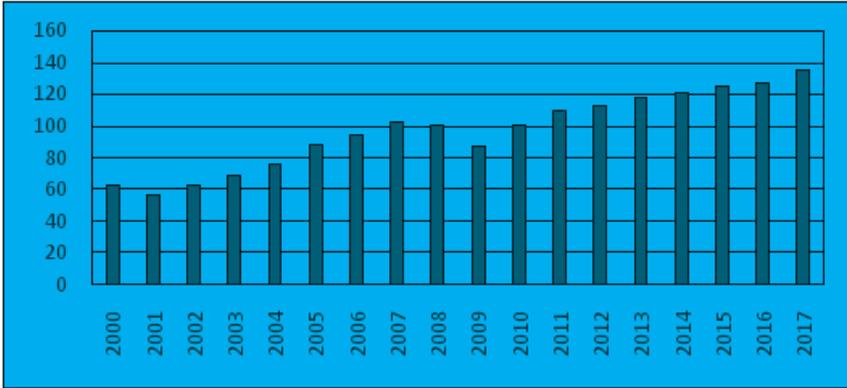


Figure 3: Industrial production index in Turkey, 2000-2017 (2010 = 100) classification economics activities Nace Rev 2: manufacturing Source: Author-generated by utilizing the Eurostat 2020 data.

Along with globalization processes, one of the factors that played a key role in the deindustrialization is the inflow of foreign direct investments. Foreign direct investments stemmed from the rising international movement of capital are discussed in (Alderson, 1999) in terms of its potential to negatively affect the workforce in the manufacturing industry. Accordingly, in many cases, the concentration of foreign direct investments in a country causes the decline of the labor force in the industry. When we analyzed the trend of foreign direct investments in Turkey after 2000, a significant rise is observed. The share of foreign direct investments in the GDP increased to its highest value to 3.6% in 2006 from 0.3% in 2000 and it was 1.1% in 2019. In 2019, the percentage for foreign direct investments in Turkey is lower compared to the EU with 1.5% and the world with 1.7% respectively (Figure 5). Thus, within the GDP, foreign direct investments were not able to sharply affect the employment in the manufacturing industry.

According to the most prominent indicators in the literature and the study mentioned above, it is not possible to discuss an exact deindustrialization process for Turkey. Since there is no decrease either in the manufacturing industry production and other values related to the production or in the employment rates of the manufacturing industry. On the contrary, based on the parameters of the 2000-2019 period, industrialization has continued to increase in Turkey. However, today's deindustrialization processes emerging in the developing countries such as Turkey are rather observable through the political interventions towards the lands. The transformation of large-scale factory lands plays an especially critical role in the urban regeneration projects designed after 1980. Therefore, focusing solely on cities can help to reveal many spatial parameters that were not found

out in the macro indicators. In the next section, deindustrialization processes occurring in Istanbul as an important industrial city of Turkey will be analyzed and a novel perspective will be provided for the deindustrialization.

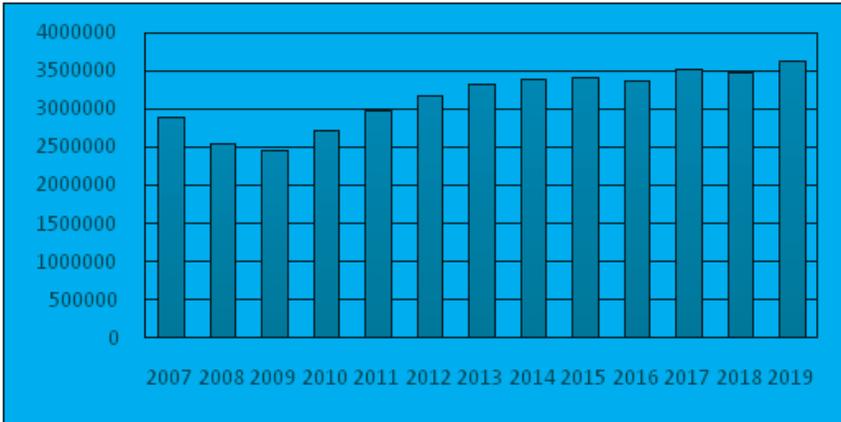


Figure 4: Manufacturing employment in Turkey during the period of 2007-2019. Source: Generated by the author using Social Security Institution data (2020).

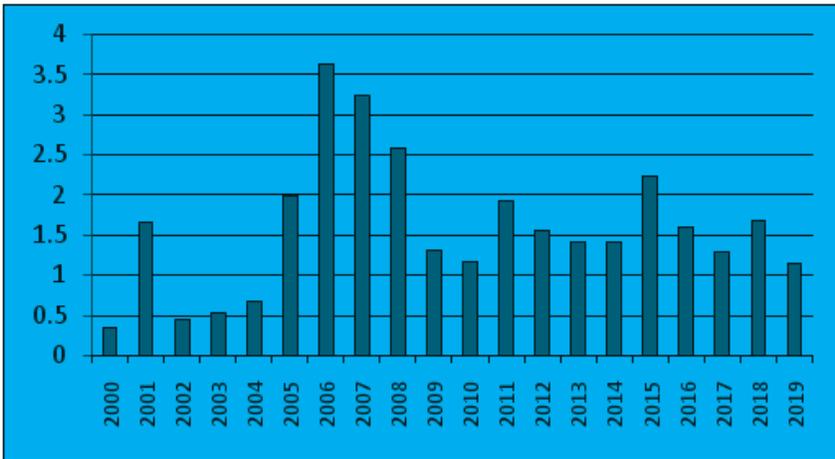


Figure 5: Foreign direct investment, net inflows (% of GDP) Source: Author-generated utilizing the data from The World Bank 2020 (d).

5. Deindustrialization of Istanbul Through Spatial Changes

Istanbul is the first city that comes to mind for the urbanization and industrialization processes of Turkey. Industrialization with a rising speed after 1950 accompanied by a preference of the population to reside in concentrated mostly in the Istanbul among other cities. Therefore, this situation has enabled some areas in

Istanbul to become distinct points recognized by the condensed industry. The deindustrialization processes symbolized by the shutdowns of factories after 2000 have exclusively accelerated in the places that were known as industrial settlements in the past. These processes emerge through the interventions in form of micro-planning that was mainly conducted by district municipalities or the Metropolitan Municipality. These interventions are especially beneficial for the analysis of deindustrialization in those countries fulfilling the criteria of developing economies such as Turkey. Thus, deindustrialization that was not apparent in the macro-indicators is revealed in the spatial scale along with the urban transformation. In the study, deindustrialization processes in Istanbul were analyzed at the level of districts and areas within the districts.

As a result of the field studies carried out between 2017 and 2018, 291 large-scale factories were identified in Istanbul, which were closed after the 2000s (Figure 6). The functional transition in these factory areas is closely related to the urban transformation of Istanbul. The first holistic intervention regarding the macro transformation of Istanbul was set forth with the 1/100.000 scaled Environmental Plan announced in 2004. In 2004, a protocol was signed between the Ministry of Environment and Urbanization and Istanbul Metropolitan Municipality (IMM) of the period, and upon acceptance of it by the IMM Council on 14.07.2006, the protocol was effectuated on 22.08.2006 with the approval of the IMM. This plan not only designed Istanbul on a macro scale but also guided local administrations for the past 16 years on functional transformations in the post-factory period.

The number of factory lands that productions was stopped or were demolished and inactive in Istanbul is 86. This figure corresponds to 30% of the total number of shut-down factorial lands. While some of these factories are inactive or in ruins due to legal processes, the situation of some of them is uncertain due to the prolonged planning. Another interesting functional change during the transformation of traditional factories is related to the service function. For example, 15 factory areas have been radically transformed into shopping malls. This figure corresponds to 5% of the total number of shut-down factorial lands. Different functions such as individual hotels, public buildings, culture and arts activities, advertising, hospital, education area can be examples of post-industrial uses.

Deindustrialization of Turkey that was not significant in the macroeconomic indicators becomes significant when it is dissected along with the urban

development and transformation. Factory areas with high employment capacity and massive lands have entered into a rapid transformation process after the 2000s. Despite these, the stability of the contribution of Istanbul to industrial production and employment is closely related to the preservation of small-scale industrial facilities in the city.

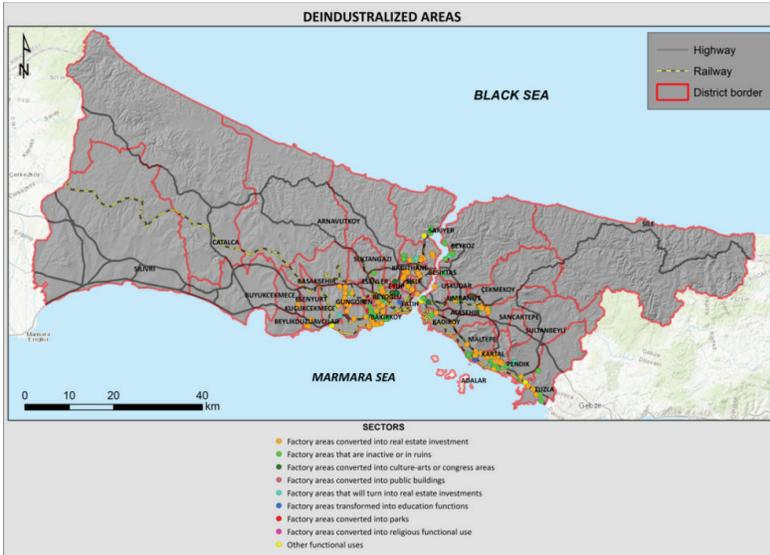


Figure 6: The geographical distribution of deindustrialization in Istanbul

Especially the presence of businesses that need relatively smaller production lands such as textiles and food facilities helped the maintenance of industrial indicators at high levels. On the other hand, facilities that required larger lands for production are being transformed, and running factories are moved to their production activities to different lands such as Tekirdag-Cerkezkooy in the east, and Kocaeli-Sakarya in the west. Moreover, some businesses stopped their production activities altogether and switched to the real estate sector based on the examples of the past decade.

The distribution of the post-factorial lands that served the purpose of globalization of the Istanbul city among the districts and industrial areas within those districts provides a more detailed view of the functional changes that occurred after factory shutdowns (Figure 6). The transformation of micro areas plays a key role in the restructuring of employment on the local scale. People who had covered employment in the factories of the past can often work as an uninsured and cheap labor force in the post-factory services sector.

D-100 (E-5) Highway is one of the areas that draw the most attention in terms of post-factory functional use in Istanbul. The deindustrialization

tendencies in this line beginning from Tuzla in the east and continuing until Kadıköy in the west are quite apparent. Kartal district, which developed itself as an industrial settlement in the past, offers the most explicit examples of deindustrialization in Istanbul. The rapid transformation of factory areas into branded real estate investments at the north and south of the D-100 Highway is also represented in the geographical scene. High-rise housing and business centers have emerged in the lands subject to real estate investments. Therefore, the horizontal spatial growth of the past has been replaced by high-rise housing structures (Figure 7). It was determined that a total of 56 factory lands in Kartal were transformed. While 19 factory lands have been directly involved in large-scale real estate investments, 29 factory areas remain inactive or ruin. Kartal is the most notable district of Istanbul in deindustrialization processes evident in the spatial scale. D-100 Highway and Sanayi Caddesi route is one of the areas in which functional transformation upon the deindustrialization is felt the most. Here, many factories such as Eczacıbasi, Oralitsa, Superlit, Yunus Cimento, Efes Pilsen have already undergone a transformation or waiting ruin.

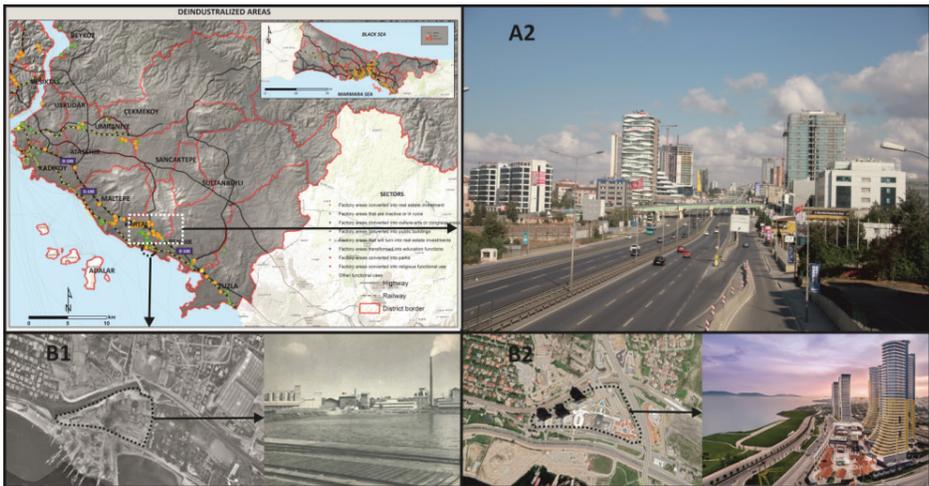


Figure 7: A1: The geographical distribution of the deindustrialization in the Anatolian districts of Istanbul. A2: The change in the geographical scene after the deindustrialization in a part of the D-100 Highway between Pendik and Kartal districts. The horizontal expansion based on the factories yields to the vertical growth accompanied by residences and business centers with the deindustrialization. B1: Yunus Cement Factory was founded in 1929 in Kartal. Source: <http://www.kartalkentder.org> B2: Real estate investment in the land where Yunus Cement Factory used to be located.

Another district of Istanbul in which the deindustrialization is apparent is Beykoz. Beykoz, which stayed as a quiet coastal settlement until the 1950s, was declared as an industrial area according to the Istanbul Industrial Zone Plane prepared in 1955 in order to classify the industrial lands around the Bosphorus (Tümertekin, 1972). Thus, the industrial function that was evolving since the last period of the Ottoman Empire has become indisputable. As well as the cultural and ethnic changes within the population, the number of inhabitants also increased due to industrialization. Industrial facilities emerged in the last period of the Ottoman Empire and the first periods of the Republic were all located in the north-south direction along the coast. Therefore, thanks to studies conducted in the field, it has been determined that 8 factory areas that undergo the process of de-industrialization in Beykoz, are located in the north and south of the Bosphorus. 4 of them are waiting inactive or demolished. 1 factory land was turned into a park and 1 factory land was turned into a public building. 1 factory land was planned to be utilized as a hotel (Figure 8). Beykoz Leather and Shoe Factory, which dates back to the last period of the Ottoman Empire, has also undergone a functional change and started to be utilized as a building for the production of TV series and commercials. The post-industrial transformation of factories has also created changes in the blue-collar labor in Beykoz. The labor of the previous factories tended to leave its place to a different labor employed by the services sector.

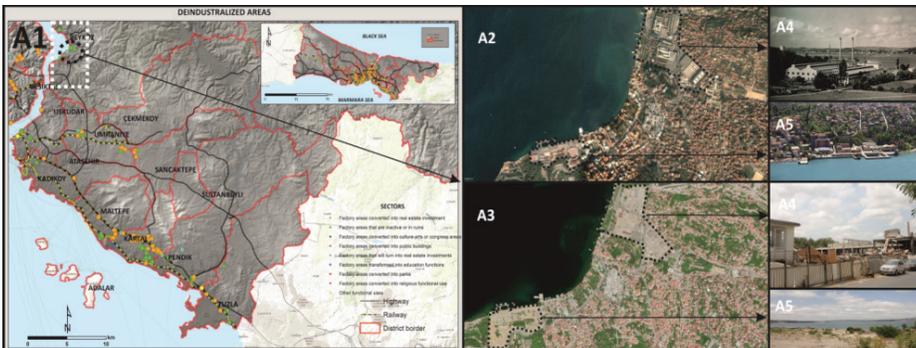


Figure 8: A1: The geographical distribution of the deindustrialization in the Anatolian districts of Istanbul. A2 and A3: The spatial status of Paşabahçe Şişecam Factory (above) and Paşabahçe Tekel and Alcohol Factories located both in Beykoz, Istanbul. A4 and A5: The utilization status of factories before and after deindustrialization is observed. A4 Source: <https://kulturenvanteri.com/> A5 Source: <https://beykozguncel.com/>

In addition to Kartal and Beykoz, Sisli is another district that co-developed with the industry. In the past, industrial areas in the district of Sisli preferred to 2 two specific locations. These were Bomonti and its surroundings, and the Buyukdere Street between Levent and Sanayi neighborhoods. The development of industry in Bomonti and its surroundings started with the establishment of Bomonti Beer Factory in 1892 and it was strengthened in 1950 when it was declared as an industrial area by the decision of the Istanbul Municipal Council (Tümertekin, 1997). On the Buyukdere Street started to emerge as an industrial zone in the first years of the 1950s with a preference of location by the pharmaceutical companies. With the 1/5000 scaled Istanbul Industrial Sites zoning plan approved on 29.04.1966, the industrial function of the city has become even more dominant. Sisli's choice of location for such industrial facilities in these two industrial areas has also triggered the formation of squatter settlements such as Gültepe, Kuştepe, and Çeliktepe that provided cheap labor to the industry.

According to the field studies, it was determined that 26 factory areas in Sisli were subjected to deindustrialization. In certain areas of Sisli, the power of de-industrialization was even more eminent. For instance, factory areas located along the Buyukdere Street were rapidly cleansed of industry and opened to different functional purposes after the 2000s (Figure 9). Many factories such as Roche Pharmaceuticals, Tekfen Lamps, Fako Pharmaceuticals, and Eczacibasi Pharmaceuticals can be given as examples of factory areas that have left their places to different uses in Sisli district (Ayik & Avcı, 2020). Similar to other districts, dominant functional transformations were again shaped by real estate investments. Among the 26 factories identified in the Sisli District, 19 of them became a branded real estate investment. Especially, high visibility in the direction of Buyukdere Street has enabled multi-story buildings to dominate. Likewise, today, Bomonti has lost its factory function in major and involved in a structuring to fulfill the goals of the service sector. While two factory areas in Sisli are in ruins or inactive, one factory area has turned into a school function, two factories have been demolished to a hotel, and one factory has been demolished to become a bank building. One factory is demolished and the factory area is utilized as a parking lot.

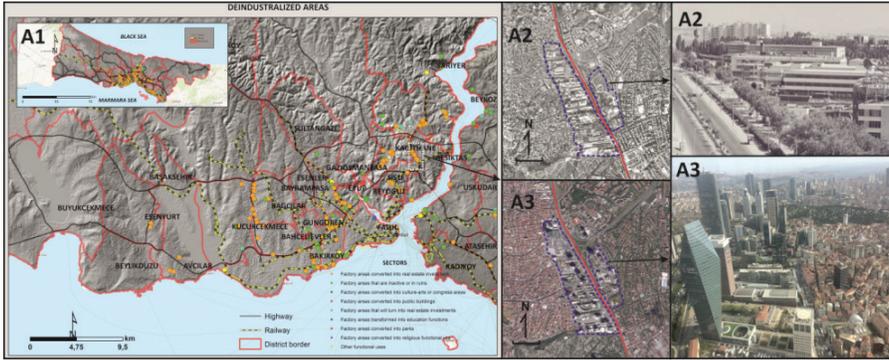


Figure 9: A1: The geographical distribution of the deindustrialization within the European districts of Istanbul. A2: The location of the factories located on the Büyükdere Street in Sisli and their geographical view. Source: <https://www.eczacibasiilac.com.tr>. A3: The transition from the factory to the multi-story residences and business center on the Büyükdere Street after the deindustrialization. Today, this area also fulfills the function of the Central Business Area of Istanbul.

6. Conclusions

Analysis of deindustrialization processes within the scope of countries and cities is one of the issues emphasized in academic research. However, researches are mostly dwelling on OECD and European Union countries and deindustrialization processes are evaluated through the macro panel data. Such analysis leading to significant outcomes in the initially industrialized countries, cannot reproduce meaningful results when it comes to the still-developing countries such as Turkey. Especially for these countries, the lack of proper panel data sets for deindustrialization often leads to an obstacle for the analysis. Another difficulty for the analysis is that the deindustrialization processes in developing or underdeveloped countries are shaped by the political urban interventions, and not through the structural change of the economy. Turkey is one of the most up to date example of this condition. Economic policies changed after the 1980s encouraged the transformation of large-scale industrial areas in metropolitan cities such as Istanbul, Izmir, and Ankara. As a result, in these cities with better integration to the global system, large-scale industrial facilities have begun to be replaced by real estate investments along with financialization tendencies. Therefore, the horizontal spatial growth based on the factories in the past

industrial areas of the cities has begun to be replaced by the vertical residential structure.

Deindustrialization as a result of typical political interventions emerges through three different patterns. These three patterns are the replacement from the center towards the periphery (decentralization), moving to a new area within the city (relocation) or complete eradication of industry from the area (deindustrialization). It is understood that these three patterns are mostly occurring in synergy for the case of Istanbul. A facility in the same area can change sector with its existing capital or some other facility can be closely located in or in a different country. Essentially, different criteria such as capital demands, profitability, and cost might play various roles during the process.

35% (103 factories) of the 291 factories closed in total in Istanbul became branded real estate investments. This high percentage reveals the fate of transformation occurring on those lands as the residence constructions after shutdowns. Apart from these lands, there are also 23 factory areas that have been planned as real estate investments but have not been completed yet, and the total percentage of those is approximately 8. When one also includes these factories that are not completed yet, the share of real estate investments among all transformation purposes reaches a total of 43%. Today, there are still areas that factories are staying inactive on the land despite the terminated production or completely demolished. Such areas that are still factorial fields constitute 30% of all deindustrialized areas. There are several reasons for the delay of transformation in these areas. For instance, lack of favorable market conditions and legal obstacles may not allow the area to be re-purposed in some cases. In fact, the high percentage of inactive or ruined factory areas among all admits the absence of rapid transformation after the deindustrialization.

The remaining 79 previous factory areas have undergone different transformations for diverse functions. The percentage of these areas among all is 27. The most prominent of these other functions are the facilities of the services sector. The number of areas transformed into services functions (banks, business centers, telecommunication buildings, etc.) is 38 which 13% constitutes of all areas. Shopping malls are the second most common function for a transformed area. Especially the rapid increase in the market value of the land, the insufficient profit in production, and the fact that the earnings obtained from sales / leasing in many areas are more than the industrial incomes steer the preferences in the shopping malls. After shopping malls, the prominent functional use in this

group is the areas that have turned into education or culture and arts functions. The number of these areas is 14. The number of areas transformed into health functions is 5.

The distribution of functional transformation areas categorized within the scope of the study varies at the district level. There are two prominent districts with a rate of 35% of transformation towards the branded real estate investments purposes. These are Kartal and Sisli. Emergence of Kartal district as a novel innovation center enables equal the distribution of population among Istanbul despite the Central Business Districts of European side. Hence, some urban problems such as the traffic can be solved. For the post-industrial transformation in Kartal, the region of D-100 highway and the Sanayi Street in the south stand out within the district. In Sisli, 14 of the 26 factory areas identified have turned into branded real estate investments. In Sisli, Bomonti, and surroundings of it in addition to the Büyükdere Street are the places where the transformation is most noticeable. The number of projects that have been proposed but not completed yet is 23. Among them, some of the projects are in the initial phase, while others are in the planning phase. There is no significant condensation in the distribution of these areas among the districts. Kartal is the most prominent district with its 4 factory areas. When these two titles are evaluated together, the percentage rises to 43.

Ruined or inactive post-factorial areas are 30% of all 291 that has been found. Kartal is the place where these areas are the most. Of the 56 facilities identified in Kartal, 29 are still waiting in ruins or inactive. Among all the reasons that delay the transformation of these areas, a major one is the lack of compliance with the legal legislation. However, doing the required planning will speed up the transformation in these areas. After Kartal, 8 factory areas in Maltepe and 7 in Sarıyer still waits for transformation in an idle or ruined state.

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CHAPTER VI

INDUSTRIAL CLUSTERING IN INDUSTRIAL GEOGRAPHY: THE CASE OF GAZIANTEP ¹

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1. Introduction

Economic geography, population and relations between economy and resources throughout history; differences and similarities from place to place in terms of people earning a living; factors that determine preferences in choosing the location of economic activities; regional specializations and the causes of trade flows created by this specialization; As explanation of the differences in economic development and living standards have focused on numerous topics (Tümertekin & Özgüç, 1997; Kum, 2011; Doğanay, 2011). Economic geography seeks answers to concrete questions about the distribution and location of economic activities, its role in uneven development, and regional and local processes of economic development (Mackinnon & Cumbers, 2007; Arnott & Wrigley 2001).

The realities of economic geography are certainly among the most striking features of the world's economies. For example, one of the most striking things about the United States of America is that in this generally dispersed and largely fertile country, the majority of the population is settled in several clusters in

¹ This study was produced from the doctoral thesis titled "Industrial Cluster Analysis in Gaziantep Province in the Context of Economic Geography" prepared under the supervision of Ersin Kaya Sandal at the Department of Geography of the Institute of Social Sciences.

metropolitan areas, of which $\frac{1}{4}$ is located on the east coast (Krugman, 1991). Because industrial organizations need large consumption markets (Kara, 1990).

Changes in the economic structure brought about by globalization have also changed and transformed the global and local economic geography landscape. This change and transformation has revealed the need to evaluate some ongoing research areas in economic geography with new approaches. The concept of clustering is one of these areas.

Industrial activities have an important place in the formation process of the economic geography of the place (Ünal, 2010). On the other hand, the accumulation and concentration of economic activities in different places emerge with the mutual functional relations of economic factors (Mutluer, 1995). Since the early 1990s, with the concept of agglomeration or clustering within the scope of the New Economic Geography (NEG), space, that is, geography, has had a much more important position in the economy. Geographical concentrations generally consist of interconnected companies, specialist suppliers, service providers, companies in the relevant sector, and related institutions in specific fields that compete with each other as well as cooperate (Porter, 1998). Clustering not only creates great economic opportunities and advantages, but also changes and transforms the socio-cultural and geographical structure in the area where the agglomeration takes place.

Gaziantep was founded and rose on the Silk Road, which starts from China and extends to Europe. Productivity and commercial capability, which are the characteristic features of Gaziantep, which is the gateway of the Silk Road to Anatolia, formed the basis of its economy (Gaziantep Chamber of Commerce, 2012). The historical past of the city of Gaziantep indicates that it has a great trade heritage. Mortan and Arolat (2009) stated that the city formed its own economic hinterland, and that it was one of the rare cities that benefited from the growth of the Mediterranean basin between 1520 and 1580.

After the proclamation of the Republic, Gaziantep industry had a structure in which there were agricultural-based looms and these also operated in workshop type. By 1925, Turkey was divided into 11 industrial zones. Gaziantep has been connected to 7 provinces (Urfa, Malatya, Diyarbakır, Siirt, Mardin, Elazığ and Bitlis) and became one of 11 independent industrial zones. Pekdoğan (1998) expressed this situation as Gaziantep was the economic brain of the region in those years as it is today. Although the 1940s and 1950s were the years when statism policies were most intense in the economy, Gaziantep could not benefit

from state investments sufficiently. Despite all these negativities experienced between 1941-1945, it is seen that 8000 weaving looms are operating in Gaziantep.

“While large cotton yarn factories were established in the city in the 1950s and 1960s, small businesses based on hand looms in weaving started to leave their place to factories” (Bilgic, 2013). With the State Planning Organization (DPT), which was established after the 1960 Military Coup, steps were taken to recover the country’s economy with five-year development plans. According to the industry census made in 1964, 2392 people work in 43 companies (10 or more workers) in Gaziantep. Gaziantep was the 12th in the country in the number of companies and the 22nd in employment.

The years when Gaziantep industry gained momentum and returned to the manufacturing industry coincide with the 1990s. It is seen that Gaziantep, which witnessed an export-oriented growth in the 2000s, has entered into efforts to integrate into the competition and innovation-oriented global economy with the sectors of food, chemistry, rubber and plastic, machinery, leather and related products under the leadership of the textile sector (especially machine-made carpet production). Its exports, which have developed over the years, have reached an export figure of approximately 6.3 billion dollars to 172 countries by 1270 companies as of 2015. Although these figures are important in terms of showing the current economic situation of the province, it is thought that they will also point to the continuation of innovation and R&D-oriented growth.

In this study, in which the development of the concept of economic geography in the historical process and the place and importance of the concept of space in economic geography in industrial clustering studies are determined from a geographical perspective, it is aimed to determine the current situation of the industrial cluster in Gaziantep on the basis of economic geography with the Three Star Analysis method. In addition, some key findings and conclusions are intended to provide a geographical perspective in the development of cluster policies by the public and private sectors.

2. Literature Review

Thünen is considered to be the founder of location analysis. Christaller was the first to theoretically examine the functions of cities and their relations within a statistical framework. In his book called *Central Places (Die Zentralen Orte in Süddeutschland)*, he observed that there is a 7-level structure in Southern Germany

by examining the functions in the center of the settlements, the areas under the influence of the center and the relations between the settlements. Although both Christaller and Lösch actually referred to agglomeration economies and thus clustering while trying to explain the establishment places of firms, they could not fully focus on the benefits of this concept. Despite these shortcomings, however, Christaller and Lösch's models occupy a central place in the economic and geographical conceptualization of the urban hierarchy in spatial economies (Capello, 2007). Weber used transportation cost, labor cost and agglomeration activities to determine the optimal industrial establishment location.

Unlike traditional location theories, studies focused directly on clustering are conceptually based on Ricardo's Comparative Advantage Theories. This theory is basically based on the idea that a country can produce a good or service at lower costs. The idea that spatially close settlements bring significant benefits for companies was first expressed by Marshall.

Undoubtedly, one of the most important contributors to the development of the cluster concept in recent years is Porter. By examining 10 countries and more than 100 sectors, he identified the sectors with international competitive advantage and explained the factors that are effective in the emergence of this advantage.

Another name with important studies on clustering is Krugman. Putting forward the center-periphery model, which is accepted as the main axis of the New Economic Geography, Krugman states that the technical and model applications obtained from the theoretical industrial organizations enable the economic geography to be reconsidered. In other words, he states that it is time to try to combine the long-term but informal perspective tradition in this field with formal models.

An increase is observed in academic studies on clustering in Turkey. A model proposal has been developed regarding the need for harmonization between different policies in Turkey, the necessity of supporting cluster formations and what regional development agencies can do in this regard (Alsaç, 2010; Cansız, 2011).

Akdeve (2008) determined the inter-enterprise relations in Ankara OIZ and revealed the inter-firm affinities and learning processes, the ability of enterprises to innovate and technological change, assimilate and disseminate.

Özgen (2009) analysed the scope of innovation-based competition based on Porter's (1998) model and illustrated that clustering is a necessary unit in order to take part in global competition, by supporting it with current practice examples.

Güneş (2009), in his study, determined the existence of the cluster structure in the tourism sector in Erzurum and the positive or negative aspects of its current situation.

Keskin (2009) tried to determine what can be done to improve the cluster, what the deficiencies are and how to eliminate it by determining the profile of the Isparta forest products industry cluster, determining the competitive advantages and disadvantages of the cluster with business cluster analysis.

İrhan (2010) examined the clustering concept and its main theoretical approaches, after evaluating the effect of clustering on entrepreneurship, Bayrampaşa knitwear cluster was examined as an application study.

Karayel (2010), in his study, aimed to reveal the development of the concept of clustering in the literature and its effect on the performance of businesses, and then to determine the application results of the information obtained through field research and literature review in the shoe industry.

Erkut (2011) tested the hypotheses he prepared in his study, which aimed to reveal the areas with clustering potential in Aydın and their competitive advantages with various hypotheses.

Arıç (2011) tries to determine the relationship between the clustering dynamics that enable them to cluster in a certain geography and the international competitiveness of the Kayseri furniture industry.

In their studies in which the direct and indirect effects of cluster-specific resources on the innovation capabilities of enterprises are explained within the framework of a holistic model, Yiğit (2012) and Kocaoğlu (2013) explained the competitive power at the firm level by examining in detail the effects of the cluster, which is the closest to the firm in spatial, sectoral and relational dimensions. .

Eroğlu (2013) questioned whether there is a relationship between clustering strategy and urban competitiveness, how clusters perceive the concept of urban competitiveness, whether urban competitiveness increases with clustering strategy, and answers by asking basic research questions.

3. Data and Method

Industrial Cluster Analysis is a method used for the analysis of sectors, institutions and organizations that are formed by the concentration of businesses and institutions that are in contact with each other in a certain geographical area (space) and contribute to the formation of the economic value they create.

The cluster analysis used in this study is the Three Star Analysis. The Three Star Analysis is a technique developed by the European Cluster Observatory (ECO) platform funded by the European Commission. It is the most preferred cluster analysis in the European Union and the USA.

The reason for choosing the Three Star Analysis method is; it is based on employment data, which is the data that best shows clusters, and also reveals sectors with clustering potential. Three basic parameters are used in the Three Star Analysis. These are: Size, Dominance and Specialization parameters.

Size (Size) (e_i/E_i) is the ratio of the sector employment data in the province to the total employment data of the sector in the country. If the employment in a cluster is above a certain level, the potential of this cluster to create economic benefits also increases.

Dominance (e_i/e_t) is the ratio of sector employment data in the province to the total employment data in the province. If the employment level in a cluster rises above a certain level at the regional level, the economic benefit potential of this cluster also increases.

Specialization [$(e_i/e_t) / (E_i/E_t)$] shows the ratio of the employment share of the sector in the province to the employment share of the sector in the country. If a cluster category is more concentrated in a particular province than in the rest of the country, the economic benefit potential of this cluster also increases. It is assumed that the specialization parameter is met when the dominance level is higher than the magnitude level. Here;

e_i : Gaziantep's employment in the i sector,

e_t : Gaziantep's total employment,

E_i : Turkey's employment in the business sector,

E_t : It represents the total employment of Turkey.

In the Three Star Analysis, a threshold value must be determined for all three parameters to show that clustering has occurred. The figure of 0.007 is taken for size and dominance to reflect a general trend. For specialization/specialization, a value of 1 is taken since it is expected that the ratio of the employment share of the sector in the province to the share of the sector in the country is expected to be equal in almost every study.

In this study, in determining the threshold value; In terms of employment, the expected value of each sector in the manufacturing industry is taken as the threshold value for both size and dominance.

In the study, 12 of the 37 main sectors were excluded from the evaluation because they did not have employment in Gaziantep. In determining the threshold value for the remaining 25 main sectors; In terms of employment, the value obtained by dividing the expected value of each sector in the manufacturing industry by the 25 sectors we evaluated in the study is taken as basis. So the threshold value for the size will be: $1/25 = 0,04$.

However, it is not correct to ignore the values used in other studies conducted in our country. In addition, in the determination of threshold values in the light of analyses made with different scenarios, the most appropriate threshold value was determined for the indicators of the industry sub-sectors of the province, taking into account the values used in the literature based on the employment data of the province. Threshold values were taken from the highest possible value for the size and dominance parameters in order to determine the clustering sectors in the province more reliably (Table 1). This has enabled the study to proceed on a more solid ground.

Table 1. Threshold Values Used in the Analysis of Three Stars
Based on Two Codes, Four Codes and Six Codes for Gaziantep Province

SIZE			DOMINANCE			SPECIALIZATION		
2 Code	4 Code	6 Code	2 Code	4 Code	6 Code	2 Code	4 Code	6 Code
0,045	0,060	0,070	0,010	0,010	0,010	1	1	1

Source: Author

In the three-star Analysis, NACE Rev. Codes are used. Since the TOBB (Association of Chambers and Commodity Exchanges of Turkey) Industry Database, which consists of the information of companies that have had capacity reports throughout Turkey, provides the most appropriate data in terms of both the information it contains and its up-to-dateness, the company and employment data from the TOBB Industry Database for 2015 were used in the study. The responsibility of publishing the industry sector capacity report statistics related to the statistics for the enterprises operating only in the industrial sector in Turkey within the scope of the official statistics program (RIP) has been given to TOBB. Industry Capacity Reports, which are prepared in accordance with the criteria of capacity principles, are approved by the Union of Chambers and Commodity Exchanges of Turkey after examining their compliance with the

criteria and become official. In other words, “Capacity Report is an official document showing how much production an industrial facility can produce with its existing machinery, personnel structure and production technology used” (www.tobb.org.tr).

The renewal of the infrastructure and coding system of the TOBB Industry Database, which was created in line with the reports prepared by the Chambers of Industry, Chambers of Commerce, Chambers of Commerce and Industry as a result of the on-site inspection of the production facilities, is another factor in this choice. The national classification PRODTR-2010, which was created by the Turkish Statistical Institute, is based on the classifications prepared by the European Union Statistical Office (EUROSTAT) in order to be compatible with the European Union and to allow comparisons in the creation of statistics. Machinery and equipment information and raw material coding are done according to the CPA 2008 classification. Industry capacity report statistics cover companies operating in the industrial sector within the borders of Turkey and having an Industrial Capacity Report made. Statistics are given throughout Turkey and according to the Statistics Regional Units Classification Level-3 (provinces).

In the TOBB Industry Database, there are 37 main sectors on a two-code basis and 255 sub-sectors on a four-code basis, and this includes 1499 sub-sectors on a six-code basis. In this study, all three codes were evaluated separately in order to get more detailed and clearer results. 25 out of 37 main sectors with two codes, 230 sectors out of 255 on a four-code basis, and 519 out of 1499 sectors on a six-code basis were examined. 12 sectors on a two-code basis, 25 sectors on a four-code basis, and 980 sectors on a six-code basis were excluded from the evaluation as they do not have employment in Gaziantep.

From the information presented, from the title of production capacities according to the provinces, employment information (as engineers, technicians, masters, workers and administrative workers) and the number of firms were obtained for each sector one by one on two, four and six codes basis for Gaziantep province. The same process was repeated for other provinces in all sectors, as the total data for Turkey was also needed for the Three Star Analysis to be performed. The necessary formulas were prepared and transferred to the Excel environment in order to classify these raw data according to size, dominance and specialization parameters on the basis of two codes, four codes and six codes.

4. Findings

As a result of the Three-Star Analysis, sectors that exceed the threshold value in a single parameter, that is, 1 star, are called Candidate Cluster, sectors that exceed the threshold in two parameters, that is, receive 2 stars, are called Potential Cluster, and sectors that are above the threshold in all three parameters, that is, 3 stars, are called Mature Clusters has been done.

A dense network of organized relations stands out between the firms and cluster actors in these clusters, which are above the threshold for all three criteria of size, dominance and specialization used in the Three Star Analysis. There is a trust-based cooperation between cluster actors and there is a constant interaction for both the economic and socio-cultural transformation and renewal of the cluster.

4.1. *Three Star (Mature) Clusters on a Two Code Basis*

In the study, 5 sectors on the basis of two codes were classified as mature clusters by taking three stars. These sectors are; manufacture of textile products, manufacture of leather and related products, printing and reproduction of recorded media, manufacture of rubber and plastic products, production and distribution of electricity, gas, steam and ventilation system (Table 2).

Table 2. Three-Star (Mature) Clusters and Their Coefficients on the Basis of Two Codes

Activity Name	Size	Dominance	Specialization
Manufacture of textile products	0,1071	0,4640	4,1482
Manufacture of leather and related products	0,0539	0,0193	2,0882
Printing and reproduction of recorded media	0,0526	0,0194	2,0373
Manufacture of rubber and plastic products	0,0457	0,0813	1,7727
Production and distribution of electricity, gas, steam and ventilation system	0,1549	0,0417	6,0039

Source: Author

The number of people working in these sectors in Gaziantep is 131,007. This number corresponds to 62.56% of the total employment (209,394) in the province. In addition, the employment of these sectors, which appear as mature clusters on the basis of two codes, is 1,487,969 people in Turkey. This number constitutes 18.33% of Turkey's total employment (8,113,530). In these sectors, the province of Gaziantep employs 8.80% of the total employment of these sectors in Turkey.

If we examine the sectors operating in the mature cluster on a firm basis, the number of firms operating in Turkey in a total of 5 sectors is 22,618. 5.30% (1200) of these companies operate in Gaziantep.

Within the province; There are 736 companies in the textile manufacturing sector, 174 companies in the leather and related products manufacturing sector, 35 companies in the printing and reproduction of the registered media, 216 companies in the rubber and plastic products manufacturing sector, and 39 companies in the electricity, gas, steam and ventilation system production and distribution sector. .

4.2. *Three Star (Mature) Clusters Based on Four Codes*

12 sectors on a four-code basis are classified as mature clusters with three stars. These sectors are; Manufacture of oil and fat, manufacture of ground vegetables and cereals, manufacture of cocoa, chocolate and confectionery, manufacture of other foodstuffs not elsewhere classified, manufacture of textile fiber preparation and twisting, manufacture of carpets and rugs, manufacture of other textiles not classified elsewhere, shoes, boots, slippers, etc. manufacturing, plastic layer sheet tube and profile manufacturing, plastic bags, bags, sacks, boxes, demijohns, bottles, reels and so on manufacturing of packaging materials, electric power generation, steam and air conditioning supply sectors (Table 3).

Table 3. Three Star (Mature) Clusters and Their Coefficients Based on Four Codes

Activity Name	Size	Dominance	Specialization
Oil and fat manufacturing	0,0611	0,0168	2,3684
Manufacture of ground vegetables and cereal products	0,1338	0,0454	5,1826
Manufacture of cocoa, chocolate and confectionery	0,0625	0,0294	2,4212

Activity Name	Size	Dominance	Specialization
Manufacture of other foodstuffs nec	0,0637	0,0102	2,4689
Preparation and spinning of textile fiber	0,2289	0,1837	8,8700
Carpet and rug manufacturing	0,5231	0,1134	20,2686
Manufacture of other textiles nec	0,1580	0,0289	6,1210
Shoes, boots, slippers etc. manufacture	0,0785	0,0185	3,0398
Manufacture of plastic sheets, plates, tubes and profiles	0,0724	0,0306	2,8072
Plastic pochette, bags, pochette, gunny bag, boxes, carboys, bottles, reels, etc. manufacture of packaging materials	0,1235	0,0388	4,7862
production of electrical energy	0,1355	0,0276	5,2496
Steam and air conditioning supply	0,2363	0,0142	9,1558

Source: Author

The number of people working in these sectors in Gaziantep is 116,687 people. This number corresponds to 55.72% of the total employment (209,394) in the province. In addition, these sectors, which appear as mature clusters on the basis of four codes in the province, employ 770,890 people in Turkey. This number constitutes 9.50% of Turkey's total employment (8,113,530). In these sectors, the province of Gaziantep employs 15,13% of the total employment of these sectors in Turkey.

If we examine the sectors operating in these mature clusters on a firm basis, the number of firms operating in 12 sectors throughout Turkey is 14,285 and 8.82% (1260) of these firms operate in Gaziantep.

Within the province, 102 companies are in the oil and fat manufacturing sector, 206 companies are in the production of ground vegetables and cereal products, 102 companies are in the cocoa, chocolate and confectionery manufacturing industry, 35 companies are in the manufacturing of other foodstuffs not classified elsewhere, 236 companies are in the textile fiber preparation and bending industry. , 201 companies are in the carpet and rug manufacturing sector, 30 companies are in the manufacturing of other textiles not classified elsewhere, 168 companies are shoes, boots, slippers, etc. In the manufacturing sector, 53

companies operate in the plastic layer, sheet, tube and profile manufacturing sector, 26 companies operate in the electrical power generation sector, and 13 companies operate in the steam and air conditioning supply sector.

4.3. Three Star (Mature) Clusters Based on Six Codes

On a six-code basis, 30 sectors were classified as mature clusters with three stars (Table 4). These sectors are; Nuts and peanuts (roasted, salted or otherwise prepared), bagasse and other solid residues (remains from the manufacture of vegetable fats or oils), cereal breakfast foods and other cereal products, bran husk and other residues (remains from the processing of cereals), chocolates and food preparations containing cocoa (excluding cocoa powder and white chocolate sweetened in bulk), confectionery (including white chocolate), non-cocoa synthetic staple fibers (carded, combed or otherwise processed for spinning), wool yarn for retail sale Yarn of fine or coarse animal hair or horsehair, yarn of cotton (other than sewing thread), man-made filament yarn, plied or twisted (excluding sewing thread and high tenacity yarn of polyamides, polyesters or viscose rayon), whether or not ready for retail sale artificial and synthetic filament threads (sewing threads) ready for retail sale Yarns with synthetic staple fiber content $\geq 85\%$ by weight (excluding sewing thread), yarns with synthetic staple fiber content $< 85\%$ by weight (excluding sewing thread), bleaching and dyeing services of textile fibers and threads, sacks bags and the like (used for packing goods), carpets and other textile floor coverings (with knots), carpets and other textile floor coverings, tufted (tasselled), non-woven fabrics and products made from them (excluding clothing), textile fabrics not elsewhere classified (impregnated (impregnated), dressed or coated), gimped yarns and tapes, chenille yarns, chenille yarns, shoes boots etc. with soles and uppers of rubber or plastic (except waterproof shoes or sports shoes), sanitary towels and tampons baby pads and diapers and similar hygienic products apparel and clothing accessories (made of pulp, paper, cellulose wadding or cellulose fiber nets), other printing services n.e.c., other synthetic filament yarns single ply, sheets sheets films films foils and strips of plastics (not supported or similarly combined with other materials), other sheets of sheets, films, foils and strips of non-porous plastics, bags and bags (including cones, handmade (excluding bags) ethylene polymers, bags and bags (including cones, excluding handbags), other plastics (except those made of ethylene polymers), carboy bottles, flasks and similar items made of plastic, electrical energy, steam and hot water sectors.

Table 4. Three Star (Mature) Clusters and Their Coefficients Based on Six Codes

Activity Name	Size	Dominance	Specialization
Nuts and peanuts (roasted, salted or otherwise prepared)	0,0690	0,01	2,67
Pulp and other solid residues (from the manufacture of vegetable fats or oils)	0,0774	0,01	3,00
Grain breakfast foods and other grain products	0,1972	0,01	7,64
Bran, husk and other residues (from the processing of grains)	0,1350	0,01	5,23
Chocolates and food preparations containing cocoa (excluding cocoa powder and white chocolate sweetened in bulk)	0,0731	0,01	2,83
Confectionery (including white chocolate), cocoa-free	0,0707	0,01	2,74
Synthetic staple fiber (carded, combed or otherwise processed for spinning))	0,4513	0,01	17,49
Wool yarn, whether or not for retail sale; yarn of fine or coarse animal or horse hair	0,0907	0,01	3,52
Cotton thread (excluding sewing thread)	0,1076	0,03	4,17
Man-made filament yarn, plied or twisted (excluding sewing thread and high tenacity yarn of polyamides, polyesters or viscose rayon), not ready for retail sale; artificial and synthetic filament threads (excluding sewing threads) ready for retail sale	0,4474	0,08	17,33

Activity Name	Size	Dominance	Specialization
Threads, synthetic staple fiber content \geq 85% by weight (excluding sewing thread)	0,5520	0,04	21,39
Threads, synthetic staple fiber content $<$ 85% by weight (excluding sewing thread)	0,1036	0,01	4,01
Bleaching and dyeing services of textile fibers and yarns	0,2272	0,05	8,80
Sacks, bags, bags and the like (used for packing goods)	0,1329	0,02	5,15
Carpet and other textile floor coverings (knotted ones)	0,7820	0,10	30,30
Carpet and other textile floor coverings, tufted	0,4344	0,01	16,83
Non-woven fabrics and products made from them (excluding clothing)	0,3928	0,01	15,22
Textile fabrics (impregnated, clad or coated) nec.	0,1218	0,01	4,72
Gimped threads and ribbons; chenille yarns; knit yarns	0,5533	0,02	21,43
Shoes, boots, etc., with soles and uppers of rubber or plastic (excluding waterproof shoes or sports shoes)	0,2015	0,01	7,81
Sanitary towels and tampons, baby pads and diapers and similar hygienic products, apparel and clothing accessories (made of pulp, paper, cellulose wadding or cellulose fiber nets)	0,1517	0,01	5,88
Other printing services not elsewhere classified	0,0921	0,02	3,57
Other synthetic filament yarns, single ply	0,2275	0,01	8,82

Activity Name	Size	Dominance	Specialization
Other sheets, sheets, films, foils and strips, non-porous, of plastics	0,0777	0,01	3,01
Other sheets, sheets, films, foils and strips, non-porous, of plastics	0,1978	0,01	7,66
Sacks and bags (including cones, excluding handbags), of ethylene polymers	0,2213	0,02	8,58
Bags and bags (including cones, excluding handbags), of other plastics (excluding those of ethylene polymers)	0,2433	0,01	9,43
Carboys, bottles, flasks and similar articles, of plastic	0,1238	0,01	4,80
Electrical energy	0,1355	0,03	5,25
Steam and hot water	0,2363	0,01	9,16

Source: Author

The number of people working in these sectors in Gaziantep is 127,112 people. This number corresponds to 60.70% of the total employment (209,394) in the province. In addition, these sectors, which appear as mature clusters on the basis of six codes in the province, employ 631,024 people in Turkey. This number constitutes 7,77% of Turkey's total employment (8,113,530). In these sectors, the province of Gaziantep employs 20,14% of the total employment of these sectors in Turkey.

If we examine the sectors operating in these mature clusters on a firm basis, the number of firms operating in 30 sectors throughout Turkey is 9969 and 11.55% (1152) of these firms operate in Gaziantep.

Within the province, 141 firms in the nuts and peanuts (roasted, salted or otherwise prepared) sector, 41 firms in the bagasse and other solid residues (remains from the manufacture of vegetable fats or oils), 60 firms in the cereal-made breakfast foods and other grain cereal products. 77 firms in the bran husk and other residues (remains from the processing of cereals) sector, 35 firms in the chocolate and cocoa-containing food preparations (excluding those in bulk and sweetened cocoa powder and white chocolate), 60 firms in the confectionery (including white chocolate) cocoa-free sector. , 6 firms in the synthetic staple fiber

(carded, combed or otherwise processed for spinning) sector, 4 firms in the fine or coarse animal hair or horse hair threads sector, whether wool threads are for retail sale or not, 35 firms in cotton threads (excluding sewing thread) In the sector, 125 companies manufacture artificial and synthetic filament yarns, plied or twisted (sewing threads and In the sector of artificial and synthetic filament yarns (except sewing threads) ready for retail sale, which are not ready for retail sale, excluding high tenacity yarns from polyamides, polyesters or viscose rayon, 31 companies use yarns with synthetic staple fiber content $\geq 85\%$ by weight (excluding sewing thread)) industry, 13 companies in the yarns sector with a synthetic staple fiber content $< 85\%$ (excluding sewing thread), 34 companies in the bleaching and dyeing services sector of textile fibers and yarns, 25 companies in the sacks, bags and similar (used for packaging purposes) sector, 174 companies in the carpet and other textile floor coverings (knotted ones) sector, 17 companies in the carpet and other textile floor coverings tufting (tassel) industry, 13 companies in the nonwoven fabrics and products made from them (excluding clothing) industry, 10 companies in the textile fabrics industry (not elsewhere classified). In the impregnated (impregnated) clothed or coated) sector, 14 companies pe yarns and strips, chenille yarns, chenille yarns sector, 77 companies, shoes, boots etc. In the sector of rubber or plastic soles and uppers (except for waterproof shoes or sports shoes), 14 companies include hygienic towels and tampons, baby pads and diapers, and similar hygienic products, apparel and clothing accessories (made of pulp, paper, cellulose wadding or cellulose fiber nets) sector, 26 firms in other printing services sector n.e.c., 6 firms in other synthetic filament yarns single ply sector, 15 firms in sheets sheets films, foils and strips plastic (not supported or similarly combined with other materials) sector, 7 firms in other sheet plates films, foils and strips in the non-porous plastics sector, 26 firms in the bags and bags (including cones, excluding handbags) ethylene polymers sector, 9 firms in the bags and bags (including cones, excluding handbags) other plastics (excluding those made of ethylene polymers) sector, 18 firms demijohn bottle flask and similar In the plastics sector, 26 firms operate in the electrical energy sector, and 13 firms operate in the steam and hot water sector.

5. Conclusion and Recommendations

Gaziantep has managed to become a productive city in thousands of years with its geographical location and human capital accumulation built on a rich community of civilizations. In the last thirty years, breakthroughs in the industry

have changed the economic structure. Considering the distribution of the industrial facilities and the workforce in the Southeastern Anatolia Region on the basis of provinces, the importance and weight of the province of Gaziantep is clearly revealed. According to 2014 data, 1535 (43.9%) of 3495 facilities in the Southeastern Anatolia Region and 62.8% (114,329) of total employment are located in Gaziantep. The number of OIZs in Gaziantep has reached 5, and the establishment of the 6th OIZ continues. The rapid development of the industry in this way has also increased the cluster effect in some sectors. In particular, some sectors have formed important clustering areas not only in national but also in regional terms.

In this study, it is aimed to determine the industrial cluster in Gaziantep city, its size, effect and location in Turkey scale. Three Star Analysis was used as the method. The data of Turkey and Gaziantep provinces taken from the TOBB industry database were evaluated on the basis of two, four and six codes. Due to the necessity of using the data of a reference upper region in order to carry out the Three Star Analysis, Turkey's data were also taken.

5 sectors in the province of Gaziantep in two codes, 12 sectors in four codes, 30 sectors in six codes were classified as mature clusters with three stars.

The following suggestions can be made regarding the future situation and clustering of the industry in Gaziantep.

In line with the data obtained as a result of the study, it can be thought that the existing sectors in the province of Gaziantep will grow further in the coming years within the framework of additional production, modernization investments, and production based on expansion, especially through the machine-made carpet sub-sector of the textile sector and that it may form a global cluster.

The rubber plastic industry will maintain its current status in the coming years. However, in order to move this sector to an international dimension, the necessity of additional measures such as the production of public support plastic basic raw materials from within the country is obvious.

The chemical industry can be expected to develop much faster. Investments to be made in this sector and incentives to be given may bring along an important new clustering process for the province, region and country. It is thought that the chemical industry will show a significant development in Gaziantep in the future.

It is foreseen that industrial clusters, which will be formed by private sector investments that closely follow the economic developments in the world

and Turkey, make technology-based investments, cooperate with the public and NGOs, will play a leading role for national and regional development.

Gaziantep needs to attach more importance to local dynamics in order to maintain and further develop its place in economic development and sectoral clusters. For this, space-related industry analyzes should be made.

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CHAPTER VII

THE MOSQUE OF SHEIKH SİNAN-ALAŞEHİR

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1. Introduction

Alaşehir, which has hosted many civilizations throughout history, is one of the influential settlements of Western Anatolia. With the province has been taking over by Ottoman in the 16th century, zoning activities have been developed in Alaşehir and many monumental structures such as mosques, khans, baths, tombs, fountains, as well as residences that were representatives of civil architecture were built (Emecen, 1989, 342-343). These structures sometimes had been built individually in the district where they are located, however, sometimes several buildings with different functions were combined and transformed into a complex. Alaşehir Sheikh Sinan Complex (Aksu ve Karakaya, 1993-4), located in Sarısu district, which consisting of a mosque, a tomb, a zawiya, a library and a cemetery; might be a great instance of these complexes. Unluckily, only the mosque, tomb (Özergin, 1970-71, 68. Daş, 2007, 103-107) and cemetery have survived until today (Fig. 1) but, the zawiya and library, whose existence was received from the sources, do not exist today (Evliya Çelebi, 2011, 59; Akıncı, 1949, 103-104; Erge, 2000, 64; Karakaya, 1996, 88). The fountain of the complex, which can be seen in the photographs obtained from the archives of the Turkey General Directorate of Foundations, has not endured.



Fig.1- Alaşehir Sheikh Sinan Complex general view
(Turkey General Directorate of Foundations).

2. Plan and façade faetures

The Sheikh Sinan Mosque consists of a harim covered with domes of equal size, a three-unit end portico and a minaret placed in the northeast corner of the last portico (Fig 2, Fig.3).



Fig.2- General view.

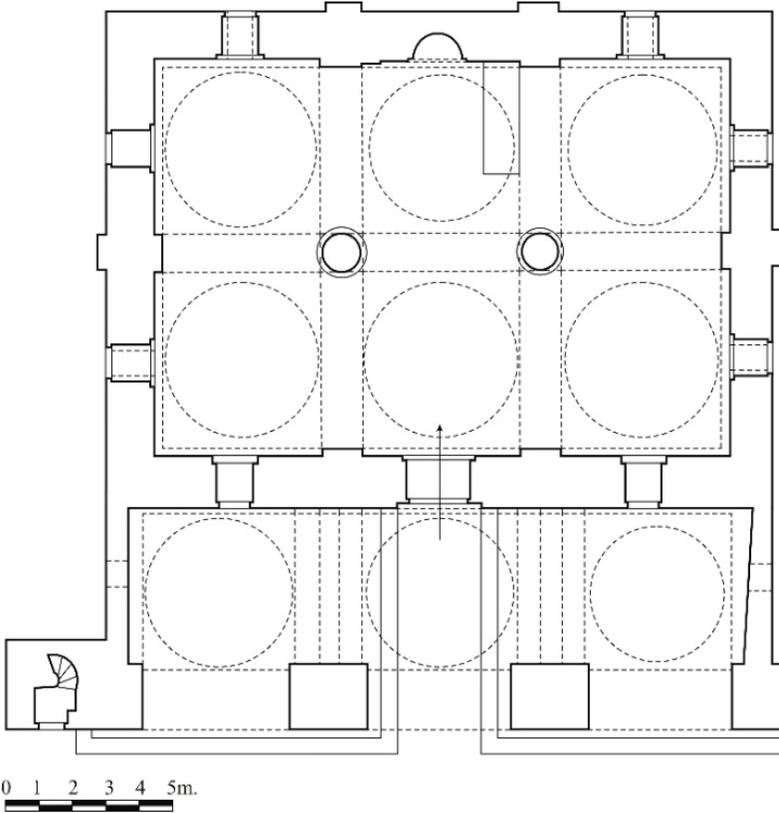


Fig.3- Plan

The building has alternating masonry consisting of two rows of rough-hewn stones and three rows of bricks. At the northern end of the western facade, an ornamented spolia block is notable. The structure has been surrounded by rows of diagonal bricks eaves. The domes covering the portico are lower than the domes of the harim. The domes are hidden by octagonal prism-shaped drums on the roof and the areas other than the domes are covered with metal plates.

There are five windows arranged in two rows on the west façade (Fig.4). One of the windows is placed on the sidewall of the portico and the other four are on the wall of the harim. The two windows in the lower row are rectangular-shaped and have pointed arch pediments. The pediment arches built with bricks are filled with horizontally placed bricks. The windows in the upper row are in the form of pointed arch openings. A buttress harem states on this facade.



Fig.4- Western facade.

On the south facade, there are four windows: two in the lower row and two in the upper row. While the rectangular lower row windows have pointed arch pediments, the upper row windows are in the form of pointed arch openings. Two buttresses are located on the facade.

The window arrangement, the buttress centred on the harim, and the east facade have similar characteristics to the west façade (Fig.5). The minaret on this facade was added to the northern end of the facade. The platform built with cut stones is at the same height as the portico. The entrance opening on the northern facade of the platform is low-arched and it was built of the cylindrical form cut stones. Since the junction of the platform and the foundation is restored unsuccessfully, it cannot be revealed whether the transition segment exists or not. There is a slip moulding bracelet on the upper part of the body. The transition to the minaret balcony consists of a series of mouldings.



Fig.5- Eastern facade.

The portico, located in the north of the building, opens to the courtyard with three arches (Fig.6). The ranks carrying the top cover are connected to each other and to the northern wall of the harim by arches. There are ornaments made of bricks on the arch corners. The arches in the portico are covered with iron windows, presently. The two piers in the middle are connected to the walls of the harim by pointed arches of 200 cm width. The middle part of the belly of the arches indents 60 cm. The wooden tensioners are placed inside the arches. The portico terrace is reached by two steps. There is an entrance placed in the middle of the northern wall of the harim and a window on both sides of the entrance. Vertical rectangular windows are round arched. A mukebbie is seen just above the entrance opening (Fig.7). Mukebbire is covered with a double-winged wooden door. E H Ayverdi states that the opening to the mukebbire is a window to the mahfil floor (Ayverdi, 1989, 25). However, when we considering the other upper row windows in the harim, since the opening here is lower than the others and the arch form is flat suggests that this opening is prepared for the mukebbier rather than a window. There is an inscription on the upper part of the mukebbire that presents the reconstruction of the mosque.



Fig.6- Northern facade.



Fig.7- Harim entrance and mukebbire

The entrance to the harim is provided by a low-arched opening. The entrance opening has two wooden door sections. The photograph used by Ayverdi as a mosque door belongs to the tomb (Ayverdi, 1989, 25).

The dome transitions are provided with pendentives in the harim, which is covered with six domes of equal size (Fig.8). The two columns supporting the domes are connected to each other and to the harim wall with arches. Wooden tensioners are placed inside the arches. The rectangular-shaped entrance to the harim and the low arched entrance to the mukebbire above the entrance is placed in a dent.

In the rectangular-planned harim, the walls have recently been covered with wood to a certain height from the ground. The walls are plastered and whitewashed. The women's mahfil was extending along the northern wall of the harim is wooden. The diameters of the two columns carrying the domes are distinctive from each other. The top of the spolia columns has been painted by considering marble view, with oil paint. The columns' capitals have been surrounded with acanthus leaves. The wooden muazzin mahfil in the southeast corner of the harim was also painted with oil paint in the same consideration as spolia columns.



Fig.8- Harim.

It is recognised that the semicircular mihrab niche, surrounded by a rectangular collapse, was placed in a large collapse in the form of a Bursa arch. The mihrab, which has a muqarnas carapace, has not has any colonnades. The wooden minbar is painted with oil paint.

III. Decorations

The decorations in the building are shown on the arch corners of the portico, on the lower surface of the mükebbire balcony and on the wooden minbar. In addition, at the north end of the western wall of the mosque, on a spolia block used as a building material, ribbon embossed laurel leaves can be seen. The handmade ornaments have been created close to the present day.

All the main walls of the building have been built with the use of brick and stone together. This colourful appearance provides the building with ornaments looking. In addition, ornaments consisting of geometric motifs created with bricks are seen on the arch corners of the portico. In the eastern one of the corner brackets, inverted-flat triangles are formed by placing the bricks on vertical and diagonal axes (Fig.9, 10). The flat edges of the bricks broke the ends of the

triangles, causing hexagons to form in the centre, giving the ornament the impression of being made of hexagons. In the other corner, the bricks were placed in groups of three horizontally and vertically, creating an ornament suggestive of wickerwork (Fig.11, 12). It is apprehended that brick-stone alternation was a characteristic practice for the 14th and 15th centuries of Ottoman architecture. The brick-stone alternating woven roof, which is seen in many cities, especially in Bursa and the surrounding buildings, has been completed with diagonal bricks eaves (Batur, 1970, 202). The brick-stone alternations are seen in the following examples: Bursa Hudavendigâr Mosque (1385) (Peker, 2007, 17), Iznik Nilüfer Hatun İmaret (1388)(Özbek, 2002, 78), Bursa Muradiye Mosque (1426) (Özbek, 2002, 387), Tire Yeşil İmaret (Yahşi Bey) Mosque (1446) (Baloğlu, 2017, 75). The arch corners of buildings with different functions such as Bursa Muradiye Mosque (1426) (Özbek, 2002, 387), Manisa İvaz Paşa Mosque (1484) (Acun, 1999, 120), Manisa Karaköy (İvaz Paşa) Bath (1484-88) (Acun, 1999, 510), Manisa Kaval Fountain (1480) (Uçar, 2012, 42), Bursa Koza Inn (1489-91) (Ersoy-Uçar, 2013, 50) are decorated with geometric decorations created with bricks as in Alaşehir Sheik Sinan Mosque.



Fig.9- The arch corners of eastern

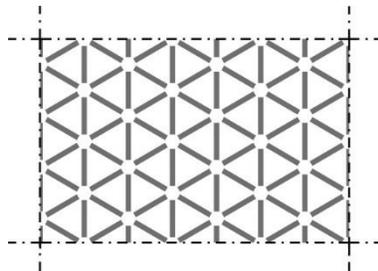


Fig.10- Detail.

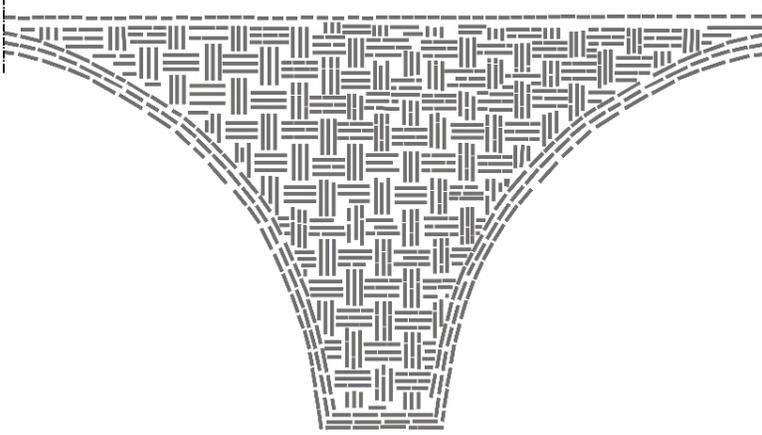


Fig.11- The arch corners of eastern.

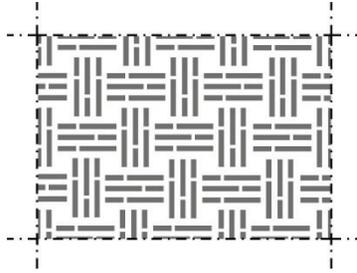


Fig.12- Detail.

On the lower surface of the mükebbire balcony, a relief rosette reminiscent of a wheel, created with radial bars, is engraved. A four-petaled flower draws attention in the middle of the rosette.

It is noteworthy that in the portico and the harim, there are hand-drawn ornaments with herbal compositions created with pendentives, palmettes and rumis, both on the domes and providing the transition to the dome. In the examinations we executed on the building on different dates, there were no hand-drawn ornaments. These decorations must have been added to the building near the present day.

On the transoms of the wooden minbar with the künde-kari technique, an ornament with a geometric pattern developed from twelve-pointed stars can be seen (Fig.13). Five-pointed stars are formed on the extensions of the arms of twelve-pointed stars arranged along their horizontal and vertical axes. The geometric compositions of eternal character, which are indispensable decoration elements of Anatolian Seljuk structures, continued to be practised in Early Period

Ottoman structures as well. It is comprehended that eleven varieties of stars with different arm numbers from six to twenty-four were detected, especially on the side mirrors of the minbars of this period, and the most preferred one was the twelve-armed star (Bayrakal, 2008, 221). The xamples such as Bursa Grand Mosque (1399-1400) (Özbek, 2007, 305), Ayaş Great Mosque (15th century) (Bayrakal, 2008, 73) and Ankara Ahi Elvan Mosque (second half of the 14th century) (Bayrakal, 2008, 84) minbari are similar to the minbari of Alaşehir Sheikh Sinan Mosque on their side mirror decorations in which twelve-pointed stars are used.



Fig.13- Minbar

4. Dating and Inscription

The building has not a construction inscription itself. R Akıncı gives the construction date of the mosque as 1445-1465 based on the inscription on the tomb (Akıncı, 1949, 103). It is stated in the Yurt Encyclopedia that the mosque was built in 1465, but the source was not given (Yurt Ansiklopedisi, 1982-83, 5622). Mojtahedi (Modjtahedi, 1988, 23), who has conducted a study on the architectural works in Alaşehir, dates the mosque to the middle of the 15th century.

The mosque yields the same courtyard as the Sheikh Sinan Tomb and is known as the Sheikh Sinan Mosque. Sheikh Sinan's name is mentioned in the inscription in the tomb and the tomb construction date is given as 1485. Sheikh Sinan is the caliph of Emir Sultan and the sheikh of Nurbahshi. He came to

Alaşehir around 1425 and became one of the notables of the Nurbahsi order in Western Anatolia in the 15th century. Sheikh Sinan has died on August 16, 1482, in Alaşehir and was buried in the tomb he had built for himself (Özergin, 1970-71, 71).

The Istanbul Zincirlikuyu Atik Ali Pasha Mosque, which is a very similar example of the Sheikh Sinan Mosque in the plan, is similarly dated to the second half of the 15th century. Considering this knowledge, it is plausible to date the mosque to the 3rd quarter of the 15th century.

There is an inscription on the upper part of the mukebbire that points to the repair of the mosque (Fig.14). According to the inscription, the building was repaired by Hacı Bilal in 1236/1820-21. Ayverdi gave the date of the inscription as 1321/1905 (Ayverdi, 1989, 25).



Fig.14- Inscription

The inscription is as follows:

بسم الله لر الرحيم و بهنسمين
 ادخلوها بسلام امنين صدق الولي المين
 صاحب الخيرات اغايى نامدر حاج بلال
 عمرو اقبالن مزيد ايد خناب ذولجلال
 ايلدى بو جامعى تامير رضاءلله ايجون
 اطيب ماليلا استحكممن اتى بر كمال
 التى مصرع ايل تعمير كلوب تاريخ سال
 نأل اجر جريل ايدى بلالى ذولجلال
 سن ١٢٣٦

In the first line of the inscription, Basmalah and “*We will have His (Allah’s) help.*” The second line in Arabic is a verse and its translation is as follows:

Enter them in peace, secure.” (The Qur’an, Surah Hijr, Verse 46)

The Ottoman inscription begins from the third line and its transcription in Latin letters is as follows:

Sahib-ul hayrat Aga-yı namdar Hac(1) Bilal
 Ömrü ikbalin mezdi ide cenabı-ı Zül-celal
 Eyledi bu camii tamir rızaen li-llah için
 Ayteb maliye istihkamin etti ber-kemal
 Altı mısra ile tamir gelub tarih-i sal
 Nail-i ecri cezil ide Zül-celal
 Sene 1236

The date of repair in the inscription is given both in numbers and in the abjad calculator.

It holds the date of H.1236, which is written in numbers in the inscription, with the abjad calculation of the phrase نأل اجر جریل ایده بلالی نولجلال in the inscription.

5. Evaluation and Conclusion

The building has a planning scheme covered with domes of equal size. Examples of mosques of this type are mostly encountered in the 14th-15th centuries. It is seen that the number of domes varies between two and twenty in multi-unit mosques covered with domes of equal size, which are not numerous. *Antalya Yivli Minare Mosque (1387)* (Öney, 1989, 10), *Bursa Abdal Mehmet Mosque (second half of the 15th century)* (Kuran, 1964, 44), *Bursa Great Mosque (1396-99)* (Kuran, 1964, 36), *Istanbul Zincirlikuyu Atik Ali Pasha Mosque (second half of the 15th century)* (Kuran, 1964, 44) are an example of this plan type.

Istanbul Zincirlikuyu Atik Ali Pasha Mosque has very similar features with Alaşehir Sheik Sinan Mosque in terms of plan scheme. Both mosques have six domes that are the same size as the rectangular harim. While the supports in the harim of the Istanbul Zincirlikuyu Atik Ali Pasha Mosque are pedestals, they are spolia marble columns in the Alaşehir Sheik Sinan Mosque. There is a three-unit portico to the north of both buildings. The minaret, which is located at the northern end of the eastern wall of the harim in Alaşehir Sheşik Sinan Mosque, is placed at the northern end of the western wall of the harim in Istanbul Zincirlikuyu Atik Ali Pasha Mosque.

In a conclusion, Alaşehir Sheik Sinan Mosque is one of the representatives of multi-unit mosques covered with domes of equal size. The domes are few

in number and are one of the reflections of Early Period Ottoman structures in Manisa with its brick-stone alternation, brick ornaments and the use of spolia materials.

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CHAPTER VIII

THE ANALYSIS OF TURKISH-AMERICAN RELATIONS

STRATEGIC PARTNERSHIP IN SO-CALLED OR IN ESSENTIAL?

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1. Introduction

In the first decade of the 21st century, Turkish-American relations were in cooperation in the fight against terrorism, which was described as a common enemy, and Turkey provided all kinds of support to the USA, especially in Afghanistan. In the second decade of the 21st century, the Arab Spring and the Syrian Crisis, which took place in Turkey's close quarters and transformed the world order from unipolar to multipolar, caused the national interests of the two countries to clash, and Turkish-American relations became fragile and strained despite being in the same alliance.

The so-called word, which is explained as “the one who lives or is known as it is not in reality” and whose synonyms are “supposedly, as if”, clearly describes the point that the relations between the two countries have reached today.

In order to understand the current problems in Turkey-US relations, it is necessary to put forward a brief historical perspective first. The first beginning of relations started when the USA sent its merchant ships to the Mediterranean in order to open up to the world.

2. The Beginning of Turkish-American Relations:

The USA, which won the war of independence with England, started to use sea routes to open up to the world. In this context, the biggest problem of the USA,

which sent its merchant ships to the Mediterranean, was the Algerian pirates in the region. For the Algerian natives, piracy was like a routine business. It was forbidden to attack only the ships flying the flag of the countries that had a trade agreement with the Ottoman Empire and to navigate in the Turkish seas, and the looting of other ships was allowed. To be protected from pirates, there was no other choice but to agree with the Ottoman Empire, the power of that period in the region.

On September 5, 1795, the “Friendship and Peace Agreement” with 22 articles, all in Turkish, was signed between the US delegation and the Ottoman Empire, which came to Algeria. According to the agreement, the USA agreed to pay 21 thousand 600 dollars of tax every year and became the “taxpayer” of the Ottoman Empire. The Americans, who paid taxes to the Ottoman Empire for 29 years, later got rid of this tax burden by using force (Bardakçı, 2016).

The USA, which opened a consulate in İzmir in 1824, signed a Trade Agreement with the Ottoman Empire on May 7, 1830. The relations between the two countries were initially only made in the form of missionary and trader lobbying.

Relations between the two countries began to change from 1912 onwards. The support of the anti-Ottoman propaganda initiated by the Armenians in the US public opinion and the declaration of the Ottoman State that it abolished the capitulations unilaterally as of October 1, 1914, caused tensions in relations. The American administration stated that it did not recognize this decision. The start of World War II and the increase in Armenian events caused the relations to deteriorate. The USA, which declared war on Germany in 1917, did not declare war on the Ottoman Empire in order to stay away from the war fronts outside Europe and not to harm the missionary activities.

After the end of the war, US President Woodrow Wilson, who turned towards world-shaping policies rather than the isolated policies implemented by the previous administrations, did not want the USA to remain in its continent. Wilson intended to take steps that would change the Eurocentric world order instead of “The Magnificent Solitude”. In this context, it pioneered the establishment of the League of Nations, but because the US public was not ready for such a radical change and the congress did not approve, the USA could never become a member of this society, which it pioneered. The fact that a superpower like the USA was not a member of the society was added to the emergence of extreme right-wing political movements in European countries

and societies that were not satisfied with the agreements made after the First World War, and the emergence of political leaders such as Hitler and Mussolini, thus the League of Nations could not realize its main purpose of preventing a new world war.

2.1. Report of the Harbord Military Mission:

The Ottoman Empire, the loser of the First World War, signed the Armistice of Mondros on October 30, 1918, aboard the British battleship *Agamemnon*, anchored in the port of Mondros on the island of Lemnos. The plug of the Ottoman State, which was put into a vegetative state in Mondros on October 30, 1918, was completely withdrawn with the Treaty of Sèvres on August 10, 1920. Between these two deadly agreements, different solutions were discussed to save the Ottoman Empire from its vegetative life, and one of them was to accept the mandate of the USA, which was a taxpayer about a century ago. Supporters of the American mandate argued that it was more acceptable to be under the mandate of the United States than under the rule of imperialist Europe. At the same time, the Armenian lobby in the USA was bringing the genocide allegations against Armenians to the agenda again, and similarly, some of the Armenians were in support of the American mandate.

US President Woodrow Wilson decided to send a delegation to the Ottoman Empire under the leadership of General Harbord on July 29, 1919 (Trask, 1971: 18-19).

The mission of this 40-person American delegation sent to investigate the genocide allegations is; it was to investigate Armenia and the cities and villages where Armenians live, together with their ethnic, military, economic and financial situations. When the delegation came to Istanbul, it did not visit any member of the Ottoman Government and paid a courtesy visit to the High Commissioner of the Allied Powers, as the USA broke off diplomatic relations with the Ottoman Empire while entering the First World War (Akar, 2019: 58). This visit is the first and most important comprehensive initiative of the USA to Turkey.

General Harbord also had a meeting with Mustafa Kemal in Sivas. The most important reason why Mustafa Kemal made this meeting is to collapse the bloc formed by England-France and Italy utilizing Wilson's principles and draw the USA to the side of the National Struggle. Although the minutes of this secret meeting held on September 22, 1919, under the shadow of the decision

of “Mandate and protection cannot be accepted” taken at the Sivas Congress, were not published, Harbord expressed that he was very impressed by Mustafa Kemal and his friends in his article published in the June 1920 issue of *World’s Work*. In the message Mustafa Kemal Pasha sent to Kazım Pasha, he said, “The General appreciated all our national operations and initiatives and said, “If I were a Turk, I would only act in this way,” and expressed opinions in our favor” (Akar, 2019: 79).

The original text of the main report written by Harbord consists of 43 pages. The most important point in this report is that the Turks were not prepared for an attack against the Armenians and that the reports about the attacks and massacres against the Armenians and other Christians are not true. Despite this report by the USA’s delegation to Turkey that what happened at that time was not an attack, massacre or genocide, the expression of the events as genocide by US President Joe Biden on April 24, 2021, more than a century later, is purely political and historical. It is proof that he is far from the truth. In addition, it was emphasized in this report that we encountered a country that was going through a major change. The Harbord report and the articles published by him ensured the recognition of Mustafa Kemal Pasha and the National Struggle by the American administration and the public. As a result of this report, the proposal regarding the mandate regime demanded by some of the Armenians was rejected, the realities of Turkey were recognized and Turkish-American relations were re-established on a more realistic and solid ground (Akar, 2019: 142).

2.2. Turkish-American Relations during the Hot War Period (1914-1945):

The world war, which started in 1914, ended temporarily with the dissolution of the empires in 1919. Among the agreements that ended the First World War, only the Treaty of Sèvres could never be implemented because the Turkish Nation led by Atatürk won its liberation on the battlefield and against all imperialists, and the Treaty of Lausanne, also known as the founding document of the Republic of Turkey, was signed instead. The agreements signed by other losing countries, just like the Treaty of Sèvres, offered great advantages to the winners of the war and collapsed the losers of the war both politically and economically. Supporters of Nazism under the leadership of Adolph Hitler in Germany, which was crushed under the Treaty of Versailles, one of the agreements with the most severe provisions; In Italy, the supporters of Fascism led by Benito Mussolini, who claimed that he was not given enough shares after the war, took advantage

of this conjuncture and seized the country's administrations. The tendency of both countries towards expansionist policies showed that the unclosed account of the world war would be opened again. For this reason, the 1914-1945 period can also be considered as a single hot war period.

While the Anatolian people were fighting against imperialism for their salvation, there was a coldness towards the Turks in America due to the negative statements of most non-Muslims who migrated from the Ottoman Empire, especially about the deportations of Armenians. In fact, the National Struggle in Anatolia was watched very closely by the USA. In the issue of "The New York Times" dated 9 July 1919, it was stated that "Mustafa Kemal Pasha established a separate Turkish State in Anatolia".

Turkey's title deed Lausanne Peace Treaty, which was signed on July 24, 1923, and entered into force after the approval of the country's parliaments on August 6, 1924, was not a party to the United States as it was not a party, and the United States did not participate in the signing and ratification stages of this agreement. It has been explained that the USA did not take sides with the Allied Powers because it did not declare war on the Ottoman Empire, was not a party to the armistice and did not sign the Sevres. On August 6, 1923, just 13 days after the Lausanne Peace Treaty, the Turkish-American Treaty of Amity and Commerce was signed between Turkey and the American representatives' Joseph Grew and İsmet İnönü (Türk, 2006: 8). Grew, the representative of this treaty on the US side, which was not ratified by the US Senate, became the first US ambassador to the Republic of Turkey on October 12, 1927 (Pakman World (wordpress.com, 2019).

Between two great wars, which are sort of a continuation of each other, Turkey under the leadership of Atatürk has written an unprecedented economic, social and cultural growth and success story. However, the World Economic Depression that emerged in 1929 also put the Turkish economy in trouble and Turkey began to seek credit. In this context, the first country that comes to mind was the USA, which was not badly damaged by the First World War, and 10 million dollars were borrowed from the USA in 1930. After Turkey became a member of the League of Nations on July 18, 1932, the first international organization that the USA supported to establish, Turkish-American relations have reached a much better level. This policy unity in bilateral relations continued after Atatürk's death, and a trade agreement was signed between Turkey and the USA on April 1, 1939. With the start of the Second World War, the essence of

relations was formed by the conferences, which were based on the pressures of the USA on Turkey to enter the war

3. Cold War Period Turkish-American Relations (1945-1991):

At the end of the two great wars that followed each other, the fight for world domination began between old friends the USA and the USSR. While the neighboring states of the USSR were crushed under the political and expansionist influence of this union, the USA did not want its “Hot War” friend, with which it acted together against Nazism, to grow and expand. In this context, the USA started to turn to containment policies and wanted to show its support to Turkey, the neighbor of the USSR. The first formula found as a show of strength was that the body of Turkey’s US Ambassador Münir Ertegün, who passed away in 1944, was sent to Istanbul with the Missouri Battleship.

3.1. Missouri Visit

Münir Ertegün was appointed as Washington DC Ambassador in 1934 and continued this duty until he died in 1944 due to a heart attack. During his tenure in the USA, he became close friends with President Franklin D. Roosevelt. He became a popular and effective ambassador who established strong relations between Turkey and the United States. As a reflection of the value given to him, after his death, his body was brought to Turkey with the famous Missouri Battleship in 1946.

Missouri also had a symbolic meaning, as it was the ship on which the surrender agreement of Japan was signed after the Second World War. The Missouri visit, which was regarded as an intimidation to the USSR President Stalin, led to a new rapprochement in Turkish-American relations. After he visits Missouri, President Truman, in his speech on Army Day in April 1945, declared that “The Middle East is of economic and strategic importance with its energy resources and the weak states here will be supported”. On March 12, 1947, with the President’s speech in Congress, which would be called the Truman Doctrine, the “Cold War” order that would keep the whole world under its influence until 1991 was beginning.

3.2. Truman Doctrine and Marshall Plan:

Europe, the central continent of the world wars, had experienced the greatest destruction of the war. The city that was not destroyed, the capital that was not

bombed was almost non-existent. Washington and Moscow, the two capitals least affected by this destruction, were also the capitals of the post-war power struggle. In particular, it was inevitable that the USA, the leader of the capitalist world, whose country had not dropped a single bomb, wanted to consolidate the world's superpower. The only and most important rival against the USA was none other than the leader of the communist world, the USSR.

Harry Truman, the first US President of the “Cold War” era, implemented aid plans that would contribute to the reconstruction of the war-torn continent of Europe, thus increasing the regional and global effects of the US. In his doctrine, which is named after him, Truman turned to the US's containment policy against the Soviet Union's expansionist policies in Europe and the Middle East in the post-World War II world order, and in this context, aid was provided to Turkey, Iran and Greece. Communism has been used very clearly as a threat to the security environment that the USA is trying to create for itself and its allies. The threat of Germany and Nazism in the “Hot War” period was embodied as the USSR and communism in the “Cold War” period (Önder, 2020: 5).

In a speech at Harvard University on June 5, 1947, US Secretary of State George Marshall gave the first indications of his plan to aid Europe, which would later be named after him. The U.S. Congress approved the European Compensation Program on September 11, 1947, called the “Marshall Plan.” In line with the plan, which includes support to 16 European countries in total, until the end of June 1948, 100 million dollars of aid was provided to Turkey, of which 76 million dollars was provided for equipment, 24 million dollars for other expenses, and 300 million dollars was given to Greece (Ertem, 2009, 390). The fact that Greece came out of the war with much more casualties and the Greek lobby in the USA were influential in determining these amounts. (The effectiveness of lobbying in the USA still maintains its importance and is one of the most important aspects that shape Turkish-American relations.) Again, according to American experts, Turkey's foreign trade balance was better than 15 other European countries, with its gold and foreign exchange stocks. The most important reason for this is that then-President İsmet İnönü's political maneuvers to keep Turkey away from the whirlwind of World War II were very good.

Turkey received a total of 137 million dollars in aid between 1948-1951 during the “Cold War” period, and this military aid program was initially directed towards the modernization and training of the Turkish Armed Forces.

In this process, many expert personnel from the USA came to Turkey for the training of the Turkish army and gave training to the naval, air and land units. Within the scope of the Marshall Plan, agricultural and food industry products such as wheat, milk powder and cheese were also sent to Turkey (Aydın, Erhan, Erdem, s. 250).

3.3. Support for Korea and Entry to NATO:

Turkey, which was able to protect its people with political maneuvers from the destructiveness of the 2nd World War, was considerably weakened economically. The transition to a multi-party system in such a period when economic difficulties were at an extreme led to a change in power. The Democratic Party period between 1950-1960 was a period when Turkish-American relations intensified. Prime Minister Adnan Menderes, who came to power on May 14, 1950, sent a unit of 5000 people to South Korea on June 25, 1950, in support of the US army, as soon as he came to power. Turkish soldiers sent to Korea without a parliamentary decision lost a total of 734 martyrs, 2147 wounded, 234 captives and 175 casualties in clashes against South Korean and Chinese troops. This behavior of Turkey, which sent soldiers to the Korean War following the call of the United Nations, gained the appreciation of the USA (Oran, 2009: 545).

After the Korean War, the USA took responsibility for Turkey to become a NATO member. With the establishment of the NATO alliance against the two threatening countries of expansionist communism, China and Russia, the US policy of reshaping the world began.

With the agreement signed on February 18, 1952, Turkey officially became a member of NATO. Thus, the USA and Turkey entered into closer relations and became allies. In this direction; with the contract approved by the law numbered 6375 dated March 10, 1954, the doors of the American military bases that are still active in Turkey were opened (Eşel, 2011: 150). Especially the first 5-year period of the Democratic Party has taken its place in history as a process in which Turkey acted together with the USA and clearly expressed its side during the “Cold War” period.

3.4. Approaching Russia

After Menderes, who made an official visit to the USA to attend the meetings of CENTO on October 5, 1959, could not find the interest and financial support he expected from the USA administration, his search for rapprochement with

the USSR began. On December 6, 1959, US President Eisenhower made an immediate move to improve relations with Turkey and became the first US President to visit Turkey. Although Eisenhower's trip softened the relations, the announcement that Prime Minister Menderes would make an official visit to Moscow on July 12, 1960, and that the USSR President Nikita Khrushchev would respond to this visit is an indication that the problems with the USA could not be fully resolved. Since Menderes could not make this trip due to the May 27, 1960 coup, the comments on whether the trip would have taken place had he been in power, or whether it was just intimidation given to the USA, have continued from the past to the present (Eşel, 2011: 153). As one of the reasons for the 1960 military coup, it has also been claimed that Menderes was punished for his departure from US policies.

3.5. Johnson Letter

Upon the tense situation and bloody events that emerged in Cyprus in December 1963, Turkey, on the one hand, continued its protest attempts, and on the other hand, it discussed that it would choose a military intervention in Cyprus. To protect the security of the Turkish society and prevent the massacres of the Greeks from turning into a genocide, Turkey used its rights as a party to the 1960 Treaty of Guarantee and on March 16, 1964, the Grand National Assembly of Turkey unanimously gave the government the authority to land in Cyprus. The Turkish government announced its decision to land in Cyprus on 2 June 1964 and started the necessary preparations.

Despite the traffic of talks with the USA, the increase in human rights violations in Cyprus and the incidents turning into genocide, the then US President Lyndon Johnson, addressed to Prime Minister İnönü, just 2 days before the 7 June 1964, when Turkey planned to intervene. He sent a letter that is far from language and contains very heavy expressions.

In this letter, which went down in history as the first snag in Turkish-American relations and started with the phrase "Dear Mr Prime Minister", it was mentioned that Turkey's possible Cyprus operation could cause a Turkish-Greek war and that it was unacceptable for two NATO allies to enter such a war. It was reminded that Turkey should consult its allies before deciding to intervene. The arrival of Turkish troops in Cyprus was planned for 7 June. During this crisis, Turkey considered intervening in Cyprus four times, on December 25, 1963, February 15, 1964, March 13, 1964, and June 7, 1964, and it was later

announced that it was in consultation with the United States regarding these initiatives (Erim, 1966:310-321).

It was implied in the letter that this war would create the possibility of the Soviet Union's intervention in Turkey and that NATO would be reluctant to defend Turkey in such a situation, even more so. The statement that the military equipment provided by the USA to Turkey would not be allowed to be used in this intervention also created a chaotic situation on the Turkish side.

Prime Minister İnönü, who was fed up with the pressures of the USA and the West and was aware that they would stand with Greece, not Turkey, in the Cyprus crisis, used the same words in the interview he gave to Time Magazine on April 16, 1964, that is, 50 days before Johnson's letter. "If the allies do not change their stance, the Western alliance may collapse... A new world order will be established under new conditions and Turkey will take its place in this world (Zileli, 2019: 1-2).

Following the letter sent by Johnson, Turkey for a while gave up on its comprehensive intervention decision. In the same year, during the warning flight of the Turkish Air Force in Cyprus, Pilot Captain Cengiz Topel, whose plane was shot down by Greek anti-aircraft guns, jumped with a parachute and was captured by the Greeks. The martyrdom of Topel, who was exposed to unbelievable torture and lost his life in violation of the articles of the international law of war covering prisoners, greatly affected the Turkish public opinion. According to the autopsy report and the British nurse who took the photo of her body, Topel was tortured and killed while he was conscious, with various limbs cut off, crushed, beaten and some of his internal organs removed.

As the events continued to increase, on 20 July 1974, the Turkish army, as the then Prime Minister Bülent Ecevit said, in a way to ensure the safety of life and property not only of the Turks but also of the Greeks and everyone living on the island, despite the objections of the USA and other guarantor state carried out the Peace Operation. The inhuman drama experienced by the Greek Cypriot administration to connect Cyprus to Greece ended with this operation, and the island of Cyprus, which turned into a bloodbath, has turned into a peaceful island where the inhabitants do not die, except for a few isolated incidents.

Johnson's letter was not disclosed at the time it was sent but was seized by Hürriyet newspaper and published in full text in its issue on January 13, 1966. Thereupon, the government gave the letter and Prime Minister İsmet İnönü's reply to the press the next day.

İnönü replied in his letter; He wrote that the letter sent was «disappointing» for an ally of the United States like Turkey, «both in the style and content» of the letter. reported that he was in consultation with He also particularly emphasized that the Greek Cypriot government openly began to arm, engage in unconstitutional activities, increase its persecution against Turks and that all these were supported by Greece, even though it was against the international agreements it signed, but America did nothing despite all the warnings of Turkey. In the letter, İnönü also related to NATO and alliance; “An attack on any of the NATO allies will naturally always be justified by the aggressor. If NATO’s body is so weak that it succumbs to the aggressor’s claims, it needs treatment.” both critically and in the form of “Is it possible to talk about an alliance between states that reject their obligations and obligations arising from treaties against each other at any time?” He gave a reproachful answer and said, “According to Turkey’s understanding, NATO obliges immediate assistance to a member attacked. The matter left to the discretion of the members is the nature and breadth of the assistance.” In his words, he explained very well how the organization should work, to the elder brother of the organization.

Deciding to take part in the Western bloc since the Menderes period, Turkey saw with this letter that there might be difficulties in developing independent policies when its national interests conflict with the interests of the USA, understood that the USA could leave it alone, and realized the true face of US imperialism for the first time. Thanks to this letter, Turkey had to face the reality of what it might encounter in the conflict of interest in Turkish-US relations, which continued with minor problems until this date.

In the bipolar world order, as the separation between the blocs hardened, the members of the bloc had difficulty in developing policies independent of the bloc they were in. However, with the collapse of the Berlin wall in 1989, and then the Soviet Union in 1991, the bipolar world order came to an end, and regional powers such as Turkey began to pursue multifaceted policies. With the decrease in dependency on the USA, the problems in Turkish-American relations started to increase.

3.6. The Opium Plantation and the Cyprus Peace Operation:

After the Republican Richard Nixon became the President of the USA in 1968, the most important discussion topic in Turkish-American relations until 1975, first the problems related to the cultivation of opium, and then the USA’s reaction

to Turkish ability to carry out the Cyprus Peace Operation about 10 years after the Johnson letter.

Opium cultivation, in other words, the poppy crisis, has been the most important agenda item in Turkish-American relations since 1969. The explosion of drug use in the USA under the influence of the 68 generations and the evaluation of Turkey as the most important source country for drugs started to cause problems in Turkish-American relations. While there were approximately 60.000 drug addicts in the USA in 1960, this number exceeded 250.000 by the end of the 1960s. Moreover, 98 percent of the addicts were heroin addicts. The first of the two major political goals, also called the Nixon Doctrine, was to end the Vietnam War with Vietnam Policy, thereby preventing American youth from dying or maiming, and the second was to prevent drug addiction that poisoned and even killed American youth.

The Prime Minister of the time, Süleyman Demirel, against the USA, who wanted to ban the poppy grown in Turkey and the opium obtained from it, did not accept a collective cultivation ban at the beginning, reminding that Turkish villagers have been cultivating opium for centuries and that there is even a city called “Opium” in Turkey., while the amount of poppy produced by Turkey should not be a problem for the USA, this issue has turned into a problem with the increasing effectiveness of anti-Turkish lobbies.

After the Demirel government was overthrown by a memorandum on March 12, 1971, a government of technocrats (experts) supported by the Turkish Armed Forces (TAF) was formed. During this government, when Nihat Erim was Prime Minister, poppy cultivation and opium production were completely banned on 29 June 1971. This was the confirmation of the statement of Demirel period Foreign Minister İhsan Sabri Çağlayangil to İsmail Cem, who was a journalist at that time, “The CIA is behind the memorandum, there is poppy, there is nothing else” (Örmeci, 2020: 70-71).

The crisis escalated again for the United States when Turkey lifted the poppy cultivation ban on July 1, 1974, with the decision taken by the government established under Bülent Ecevit’s Prime Ministry, and resumed production. In an environment where Cyprus is much more on the agenda and Turkey is preparing for military intervention on the island, this issue has gradually fallen off the agenda.

Turkey’s rightful intervention in Cyprus caused the United States to impose an arms embargo on Turkey between 1975-1978. The dissatisfaction

created by the lifting of the ban on poppy cultivation together with the Cyprus Peace Operation was partially effective in the US Congress's arms embargo on Turkey. During Jimmy Carter's Presidency (1977-1981), this embargo against Turkey was lifted in September 1978 due to the turmoil that started in Iran and the US did not want to lose Turkey, and this issue was completely dropped from the agenda.

The poppy crisis is a very important event in terms of seeing the negative activities of the lobbyists in the USA and the problems that can be experienced when the interests between the two countries conflict. In addition, the visible and invisible role of the USA in the change of power in Turkey has started to be discussed.

3.7. Successful Children of September 12, 1980:

At the end of the 1970s, the economic problems intensified in Turkey, the political right and left views turned into anarchism in the streets that do not recognize the state authority, the security of life and property of the people deteriorated gradually, and the cities, neighborhoods, students, teachers, civil servants, workers and even the police were getting worse. It was a time of division. Despite the declaration of martial law, street clashes could not be prevented and the clashes did not end.

The thought that communism supported by the USSR could be behind this atmosphere of terror and anarchy in Turkey, disturbed the USA. Another reservation of the USA was the thought that the Islamist revolution in Iran in 1979 could be effective in Turkey as well. Iran was lost, and the loss of Turkey was not in line with the interests of the USA in this region.

In line with these developments in the domestic and foreign political arena, there was a military coup in Turkey on September 12, 1980, and the army seized power. Paul Henze, the CIA's Turkey Chief in the 1970s, had reported the September 12 coup to US President Jimmy Carter, saying "our children succeeded." Paul Henze, in a statement to a Turkish newspaper in 2003, stated that the words "our children did the job" was a fabrication by Mehmet Ali Birand, but shortly afterwards, Birand denied Henze by publishing audio and video recordings of his 1997 meeting with Henze. In the published records, it was seen that the speech was not as Birand claimed, but in the form of "The boys in Ankara did it."

Another piece of information about this statement emerged when the British broadcaster BBC published the US State Department documents regarding the September 12 junta coup, which were declassified, in a three-day series of articles, following an application made within the scope of the Access to Information Act in 2011. In this new document, James Spain, who was the US Ambassador to Ankara at the time, expressed in his correspondence titled “US-Turkey relations after the army (management) seizure”, that the “declaration of allegiance of the putschists” was accepted as follows (Miş, 2018: 1):

“We know all the current military leaders well, and we do not need to worry about changes in Turkey’s security or foreign policy, especially in NATO membership.” As it can be understood from these statements, the political view of the USA during the coup periods; is in the form of understanding what kind of policies those who seized power with the coup will follow, especially abroad, and whether Turkey will continue its NATO membership and policies that are in line with the interests of the USA.

As a result, to correct its chaotic environment, Turkey had to come under military rule once again in 1980, after 1960 and 1971, and the effects of the USA on the conduct of this coup, what happened before and after it, have always been discussed. The allegations that the coup attempt on July 15, 2016, was again supported by the US will bring the potential of the US to interfere in Turkey’s internal affairs and administration.

4. Post-Cold War Turkish-American Relations:

With the collapse of the Berlin wall in 1989 and the collapse of the USSR in 1991, the “Cold War”, which affected the world for nearly 50 years, came to an end. The influence of the USA on the world began to increase with the return of the “Cold War” period, in which bipolar and security-oriented policies were the dominant actors, to unipolarity. In the first ten years until 2001, the world entered a relatively peaceful atmosphere with the unipolar world order. This period, which I call “Hot Peace”, lasted only 10 years and in 2001 the world order turned back to bipolarity, with the US-led states on the one hand and the terrorists and the states allegedly supporting them. These terrorist attacks on the heart of the United States on September 11, 2001, in a way never before experienced in its history, made the United States “either with us or with terrorists.” It has caused the world to declare and dictate its policy to the world again through the Bush doctrine, which came to life with his expression. Since 2001, operations have

started against the countries associated with terrorism, and Afghanistan and Iraq operations have emerged as a requirement of this doctrine. While the main policy of the USA was the fight against terrorism, in the past this policy has turned to the fight using terrorism. The USA has used all terrorist structures that it can use against Jihadist Terrorist Organizations in proxy wars, regardless of whether there are groups that harm the interests of its allies. Depending on the crisis and the situation of the regions, even the countries that are in the same alliance have become incompatible with each other, and the risk of conflict between strategic partners has emerged. At the beginning of the 2020s, the world has come to experience the “Cold Peace” period, in which countries do not fight each other directly, but even countries that are in the same alliance can face each other at any time, and they can harm each other economically or politically, even if not militarily (Önder, 2020: Abstract).

3.7. Adana Consensus and Delivery of Terrorist Head:

The biggest problem at the beginning of the world, which turned to unipolarity in 1991; the existence of terrorist organizations using the weakness of the reshaping of the states and the increase in the ethnic and political crises experienced in the satiation movements in the former USSR countries and Yugoslavia.

During this period, Turkey’s biggest trouble was the PKK Terrorist Organization, which had inflicted the greatest damage on itself since its establishment in 1984. In the second half of the 1990s, the activities of this murderous organization, which murdered not only soldiers, policemen, teachers, but also many civilians, regardless of infants, children and women, had increased. In addition, the Syrian State granted asylum to the leader of the organization, Abdullah Öcalan. In 1998, as the protests escalated, it was declared by the National Security Council that if Abdullah Öcalan’s presence in Syria was continued, it would be considered a cause of war for Turkey as “Casus Belli”. General Atilla Ateş, Commander of the Land Forces of the time, expressed that Turkey had run out of patience against the Syrian government, which was protecting and hiding the leader of the organization in the Reyhanlı district of Hatay, right on the Turkey-Syria border.

To prevent the escalating tension, US President Bill Clinton stepped in, and the Adana Agreement was signed between Turkey and Syria on October 20, 1998, with the mediation of Egyptian President Hosni Mubarak. The name of the memorandum was changed to “Joint Cooperation Agreement between the

Government of the Republic of Turkey and the Government of the Syrian Arab Republic against Terrorism and Terrorist Organizations” in 2010 (713:Mizanpaj 1.qxd (tbmm.gov.tr).

According to the agreement, both states would take measures against organizations that threatened them, especially the PKK, and would prevent all their activities on their soil. Having mutually agreed not to allow any residence, logistics, training, transportation or weapons capacity, the two countries decided to cooperate in joint operations, extradition of detainees and sharing information, documents and intelligence.

The Adana agreement, made with the intervention of the USA, showed its results very quickly. Abdullah Öcalan was expelled first from Syria and then from Greece, and on February 2, 1999, members of the Greek National Intelligence Agency were brought to the Greek Consulate in Nairobi, the capital of Kenya, by a private plane. He was expelled from the consulate as a result of the pressure of the authorities and was caught by the Turkish security forces who carried out an operation to the Nairobi Airport to which he was taken. The USA's support in the capture of the leader of the organization and bringing him to Turkey improved Turkish-American relations. President Clinton's visit to Turkey after the great earthquake on August 17 of the same year and the cute images he gave with an earthquake victim child increased the sympathy of the USA on the Turkish people.

4. Issues in the 21st Century:

Turkish-American relations had a kind of golden age during the 10-year “Hot Peace” period from 1991, when the “Cold War” ended, to 2001, when the “Anti-Terrorist Period” began. During this period, the United Nations and the European continent could not intervene in the disintegration process of Yugoslavia and the human tragedy in Bosnia and Kosovo brought about by this process, while the two NATO allies, Turkey and the USA, acted together in this process. NATO intervened in the crisis areas that could not be intervened due to the vetoes of the United Nations Security Council. After the terrorist attacks of September 11, 2001, Turkey gave all kinds of support to the USA's fight against terrorism and fulfilled the requirements of the strategic partnership. The Arab Spring and the aftermath of the Syrian crisis increased Russia's influence in the region and the world, and when the interests of the United States and Turkey's security understanding began to clash, the “Strategic Partnership” gradually turned into

a “So-called Partnership”. The “Cold Peace” and multipolarity, which caused the straining of Turkish-American relations, have become the new order of the changing world since 2011.

According to the crisis and the situation of the regions, even the countries that are in the same alliance have become incompatible with each other, and the risk of conflict between strategic partners has emerged. At the beginning of the 2020s, the world has come to experience a cold peace in which countries do not fight each other directly, but even countries that are in the same alliance can face each other at any time, harming each other economically or politically, even if not militarily (Önder, 2020: 22).

Let’s examine the main problems in Turkish-American relations during this “Cold Peace” period of the 21st century.

4.1. Permission Denied:

During the second half of the 20th century, when the “Cold War” reigned, steps were not taken to change the current order in the Middle East due to the delicate balances established at that time. Towards the end of this century, at a time when the Cold War ended and the USA’s hegemony was accepted all over the world, the efforts to reshape the Middle East began with the terrorist attacks in the heart of the USA and the operations that followed. With the “Arab Spring” and the “Syrian Crisis” that followed, the Greater Middle East Project was activated. This project was an economic project and the main aim was to get rid of the authoritarian regimes, not the peoples, with the emphasis on democracy. However, when military and political issues were added to it, this project failed. After the September 11, 2001 attacks, the concept of the Middle East was expanded in parallel with Bush’s doctrine of “Either you are with us or against us”, and a region stretching from North Africa to Pakistan in addition to the Arabian peninsula was targeted for democratization. The main purpose of this project, which is known as the Extended Middle East Project and Extended Middle East and North Africa Project, was to democratize the region, ensure the security of the region and remove the region from being a source of terrorist organizations. In fact, besides these apparent aims, there was also a desire to make the world suitable for the interests of the USA, starting from the Middle East. After the September 11, 2001 attacks, Turkey, like all its other allies, supported the United States in its fight against terrorism.

The first operation was carried out in Afghanistan on the grounds of supporting terrorism or harboring terrorists. Turkey, like other US allies, did not spare its support in Afghanistan, which later became an international operation area with the intervention of NATO. The USA's determination of its next target as Turkey's neighbor, Iraq, and the USA's request for permission from Turkey to use its land, port and airspace for the operation to be carried out in this region, brought relations to a different dimension.

In fact, the USA's intervention in Iraq and the request for help from Turkey for this goes back much before the September 11 attacks. After the 1991 Gulf Operation, this situation was first conveyed to Turkey by the USA on 6 November 1998. In the following periods, the USA repeated its request for assistance from Turkey regarding the military operation in Iraq. This situation was reminded to the three parties coalition that came to power under Bülent Ecevit's Prime Ministry after the general elections held in Turkey, and promises were made that if assistance was given, they would be more willing to accept Turkey's membership in the EU and a solution would be brought to the PKK issue. Especially in 1999, when Bülent Ecevit was Prime Minister, Abdullah Öcalan was caught and sent to Turkey as a result of the joint operation of Turks and American agents while he was leaving the Greek Embassy in Nairobi, the capital of Kenya as if the USA tried to use it as a trump card (Ceylan, Uslu, 2012: 2).

While the US operation in Afghanistan was supported by the Turkish public, its desire to invade Iraq in 2003 was met with reaction. The March 1st Memorandum, submitted by the government to the Turkish Grand National Assembly to allow the US to use Turkish lands during this occupation, caused intense discussions. In the memorandum, it was envisaged that a maximum of 62.000 foreign military personnel would be in Turkey for 6 months. The fact that the US soldiers would not easily leave the place they entered once and that Turkey was drawn into the war in Iraq increased the reservations. 250 votes against, 264 in favor and 19 abstentions were cast in the secret session held as a result of the very strong objections of the opposition, which sees the danger of so many foreign soldiers settling in Turkish lands, and support from within the ruling party. Since the absolute majority of 267 stipulated in Article 96 of the Constitution could not be reached, the motion was not accepted. As 361 deputies from the ruling Justice and Development Party voted in the voting for the bill, in which a total of 533 deputies participated, it is understood that approximately 97 wastage, which is a substantial amount.

The rejection of the motion with the participation of several government deputies caused a great disappointment in the USA. In particular, the incident of the sack, which was a very important breaking point in Turkish-American relations, which occurred after the rejection of the motion, when it was understood that the Turkish Army was against this motion, can also be considered as a US retaliation against the parliamentary decision.

4.2. Headed Bags and Response to Inaction:

The USA, which could not use the Turkish airspace, ports and lands due to the failure of the mandate, had difficulties during the invasion of Iraq and had to pay a heavy economic and social bill. Unusually, the US's lack of support from Turkey was paid for by putting a sack over the heads of the Turkish army members in Iraq.

On a day when there was a 3-day holiday in the USA and it was impossible to reach the US officials, that is, on July 4, 2003, in the city of Sulaymaniyah in Northern Iraq, the American 173rd Airborne Brigade, which was a part of the occupation forces in Iraq, soldiers of the US army, accompanied by peshmerga, came to the headquarters where the Turkish soldiers were. As Turkish soldiers, who did not expect hostile behavior and did not want to cause a bigger crisis, did not respond, the Americans arrested the Turkish soldiers, put a sack on their heads and interrogated them for 60 hours. This attitude and behavior, which has nothing to do with the spirit of alliance, caused the Turkish-American relations to become even tenser after the March 1st memorandum.

The Turkish public, who expected a much harsher reaction from the government upon hearing of this incident, asked the then Prime Minister Erdogan's question, "Will you give a note to the United States?" to the question "What note is a musical note?" was disappointed with his answer. The USA, which made the Turkish army pay the price of not passing the mandate, increased its pressure and demands on Turkey as the government could not give the necessary response, and started to openly support groups, formations and organizations inside and outside that Turkey described as enemies. The support given by the USA to the Fetullah Terrorist Organization (FETO), whose leader is kept in its territory, and to the PYD in the Syrian crisis, has caused Turkish-American relations to enter a troubled period.

4.3. US-Turkey Conflict of Interest in Syria:

The Arab Spring, which started in Tunisia at the end of 2010, started with the Arab people's demands for freedom, democracy and human rights against the dictatorships, deeply affected all countries in the Middle East and caused changes in governments in many countries. In Syria, as of March 2011, the opposition started an armed rebellion to overthrow the Assad regime and establish the Free Syrian state. Syria entered into an intense civil war environment after Assad asked Russia for support against the opposition supported by the USA and the West, and Russia immediately fulfilled this demand, which would increase its effectiveness in the Mediterranean. The country's getting out of control has caused terrorist structures to run rampant in the region. People fleeing from terrorism and the oppression of the Assad regime left their countries as refugees, primarily Turkey and Jordan, and great humanitarian dramas began to be experienced. In Syria, which has become an area where great powers show power to each other through proxy wars, the policies of the USA and Turkey have changed, interests have started to clash, relations have become strained.

The most important issue in the bundle of problems between the USA and Turkey is the support given by the US administration to some groups in Syria. These groups are defined as terrorist organizations by Turkey. The interests of two important NATO allies in this regional conflict. The USA's keeping the PKK, which it considers as a terrorist organization, and the PYD/YPG, which is openly known to be the Syrian branch of this organization, separate for its benefit and giving them all kinds of support, including weapons and equipment, is seen as an act against the alliance by Turkey.

The main purpose of the USA's policy of supporting terrorism, which cannot be accepted in this incomprehensible and democratic world, can be explained as the effort to use proxies against the Syrian regime, therefore Russia and the Jihadist terrorist organizations in the region. However, as a result, these weapons, ammunition and equipment given by the USA are used by terrorist organizations against Turkey, and this situation causes the relations to be strained. While Turkey's expectation is the end of this support, the interest of the USA is to continue to support this illegal organization and ensure that Turkey does not interfere with them as much as possible, to balance the Syrian administration and therefore Russia in the region.

Turkey has carried out operations against formations, organizations and states that it sees as a threat to its existence to end this problem of survival before it starts, to show its presence in the region and to be able to sit at the table with a strong hand in the future. This process, which started with the operations carried out with the Euphrates Shield on Jarablus and Al-Bab region on August 24, 2016, followed with the Operation Olive Branch on January 20, 2018, in Afrin, Operation Peace Spring on October 9, 2019, in Rasulayn-Tel Abyad and on February 27, 2020, continued in the Idlib region with the Spring Shield Operation. Thus, Turkey has shown that it will not allow illegal nationalization and fait accomplis that may occur in the region without its initiative.

4.4. Breaking the Embargo on Iran and the Halkbank Crisis

Iran is one of the countries punished by the USA through sanctions. With this method, the USA imposes sanctions against the governments of countries that it considers to be undemocratic and that do not comply with its interests and evaluates that the peoples of the country can go to administrative changes in this way. Iran is not the only country on which the US has imposed sanctions. North Korea, Cuba, Venezuela, Syria and Russia are other countries subject to these sanctions. It is possible to access detailed information on the official page of the US Treasury Department, such as the countries that have been sanctioned, and on which issues (<https://home.treasury.gov/policy-issues/financial-sanctions/faqs#830>).

Since these sanctions are not taken in line with UN resolutions, other countries do not have to comply with the sanctions, but countries that do not comply with the sanctions inevitably have to deal with great power and trouble like the USA. The Halkbank crisis between Turkey and the USA is also a crisis that started because the US sanctions on Iran were nullified through Turkey and Halkbank.

Halkbank is accused of mediating a \$20 billion fraudulent transaction in this process. In the legal process that started after the confessor Zarrab was arrested in 2016 on charges of illegally transferring money to Iran, the New York Southern District Attorney's Office prepared an indictment against Halkbank because it played a role in breaking the sanctions imposed on Iran, and the trial process began. In the 45-page indictment prepared in October 2019, it was pointed out that the majority of its shares belong to the Turkish state, and

six different accusations, including fraud and money laundering, are brought against Halkbank.

Halkbank is accused of deceiving the US Treasury Department to mediate transactions of up to \$20 billion by front companies established to circumvent the financial sanctions imposed by the US on Iran and to prevent possible sanctions.

In the 45-page indictment of the Halkbank case, Reza Zarrab and Hakan Atilla, who was found guilty of breaking the embargo against Iran and sentenced to 32 months in prison, as well as former Minister of Economy Zafer Çağlayan, former General Manager of the bank Süleyman Aslan and former Foreign Operations Manager Levent Balkan are also named as an accomplice.

Conspiracy to defraud US institutions for Halkbank's violation of US sanctions on Iran, conspiracy to violate the International Emergency Economic Power Act, conspiracy to defraud American banks, conspiracy to defraud the American banking and financial system, money laundering and money laundering. It is alleged that he committed conspiracy crimes to exonerate.

Unlike Turkish law, in American law, legal persons can be the perpetrator of a crime and criminal sanctions can be imposed on legal persons. Unlike Halkbank employees, who will be prosecuted in the lawsuit brought against Halkbank, it is the legal entity of the bank. As a rule, separate lawsuits can be filed against other employees, as is the case with Mehmet Hakan Atilla. However, the court that accepted the indictment against Halkbank only aims to determine the criminal liability of the bank as a legal entity (SETA Vakfi, 2021).

The Halkbank crisis and the litigation process are transforming into a period that strains Turkish-American relations, especially when the United States has begun to use Turkey as a pressure tool. This crisis, which is more suspended in the Trump administration, seems to be on the agenda much more in the Biden administration, and the bribery allegations that may arise during the court process may cause further discussion of the issue and further strain the relations.

4.5. Who is behind the 15 July 2016 coup attempt?

The claims of the USA in the background of the treacherous coup attempt on July 15, 2016, which was a very important turning point in the history of Turkish democracy, and the fact that the FETO leader was already in the USA, was protected there somehow and was not extradited to Turkey, Turkish-American relations emerges as another important problem.

This organizational structure, which is eager to destroy Turkey from within, has managed to hide itself and its members and has entered every level of the state for years. Especially since the 2000s, it has increased its power with the support of the political authority, has been active in the entire bureaucracy from education to the judiciary, from the military to the police, and has come to intervene in all kinds of activities of the state with a parallel structure. In the second decade of the 21st century, when its power reached the highest levels, this organizational structure, which started to contradict the political authority in Turkey, started to weaken due to some measures, albeit late, that the political authority started to take. The organization embarked on an attempt that started in the evening of July 15, 2016, to seize the administration through its traitors in the army, which is one of the institutions in which its power is most effective, and for the members of the organization, which is understood to have been exposed, to escape from the trial process. Against this treacherous mob who bombed the parliament of the nation and was able to shoot at the civilian population, the strong and oppositional stance of the anti-coup and Kemalist members in the Turkish Armed Forces caused the attempt to fail. This mind-blowing attempt, which started early in the evening, when the people were out in the most crowded way, as never seen in the history of coups, ended before it could reach its goal with the people pouring into the streets.

After this unwise attempt, necessary measures were taken to decipher and then clear the secret organizational structure within the army, and those who had relations and connections with the organization and the uprising were punished. On the other hand, the fact that the political pillar of this structure has not been fully revealed increases the risk that Turkey may face a similar problem again soon.

The support of the organization behind this uprising and its leader, and the US's distant stance against the events that took place during the uprising, created another problematic area in Turkish-American relations.

4.6. The S-400 crisis and Turkey's expulsion from the F-35 project:

Another important problem between the two allied countries is Turkey's procurement and use of S-400 missile defense systems from Russia. The USA opposes the purchase and use of these systems and claims that such weapons are not interoperable within NATO. According to Turkey's official view on this issue, the Patriot missile defense system was requested from the USA, this

demand was not met, and therefore the country bought another system for air defense and this has nothing to do with NATO. The USA implements the policy of dictating its wishes against Turkey and preventing Turkey from approaching Russia and China. Against whom Turkey will use the S-400s is being questioned by the United States, and this decision by Turkey is seen as contrary to the spirit of alliance. Turkey's increase in its effectiveness as a NATO member country in the Caucasus, the Eastern Mediterranean and the Middle East is considered by the USA as "Turkey's taking bigger steps than its current position". It is understood that the Biden administration may make more oppressive demands in these two important problems than the Trump era, and will continue to exert economic and political pressures against Turkey. The fact that the S-400 missile defense systems, which cost approximately 2,5 billion dollars, could not be activated due to the pressures of the USA, continues as an economic and political problem of Turkey.

Although Turkey is a partner in the F-35 project, the unlawful and unjust removal from the F-35 project by the USA due to the supply of S-400 is another problematic issue. There are thoughts that this sanction, which is one of the obvious examples of the "Cold Peace" policies implemented by the USA against its own or allied countries, may weaken the air force in Turkey's future, as well as the fact that the F-35 aircraft is quite problematic, Turkey's removal from the project is a serious problem. There are also opinions that it will be in favor of Turkey and that the national aircraft project can accelerate. In this context, the steps Turkey has taken in armed and unarmed drones and the fact that these planes will be sold to countries such as Ukraine and Poland is a significant positive development for Turkey. On this subject, American political theorist Francis Fukuyama, in his article titled "Droning On in the Middle East" published in the "American Purpose" magazine, mentioning the strong effects of Turkish Armed Unmanned Aerial Vehicles as "Drones have now changed this picture substantially because they are relatively cheap, hard to defeat, and don't risk the lives of human pilots. Militaries around the world are scrambling now to figure out how to defend themselves against drones, and it is not clear who will win the arms race between drones and drone counter-measures. But it is possible that the world saw its last massive tank battle during the 2003 Iraq War. Drones have done much to promote Turkey's rise as a regional power in the year 2020. The country has now decisively shaped the outcomes of three conflicts and promises to do more of the same. The Middle East, which looked like it was

being polarized along Sunni-Shia lines led by the two primary antagonists Saudi Arabia and Iran, is more genuinely multipolar. Turkey has not aligned itself permanently with anyone.”(Fukuyama, 2021:1).

4.7. Turkey, The Only Ally Country Subject to US Sanctions:

The USA imposes an embargo on countries it defines as competitors or enemies, according to its law, known by the abbreviation CAATSA. “Countering America’s Adversaries Through Sanctions Act”

CAATSA, which entered into force with the signature of President Trump in August 2017; forms the basis of sanctions against Iran, North Korea, Syria and Russia. For example; The CAATSA applied to Russia envisages imposing sanctions on individuals and institutions that have significant exchanges with the defense or intelligence sectors of the Russian Federation or with institutions and individuals working on their behalf.

CAATSA is behind the insistence of the US Congress to impose sanctions on Turkey for the purchase of the S-400 missile defense system. It seems that Turkey’s exposure to CAATSA sanctions will cause the EU to follow similar sanctions.

The fact that Turkey is exposed to an embargo by its ally and that Turkey is in the same category as enemy or rival states in the eyes of the USA is another important problem that shows the point reached in the relations between the two countries. The fact that CAATSA will be applied to Turkey due to the procurement of the S-400 defense system from Russia shows the limitations that Turkey may face when it tries to implement independent policies contrary to NATO and the US alliance. The fact that Turkey was not considered to be an interlocutor to CAATSA while analysing the benefits of buying or not buying the S-400 causes the two problems to be experienced together and related.

It is the wrong policies of the USA that force Turkey to the S-400. The USA, which did not give the Patriots to Turkey even though it promised to give its money, made a big political mistake and did not provide the necessary support for Turkey’s defence, which it deems lacking.

Both the CAATSA sanctions that do not comply with the spirit of alliance and the problems encountered in activating the S-400 defense systems affect the relations negatively. Similarly, the S-300s, which were thought to be placed in the Greek Cypriot Administration, were sent to Crete under the pressure of Turkey. In order to avoid the sanctions that the USA wants to impose through CAATSA, on the other hand, to be able to use the system and not waste the money spent,

the deployment of the S-400s to the TRNC or Nakhchivan or Azerbaijan can be considered, provided that the approval of the people and the administration is obtained. Thus, together with the principle of being one nation, two states in air defense, Turkey's not being subject to CAATSA sanctions, continuing its NATO membership without any problems, returning to the F-35 project, not disturbing its relations with both Russia and the USA, and keeping the balance in the Eastern Mediterranean with the Turkish world, advantage can be obtained.

4.8. Turkey's start to claim its rights in the Eastern Mediterranean

While Turkey was in a meaningless recession and a problematic foreign policy in the first decade of the 21st century, the Greek Cypriot Administration (GCA) acted as the only representative of the island in 2003, 2007 and 2010, respectively, with Egypt, Lebanon and Israel. Areas had signed some agreements related to exclusive economic zone. Against these agreements, Turkey signed an agreement with the Turkish Republic of Northern Cyprus (TRNC) in 2011 and the maritime jurisdiction areas of the TRNC were determined. As a result of these agreements, which were made without mutual agreement, overlapping areas emerged in the region and mutual objections began to come into play.

After the 15 July 2016 coup attempt, Turkey, which turned to more nationalistic and right-protective policies in domestic and foreign policy, signed the Maritime Jurisdiction Limitation Agreement with Libya on 27 November 2019 and started to increase its effectiveness in the Eastern Mediterranean. The fact that Turkey started to act under the "Blue Homeland" concept put forward by its patriotic admirals caused Greece and the Greek Cypriot Administration to understand that the areas determined by them in the Eastern Mediterranean would not be accepted by Turkey. In this crisis, the perception of the Turkish theses as extremism and expansionism by the EU and the USA and their statements on the side of Greece and the Greek Cypriot Administration have caused another issue to be reached in Turkish-American relations.

4.9. The problem that evolved from catastrophe to genocide under Biden (April 24, 2021)

For the first time in history, a US president explained the events of 1915 with expressions of the Armenian genocide and the great disaster. Moreover, he was not satisfied with this, he called Istanbul Constantinopolis. So, what happened that a US president made such a statement for the first time?

Turkish-American relations, which could be resolved somehow in the 20th century or that mutual sensitivities were taken care of, started to move in a direction where crises increased one by one and solutions became more difficult in the 21st century. Despite the many problems experienced in Turkish-American relations, the term genocide has never been used by US presidents regarding the events that took place in 1915. It was only in 1981 that Ronald Reagan made a similar statement, but it would be correct to accept Biden's statement as the first since it did not make much noise at that time.

In fact, for some reason, the Turkish public has lived with the assumption that if the US president says genocide, it is genocide, otherwise, it is not genocide. However, the US president's use or non-use of the phrase "genocide" can never be a result. After all, the institution that decides on these events is history and law, not politics. While it is known by the US president that both history and legal sciences do not characterize the events as genocide, the reasons for the change in political and bilateral relations that are intended to be made with this statement should be examined.

The word genocide, which was used for the first time in the history of Turkish-American relations, just after the phone call between President Biden and President Erdogan, which was expected to take place on April 23, since the election of the US President, is an important indicator of the US president's anti-Turkey political stance. According to the Reuters news agency, in this phone call on April 23, Biden informed Erdogan in advance that the phrase "genocide" would be spoken.

After the Trump administration, with the election of Biden as president, there have been obvious differences in American foreign policy. Biden's first meeting with America's neighbors and then with EU countries and his use of the phrase "America is back" as his motto created the beginning of these differences. Biden's past state experience and the fact that he held critical positions in the Obama administration show that the American foreign policies implemented at that time will come to the fore again. When we look at the main policy of the Biden administration, it is seen that first of all, America wants to act together with its allies again. During the US period under the Trump administration, the US's relations with some EU countries and Turkey were quite problematic. It can be said that in the Biden period, these relations may improve for the EU and worsen for Turkey. In this context, the US will support its allies and the alliance system. The most important indicator of America's unwillingness to keep more

military units, especially in the Middle East region, during the Biden period, and that it will intervene in the events through international organizations and its allies, is the decision to increase NATO power in Iraq.

It is thought that diplomacy, which lost its level in the Trump era, will become valuable again in the Biden era and diplomatic relations will become more intense rather than the relations between presidents. Thus, NATO's duty to protect democracy against Soviet expansion will come to the fore again. Thus, with the re-emergence of the containment policy implemented by the United States during the "Cold War" period and the counter-policies of Russia and China, the world may enter a new "Cold War" period. The US's recent maneuver to amass troops and establish new bases in Greece should be evaluated within this framework rather than in opposition to Turkey. It can be said that the USA has started to use Greece rather than Turkey in this new containment policy that the USA has started to implement due to some of the important problems that have recently been experienced between the USA and Turkey and mentioned above.

5. Conclusion:

Two different views are emerging and being discussed in the Turkish public opinion regarding the problem that Turkish-American relations have become so problematic. According to some, the reason for this set of problems in the history of Turkish-American relations is Turkey's wrong steps in foreign policy, and according to others, Turkey's independent policies. In Turkey, supporters of the opposition support the first proposition, while supporters of the government support the second proposition.

When the issues that are seen and discussed as mistakes or mistakes in foreign policy are examined:

1. The weakness in the determination of Turkey's foreign policy, which is claimed to have been caused by the despising of bureaucrats and foreign affairs members who have spent years, and the election of those who are appointed to replace them, mostly from political actors.
2. Deterioration of relations with the "one minute" protest against Israel with the thought that it will bring votes in domestic politics and the statements made afterwards, this deterioration caused the support of the Jewish lobby

in the USA, which was in favor of Turkey, to be cut off, and the Turkish lobby, which was left without support, to support Greek, Greek and The defeat of the Armenian lobby.

3. Due to the Ikhwan and neo-Ottomanist perception created in foreign policy, the deterioration of relations with the Middle East countries, especially Egypt, Israel and Syria, the withdrawal of mutual ambassadors and the absence of any country that can be called friendly with Turkey, except for Qatar, in the regional sense.
4. The inability to give the necessary and sufficient reaction to the insulting and educative actions, discourses and actions of the USA, which started with the sack over the head of the Turkish soldier in 2003, and the useless pressures and hostile behaviors of the USA, which saw this, gradually increased, and Turkey's response to this the fact that it has not been able to give the necessary and sufficient response to the accelerating pressures.
5. The fact that the CAATSA sanctions imposed by the USA on its enemies such as Russia and China and on countries such as North Korea and Iran, which it describes as enemies, cannot be prevented from applying to Turkey despite being in the same alliance.
6. The purchase of S-400s from Russia and the inability to use this system actively due to pressures, without foreseeing the problems that may be experienced by the USA and NATO, without making a full benefit-loss analysis.
7. The USA started to see predictable Greece as a more strategic partner instead of unpredictable Turkey and increased its political and military support in favor of Greece.

It can be said that this chain of political events, briefly summarized, has affected the relations of the USA with Turkey and has caused the relations to become problematic, including the use of the phrase "genocide" against Turkey for the first time.

On the other hand, some issues cannot be ignored, especially after 2016, when Turkey started to follow a more independent, unpredictable, maverick foreign policy and gradually got rid of its old mistakes.

When these issues are examined;

1. The Olive Branch, Euphrates Shield and Peace Spring operations against the Pyd/Ypg organization and its nationalization, which are tried to be carried

out with the support of the USA in Syria and supported to ensure Israel's security.

2. As a result of the adoption of the concept of blue homeland as a national policy, the defense of the rights in the Eastern Mediterranean, which was not emphasized in the past, started. In this context, the purchase of drilling vessels, the signing of the maritime jurisdictional demarcation agreement with Libya and the steps taken to improve relations with other riparian countries, albeit delayed.
3. In the crisis between Azerbaijan and Armenia, the political and military support given to Azerbaijan, without confronting Russia, resulted in the recapture of a part of the Azerbaijani lands occupied by Armenia in Nagorno-Karabakh.
4. Turkey's stance in abandoning the unsuccessful federation-solved talks in the Cyprus case and towards a confederative solution with two equal and sovereign states.
5. The production, active use and export of unmanned aerial vehicles, as a result of the seizure of 5 F-35s, which were paid for and in joint production, by the USA and these aircraft were not sent to Turkey, and the domestic and national aircraft industry was directed.

Some of the issues that can be summarized as some political mistakes made by both sides and interference in the internal affairs of the other state;

1. Despite President Trump's contemptuous and bureaucratic letter to President Erdogan, his approval of sanctions against Turkey, his threats to collapse Turkey economically, and his continued support of Pvd/Ypg in Syria, Erdogan's support for Trump and explain that he is in favor of his election.
2. The US President Biden's statement that he will support the opposition to overthrow Erdoğan, while it is clear that the US is in the background of the coups in the history of Turkey and the dire situation remaining from the 15 July 2016 attempt.
3. The US's failure to hand over the leader of the Fetullahist terrorist organization, supporting the perception that it was behind the 15 July 2016 coup attempt, and the delayed and strange statements it made after the coup attempt.

4. Allegory comments and statements made by Turkey about the raids and anti-democratic events that took place in the US Congress on January 6, 2021, similar to the statements made by the US in similar events.

Turkey, on the one hand, does not want to wear the shirt of obeying without question if you are an ally, and on the other hand, cannot show a clear stance against the USA due to the fragility caused by the wrong decisions taken in the economy and foreign policy.

The USA, on the other hand, wants to return to the bipolar world order. Instead of the capitalist and communist poles during the Cold War, the poles created by the USA this time are designed as democratic and autocratic regimes. These pressures are increasing day by day because the USA does not see Turkey as fully democratic, let alone being right or wrong. The USA told Turkey, “Either be a transparent democracy with us and remain our ally; or “become an autocratic regime on the other side, like China and Russia, remain our adversary”.

The operation to test, adjust and escalate Turkey, which the USA started with the sack incident in 2003, continued with the support of truckloads of weapons to the PKK in 2014, and by being behind the 15 July coup attempt in 2016. This operation continues with increasing violence, with the use of the words “Constantinapolis” instead of Istanbul for the first time in history, and “Genocide” for the first time in history, by US President Biden on April 24, 2021. Briefly; The USA measures the reaction of Turkey, increases its pressures and scratches the sensitivities as long as there is no reaction or the dosage remains low. It seems that as long as weak and dysfunctional reactions continue, it is likely that similar events and statements will be experienced by the USA against Turkey.

In addition to Turkey’s removal from the F-35 program and its continued CAATSA sanctions, the USA will increase its pressure in the form of asset investigations that will be shaped according to the decisions to be made in the Halkbank case and the efforts to establish a Kurdish state in Syria, and the problems in Turkish-American relations in the coming period will be increased. It is evaluated that the verse will increase by accelerating.

What Turkey should do in the face of such a realpolitik situation is listed below:

1. Turkey must first develop its democratic values, show the internal and external world that it is a social and democratic state of law, internalize its democratic norms and end all practices that give the appearance of an autocratic regime. Being at the same level as autocratic regimes in terms of rule of law and freedom of the press does not suit Turkey's democratic record.
2. It is not possible to achieve domestic unity by turning foreign policy into a domestic policy material and by marginalizing and making enemies of those who do not think like themselves. Ensuring unity can only be achieved through more democracy, tolerance, freedom and transparency.
3. Turkey should not make the slightest concession on matters related to its national interests. Our national causes must not be compromised against the protection of rights and interests on Cyprus, the Blue Homeland, the islands, islets and rocks in the Sea of Islands, and the puppet state formation that is being tried to be created in Syria and Iraq.
4. A mistake that will directly affect Turkey's survival, such as leaving NATO, should not be made, and the power of having a NATO membership, where consensus is valid, should not be lost in the decision-making process. It should be noted that NATO membership provides defense not only against threats from the outside but also against threats from within the alliance.
5. To defend the territorial integrity of Syria and Iraq together and to fight together with all separatist organizations and structures, Turkey should improve its relations with neighboring state administrations and show its leadership to prevent the realization of imperialist goals in the region with joint measures to be taken. In this context, efforts should be increased to establish an OSCME (Organization for Security and Cooperation in the Middle East) similar to the OSCE (Organization for Security and Cooperation in Europe), which is tried in Europe and prevents the outbreak of wars.
6. Against economic sanctions, savings and production economy measures should be brought to the fore immediately, and technological, economic and political nationalization moves should be activated in parallel with the national and domestic developments in the defense industry.
7. Expensive projects such as "Kanal Istanbul" should be suspended or forgotten immediately, resources should be transferred to the national power, namely military, economic, technological and political power elements,

- and production economy measures should be taken urgently, especially to ensure the development of the weakening economy.
8. Deficiencies in public diplomacy and lobbying should be identified, measures should be taken to eliminate problems, and all kinds of visual, written and social media activities related to the promotion of the country should be accelerated.
 9. Rather than appointing politicians to foreign missions, people who are based on merit, who have the capacity and ability to represent the country, regardless of their political views, should be appointed to critical positions.
 10. In the Cyprus case, efforts should be increased to reach a confederative solution based on two equal and sovereign countries and to recognize the TRNC, as it is understood that a federative solution is not possible as a result of the disturbed balance due to the Greek Cypriot side being an EU member and not accepting equal sovereignty. In this context, it should be ensured that the guarantor country, England, acts together with the Turkish side.
 11. The islands, islets and reefs occupied by Greece, although the sovereignty of the Islands (Aegean) sea was not given to Greece by agreements, should be determined one by one. Attempts should be made in the presence of the UN and NATO to evacuate these regions, a note should be given to Greece to ensure that these areas are evacuated by a certain date, and it should be announced to the whole world that if it is not evacuated, there will be an intervention.

Turkey should explain the current situation much more clearly to the USA on these issues, in which it is extremely right, and it should be shown that Greece and the Greek Cypriot Administration of Cyprus have usurped the rights of the stakeholders in the region.

The policy of balancing the great powers is possible only if the regional powers act together. The main foreign policy axis that Atatürk implemented in his period should be well understood, and the background of the Balkan and Sadabat pacts should be evaluated well. The policy of “Peace at home, peace in the world” is not only a wish but also the key to Turkey’s survival. The relations with other stakeholder countries in the region such as Israel, Egypt, Syria, Palestine and Lebanon, which have deteriorated due to meaningless reasons, should be immediately corrected by taking the national interests first, and bilateral agreements should be signed, just like with Libya.

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CHAPTER IX

THE FUTURE OF UKRAINE WITHIN THE FRAMEWORK OF GLOBAL POWER BALANCES

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1. Introduction

Throughout history, Ukrainian society and the Russians have been interacting as a natural result of their geography. As a result of these interactions, the unity of the two communities that founded the Kievan Rus State and the Kozak State broke up in a short time with Ukraine's declaration of independence in the chaos caused by the First World War. Ukraine became a part of this union with the establishment of the Union of Soviet Socialist Republics. Ukraine was occupied by Nazi Germany during the Second World War. Soviet dominance was restored when the end of the war in Ukraine. This dominance continued until the collapse of the Soviet Union. Ukraine, which gained its independence with the end of the Cold War, could not stay out of the interest of Russia due to its geopolitical importance. Russia, which was the continuation of a disintegrating empire, was not content with the remaining dominion area. Russia claimed rights in the Crimea and Donbas regions within the borders of Ukraine, using its historical and cultural ties as an excuse. Countries that declared their independence by separating from empires had difficulty standing on their own feet, as in the example of Ukraine. In this context, the historical codes of the crisis between Russia and Ukraine were analyzed. In the light of

the changing global balance of power, options such as China, NATO, European Union, the USA, and Turkey were evaluated in Ukraine's foreign policy.

Ukraine acquired its general character by the middle ages (Yücel, 2012:72-73). The meaning of Ukraine (Украина- окраина) is border region or fringe area (Editorial, 2021a). The name Ukraine is first mentioned in the Kyiv Chronicles about the death of Pereyasavl Khnez Vladimir Glebovich in 1187 (Плахонин, 2015). According to Vladimir Tolts, Ukraine came under the sovereignty of Russia in 1654 (Тольц, 2004) with the Pereyasavl Agreement signed by both sides voluntarily (Щербатов, 2009). Ukraine, an Eastern European country, has an area of 603.7 km² and a population of 46 million (Editorial, 2021b). With this feature, Ukraine is the largest country in Europe by surface area (Evans, 2008:174). Considering the geostrategic significance of the Eurasian geography, Ukraine attracts the attention of regional and global powers due to its historical background, being on the transit route both in the east-west and north-south axis. Ukraine is of geopolitical significance for regional and global actors, especially Russia. Because Ukraine is the country with the longest coast to the Black Sea after Turkey and is on the transit route for the shipment of Russian natural gas to the West (Gülşen, 2017).

The Black Sea is in a very important position in terms of approaches that explain international relations and world domination with geostrategic theories. The continents of Asia, Europe, and Africa are defined as the World Island by British author Halford John Mackinder's Heartland Theory. According to this theory, Eastern Europe and Siberia make up the Heartland of the world. The region around the Heartland stretching from the Balkans to China is the Rimland. The America-Africa-Australia-Japan line outside this region is defined as the outer crescent. Mackinder postulated the following, which became known as the Heartland Theory: "Who rules Eastern Europe commands the Heartland. Who rules the Heartland commands the World Island. Who rules the World-Island commands the world." According to this theory, Ukraine constitutes the intersection between the heartland and the Rimland (Mackinder, 1904).

Spykman, who is the theorist of the Rimland approach, emphasizes the importance of controlling Eurasia to ensure world hegemony. In this framework, he argued that who rules the Rimland commands Eurasia and who rules Eurasia commands the world. The Rimland region, as defined by Nicholas J. Spykman, is the region that acts as a buffer zone between land power and naval power, starting from Eastern Europe and extending to Eastern Siberia, including Turkey,

Iran, Pakistan, and China (Rosenboim, 2017:70). According to this theory, Ukraine is very important for the control of the rimland region due to its location in the Black Sea and its territorial depth. According to another view, the Black Sea basin refers to the geography where the “Russian Heartland and Eastern Europe” sub-geopolitical regions of the geostrategic Eurasian world region, which was under the control of the Warsaw Pact in the balances of the Cold War, and “Maritime Europe and the Maghreb”, which is the sub-geopolitical region of the world strategic region dependent on maritime trade, intersect (Bati, 2021). Therefore, Ukraine has emerged as a country where regional and global actors have wrist wrestled throughout history.

2. The State of Kievan Rus and the Origin of Russia, Ukraine, and Belarus

Russia has never been an aristocratic and bourgeois society in the Western sense. Idolatry, the old Pagan belief, the influence of steppe culture, and Orthodoxy have a determining role in Russian identity. The translation of the sacred texts of Christianity into Slavic by Cyrillic and Mephodi accelerated the formation of the Russian Orthodox identity and saving it from extinction under the influence of Greco-Latin culture. It is necessary to especially emphasize the three main elements of Russian political and state culture: Byzantine, Scandinavian and Turkish. Byzantium gained Orthodox Christianity, the institution of churches and monasteries to Russia. Scandinavians and Turks brought military and state culture to Russia. There are also various opinions regarding the emergence and origin of the word Russian. According to the Old Russian yearbook, “Russ” is the name of one of the Varyag tribes to which Rurik also belongs. On the other hand, some Russian historians claimed that “Russ” refers to the great alliance of Slavic tribes formed in the basin of the “Ros” river south of Kyiv (Nusretoglu, 2020:9-17).

The state of Kievan Rus (Riasanovsky & Steinbe, 2011:23), which is accepted to be founded in 882, is considered to be the ancestors of Ukraine, Russia, and Belarus (Özkan, 2000). Soviet historians describe the State of Kievan Rus as the common cradle of these three East Slavic nations. They reveal that the Eastern Slavs originally constituted the ancient Russian nationality or ethnicity speaking a common language. Serhii Plokhly claimed that Soviet historians started from the idea that the State of Kievan Rus was the common cradle of three East Slavic nations. He states that the Mongol invasion divided

the Russian society and led to the formation of the three modern nations. However, he reveals that imperialist Russian historians have a different view. He emphasizes that Ukrainians and Belarusians are not different nations but variants of Russian culture, and they recognize that the language they speak is also different dialects of the Russian language. In addition to this Ukrainian national historiography considers the state of Kievan Rus' essentially as a state of Ukraine and claims that the differences between Russians and Ukrainians are quite deep and obvious (Plokyh, 2006:1).

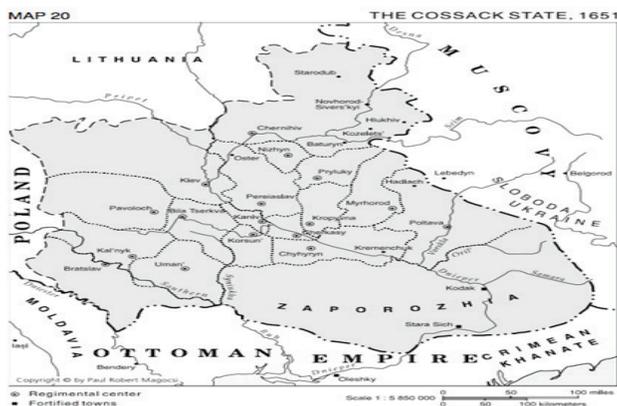
The state of Kievan Rus collapsed at the end of 1240 as a result of the coups of Batu Khan's armies (Вадим, 2021). In the continuation of the Kyiv state, which was destroyed by the Mongol invasions, the foundations of today's Ukraine with the name of Galicia-Volhynia Principality, on the other hand, Russia with the Vladimir-Suzdal principality, and Belarus with the Polotsk principality were laid (Şirin, 2019:9). Kyiv was the capital of the state of Kievan Rus, which is considered the joint state of today's Russia, Belarus, and Ukraine. Independent principalities emerged with the disintegration of the Kievan Rus state in the 12th and 13th centuries. The territory of today's Ukraine came under the rule of Russia and Belarus. According to historians, there were 15 principalities in the middle of the 12th century, 50 in the early 13th century, and 250 in the 14th century (Яновский, 2021:50-57).

The 14th century was a century in which Ukrainians sought identity. Because during this period, Ukrainian lands were occupied and Ukrainians lost their sovereignty. After the weakening and disintegration of the Mongol empire, the power vacuum left in the region was quickly filled by Lithuania and Poland in the west. The Poles captured the so-called "border region" of Ukraine in 1569 and imposed their own denomination, Roman Catholicism, on the Orthodox Ukrainians. This situation led to the emergence of resistance against the Polish authority. This resistance was continued militarily and trying to keep Orthodoxy alive with the writings written by religious opinion leaders. The Turks called these resisters Cossack or Kozak, meaning "ronin" or "free man" (Otfinoski, 2005:9).

There was a struggle against the Polish-Lithuanian union in the 16th century. It is known as a period in which Ukraine gained its independence from the Kievan Rus State for the second time in 1648-1654. The Ukrainian Cossacks, who could not cope with Poland, signed the Pereyaslavl Treaty with the Russians and swore allegiance to the Russian Tsar (Otfinoski, 2005:9). This situation

revealed that the Russian Tsardom was the most important power in the region by seizing the lands belonging to the former Kievan Principality of Russia. The Pereyaslav Agreement of 1654 formed the legal basis for the Russian Tsars to bear the title of “Tsar of all Russia, Great and Small”. It was considered the starting date of the unification of Russia and Ukraine (Aydingün, 2012:216).

Map 1: Kozak State Borders



Magosci Paul Robert, *A History of Ukraine, The Land and its Peoples*, University of Toronto Press, 1996, p.246

The state of war between Russia and Poland ended with the treaty signed in the village of Andrusovo near Smolensk in 1667. According to the agreement, Smolensk and Chernigov Voivodships were given back to Russia, while Western Ukraine was reunified with Russia (Яновский, 2021:201). During the 18th century, as the power of Russia increased in Ukraine, the power of the Cossacks gradually weakened, and the state ceased to exist in 1781. At that time, Poland was divided between its neighbors, Russia and Austria. Western Ukraine, which was previously under the control of Poland, was later passed under the control of Russia (Ofti noski, 2005:9).

3. Bolsheviks and Ukraine After World War I Period

The Russian monarchy collapsed with the October Revolution that took place during World War I. A new democratic government (Executive Committee) was formed in Kyiv on March 14, 1917. Three days later, this government was replaced by the Central Rada of Ukraine. The Central Rada of Ukraine had a

mission to establish an independent and sovereign Ukrainian state (Editorial, 2017). A reply came to the General Secretariat of Ukraine from Austria-Hungary and Germany that the officials of the Ukrainian People's Republic could participate in the Brest-Litovsk Peace negotiations on December 26, 1917. This answer meant the official recognition of the republic. This historical day was declared the foundation day of the Ukrainian National Republic based in Kyiv. A group of representatives who arrived in Brest-Litovsk insisted on independence on January 1, 1918. They brought up the issue of Ukraine's participation in the negotiations as an independent state. The Ukrainian People's Republic gained its independence on January 22, 1918, as a result of negotiations.

The Ukrainian Rada appealed to Germany and Austria-Hungary against the Bolsheviks. It caused the Bolsheviks to leave the Ukrainian borders, but this time the Germans replaced them. Ukraine regained its independence due to the First World War ended with Germany losing. The process resulted in the Bolsheviks re-entering the territory of Ukraine (Subtelny, 2009: 349-355). State policies in the Lenin period changed with the Stalin period and historical Russian policies were returned. The Union of Soviet Socialist Republics was established with the approval of the representatives of Russia, Belarus, Trans-Caucasus, and Ukraine on December 30, 1922. According to the Soviet Constitution adopted in 1924, each republic had the right to secede from the union. The republics could only split if the Communist Party agreed. However, this was a very difficult prospect.

After Ukraine joined the Soviet Union, it became the second-largest republic of the union after Russia with a land of 450 thousand km² and a population of 26 million. Kharkov was chosen as the country's capital because it was not as closely associated with the former national governments as Kyiv. During the Tsarist period, the Ukrainian language was violently suppressed in terms of its culture and national identity. The borders of Ukraine were not very well defined and were called in vague terms "Southwest" or "Little Russia". In contrast, the Ukrainian Soviet Socialist Republic became a well-defined national and regional entity with its own administrative center and apparatus during the Soviet era. Thus, Ukrainians finally achieved a regional administrative framework that reflected their national identity (Subtelny, 2009:383-387).

A leadership crisis arose in the Communist Party with the death of Vladimir Lenin in 1924. Josef Stalin was the winner of a fierce power struggle between party leaders in 1927 (Subtelny, 2009:403). Private estates and farmlands were turned into collective farms and everyone's property was confiscated in the name

of the state in the Josef Stalin period. There were mass deaths (Golodomor)² from starvation in Ukraine in the early 1930s (Editorial, 2018). For It was genocide for Ukrainians³. In 1933, along with centralization, Russification came to Ukraine, and thousands of Russian officials flocked to Ukraine (Subtelny, 2009:422).

4. Ukraine During The Second World War

One of the regions that had strategic importance for Hitler was Ukraine with the start of the Second World War, Hitler attacked the USSR in order to gain rich oil resources in the Caucasus, to dominate the Black Sea, and to persuade Turkey to join the war on his side on June 22, 1941 (Çınar, 2019). Kiev took possession to the Germans on September 19, 1941. This situation continued until the autumn of 1944, when German troops were expelled from Ukraine (Subtelny, 2009:453). The German occupation of Kyiv was initially welcomed by the Ukrainian people, who had been starved by Stalin, and the Germans moved the capital to the city of Rivne. But the Ukrainian people realized that Germany came to Ukraine for colonial purposes (Tsimbalyuk, 2015). As Machiavelli wrote in his book “The Prince”: “People change masters, hoping they will find something better. They take up arms against their current master because of this belief. They are deceived, then find that their situation is getting worse.”(Machiavelli, 1994:43). Ukraine remained under Nazi occupation until 28 October 1944.

Map 2: Ukraine in the Nazi Occupation



Orest Subtelny, *Ukraine: A History*, Toronto, University of Toronto Press, 2009, p. 462

² Голод (Golod)- It means hunger in Russian.

³ In 2006, the Ukrainian Parliament passed the “Ukraine 1932-1933 Golodomor Law” recognizing the Rada Golodomor as the genocide of the Ukrainian people.

After the end of the Nazi occupation in Ukraine, although they faced resistance from Ukrainian nationalists, total Soviet domination was achieved in Ukraine. After the Second World War, Ukraine gained its present borders (before the annexation of Crimea by Russia in 2014). This process continued with the Ukrainians taking place within the borders of a single state for the first time after centuries. In the following process, the lands of Western Ukraine were connected to the Soviet Union with the decisions of the Yalta Conference. The new territorial gains gave Russia a strategic advantage over Poland, Hungary, and Czechoslovakia. In this way, Stalin would both destroy Ukrainian nationalism and control Western Ukraine. Towards the end of 1945, the territory of Soviet Ukraine reached 580 thousand km² with a population of approximately 41 million (Subtelny, 2009:483-484).

Map 3: Map of Ukraine under Nazi Germany from 1941-1944



5. Post-Cold War Process

With the collapse of the Soviet Union, all the republics that formed the union faced economic problems. Although Ukraine tried to move to a free-market economy under the leadership of the International Monetary Fund (IMF), it was not successful. The country's requirement for foreign investment, limited trade, and sectoral problems were in question. When Ukraine sought different projects, it found two major trading partners: Russian Federation and European Union (Sağlam, 2014:436). In addition, the USA tried to have a voice in the regions that were out of Moscow's control after the Cold War. These are regions of strategic importance such as the Black Sea, the Caucasus, and Central Asia. NATO's effort to advance towards the regions, which it sees as Russia's "backyard", was met with a harsh reaction by Russia, which did not want to lose its sovereignty in the region. The Bucharest Summit in 2008 paved the way for Ukraine and Georgia, which gained their independence with the collapse of the USSR, to the Western Bloc. It caused Russia's conflicts in Georgia and Ukraine. While Russia organized military action against Georgia, it recognized the independence of South Ossetia and Abkhazia. Georgia's NATO and EU membership process was interrupted in this process (Oğuz & Ünalmış, 2019).

When Alexander Dugin considered Ukraine in terms of Russian geopolitics in the late 1990s: "Ukraine's sovereignty is such a negative phenomenon for Russian geopolitics that in principle it could easily encourage military conflict. Russia, deprived of the Black Sea coast from the Özi fortress to Kerch, is acquiring a coast so small that it is unclear who actually controls it. Russia's existence as a normal and independent state is in doubt. He emphasized the importance of Ukraine in terms of Russia's continental geopolitics (Dugin, 2015:175-176). Russia sees the possible integration of Ukraine and Georgia with the West as a major threat for itself. The source of his concern about the shift of prepaid ports in Crimea to the West should be sought in the announcement that Viktor Yushenko will not extend the use of the Sevastopol port, which was leased by Russia from Ukraine for a period of 20 years in 1997 (Dumlupınar, 2017:9).

John Mearsheimer writes that this policy of Russia is considered by the West as an attempt to revive the former Soviet Union, but this is wrong. He states that the USA and its allies should share some of the responsibility and that the main source of the problem is that a broader strategy to remove Ukraine from Russia's orbit and integrate it into the West is an extension of NATO and

the EU's enlargement policy (Mearsheimer, 2014). Viktor Yanukovich and Dmitry Medvedev agreed on a 30% discount on Russian gas supplied to Ukraine in 2010. Ukraine announced that it agreed to extend the stay of the Black Sea fleet in Crimea for at least another 25 years (until 2042). However, as the Square Protests in Ukraine posed a threat to Putin's Eurasian plans, Russia stepped in and annexed Crimea in 2014. The transportation of Russian natural gas to Europe via Ukraine, and Ukraine, which is itself an important user of Russian natural gas, is of great importance for Russia (Dumlupınar, 2017:9).

The Black Sea is the scene of the rivalry between the USA (NATO) and Russia today. While Russia is modernizing its military bases in Crimea, the deployment of nuclear-weapon-capable aircraft and missiles on the field also reveals the threat in the region (Oğuz & Ünalımsı, 2019). Russia's annexation of Crimea in 2014 marks a turning point with the realization of the annexation of territory by a foreign power in Europe for the first time since the Second World War (Dayspring, 2015:103). Although Russia bloodlessly annexed Crimea, hybrid attempts by Russia in the Donetsk Basin in eastern Ukraine failed. The mobility of the Russian army in the region gave rise to concerns. It was stated that there were around 40 thousand Russian soldiers with 117 different units on the Eastern Ukraine border, and 104 different Russian troops were active in the region in December 2014. Then, it was claimed that the number of Russian soldiers in Donbas was 14,400 and 55,800 at the border (Dumlupınar, 2017:9).

Donbas is the fourth largest mining region in Europe with its large coal reserves. The coal reserve found here is estimated to be around 100 million tons. This region provides 20% of the gross national product of Ukraine. About a quarter of the country's exports are made from this region. Besides its historical importance, Donbas is important for Russia because it is the center of some production items. Especially the Russian space and aerospace industry and the defense industry benefit from the production carried out in this region. A special iron ore, which is used in the construction of Russian tanks, is also processed in the Donbas. Also, the engines of Russian war helicopters come out of the factories in this region. The regional economy is dependent on Russia. If the region is to be separated from Ukraine, the country will have lost an important resource (Tuncay, 2021). The Russia-Ukraine crisis, which has been going on since 2014, came back to the world agenda due to the death of 4 Ukrainian soldiers in the Donbas region in eastern Ukraine on March 26 and the mobility of the Russian army on the Ukrainian borders (Başlamış, 2021). This situation

led Ukraine to seek new foreign policy for its national security within the framework of global power balances.

6. Alternative Approaches in Ukrainian Foreign Policy

The first significant indicator of the orientation towards China was Ukraine's withdrawal of its signature from the resolution text in which Beijing was condemned because of the Uyghur Issue in the United Nations. In addition, the Ukrainian administration, which banned the activities of communist parties in its own country, praised the Chinese Communist Party on the centennial of the Communist Party of China. Economic cooperation agreements were signed between the two countries, especially in the construction sector. Since last year, China has not recognized Russia's annexation of Crimea, despite its close relationship with Russia and Ukraine's largest trading partner. Unlike Western countries, China does not have political demands from the countries it lends to. Also, it is not a country that has a border problem with Ukraine like Russia. Although the Beijing administration is one of the most important customers of the Ukrainian arms industry, it does not have serious investments in the region in the context of the One Belt One Road Project due to the instability in the region, especially in Crimea and Donbas. If these problems are resolved, it would not be surprising that China would like to include Ukraine in the project due to its geostrategic position. However, turning to China, which the Biden administration sees as the number one threat, could drive a wedge between the Ukrainian and US administrations. At this point, Eastern Europe is becoming a new area of competition between the USA and China. In this context, the official visit of the President of Ukraine Zelensky to the USA on August 30 is very important (Berkday, 2021).

Another foreign policy alternative for Ukraine, like any country that comes into conflict with Russia, is undoubtedly the NATO and European Union options. However, the messages of support for Ukraine from these organizations required to be considered. The support these forces can give to Ukraine is limited due to the realities of the region. The United States and the United Kingdom cannot have a navy in the Black Sea owing to Montreux Convention. Members of NATO other than Bulgaria and Romania do not have the opportunity to support Ukraine with a large naval force. Ground support from Poland does not seem very realistic considering the current international balances and the Covid-19 Pandemic process (Aksan, 2021). Ukraine's membership in NATO

and the European Union is a low possibility in the short term. Georgia, which has been eager to become a NATO member to resist Russia since the 2008 South Ossetia War, is still not included in the union. While the European Union has not approved the full membership of the Balkan countries for years, it is against the natural flow of life to expect Ukraine to become a member of the union in a short period. It is a difficult possibility for the USA to play an active role in the conflict zones in Ukraine by opposing Russia with the foreign policy followed by the Biden administration. The United States abruptly withdrew from Afghanistan. Its future in Syria and Iraq is a matter of debate and it competes with China.

At this point, Turkey bursts into prominence for Ukraine due to its special position in the region. Turkey is a candidate country to create a new axis in the region as a result of having the second-largest army in NATO after the USA and the dialogue it has established with Russia recently. Russia's annexation of Crimea created a leverage effect in the strategic partnership established between the two countries in 2011, and the rapprochement between the two countries has continued until today. The trade volume between Turkey and Ukraine reached 5 billion dollars in 2020 (Editorial, 2021a). Approximately 1 million tourists came to Turkey from Ukraine in 2020 despite the pandemic (Editorial, 2021b). Similar cooperation can be seen in the military field as well. Ukraine has received modern technological weapons (UCAV Bayraktar TB2, cooperation in the construction of corvettes for the Ukrainian Navy) from Turkey, especially in recent years. Thus, Turkey gained a market for the high-tech weapons it produces, and also had an opportunity to test the manufactured products and develop them according to feedback (Sağlam, 2021).

The warm relations between the two countries, which started with Poroshenko, reached the level of the multidimensional strategic partnership with the Zelensky administration. Turkey's sensitivity to Ukraine's territorial integrity was met by the Kyiv administration. Moreover, Turkey sees Ukraine as a country that offers balancing opportunities for Russia in the Black Sea Basin. Considering that Russia may follow policies that may harm Turkey's interests in the South Caucasus, Syria, and Libya, Turkey has integrated close relations with Ukraine against Russia as a "defensive realist" approach to its foreign policy. Turkey-Ukraine rapprochement bore fruit in Ukraine's latest National Security Strategy document, which was approved in September 2020. Article 36 of that document lists Turkey among the countries with which a strategic partnership designed to help strengthen regional security has been developed

(Aksan, 2021). The final indicator of this process was the results of the meeting of the President of Ukraine Volodymyr Zelenski with his Turkish counterpart, Recep Tayyip Erdogan, in Istanbul on April 10, 2021. Crimea was defined as the homeland of Muslim Tatars and a former Ottoman territory in the signed declaration. It was emphasized that the “unlawful and illegitimate annexation of the region by the Russian Federation” should be ended and the Donbas region in eastern Ukraine, dominated by Russian-backed separatists, should be “saved from occupation”. Turkey also reaffirmed its support for “Ukraine’s NATO membership perspective, particularly its intention to receive the Membership Action Plan in the near future” (Zaman, 2021).

7. Conclusion

The unipolar world order that emerged with the end of the Cold War was eroded with the socio-economic developments experienced in the process. The Covid-19 Pandemic, which deeply affected the whole world, made this erosion more visible. States with regional and global claims are calculating to turn the crisis into an opportunity when the multipolar world order is taking shape. Undoubtedly, Russia is one of these countries. Russia, which wants to regain its former dominance in the global system and have a greater voice in the international arena in the post-pandemic period, wants to increase its effectiveness with the frozen conflict zones it has created. At this point, Turkey, which wants to be active in these conflict zones and whose regional weight is increasing day by day, comes to the fore. Turkey changed the course of the crisis with its support and strategic moves in the Nagorno-Karabakh issue between Azerbaijan and Armenia and played an active role in resolving the crisis in favor of Azerbaijan. Besides, In addition, Turkey showed that a game cannot be formed in the Eastern Mediterranean without Turkey with the memorandum of understanding on maritime jurisdiction areas with Libya. Likewise, the Syrian Crisis appears as another problem that awaits an urgent solution in the upcoming period. These crisis regions are also problems to which Russia is a direct party. When we add the Ukraine crisis to these problems, the developments in Ukraine can create a domino effect for the other crisis regions we have mentioned. The Black Sea basin will attract more attention from both regional and global actors in the coming days when the construction of Kanal Istanbul has started. Therefore, Turkey and Russia, especially Ukraine, manage the crises in the region correctly and when rational diplomacy is applied in line with the dynamics of the region,

it can bring along a process in which permanent solutions will be formed in the region in the upcoming period.

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CHAPTER X

EVALUATING THE ‘STANDING MAN’ ACTIONS IN THE SCOPE OF CIVIL DISOBEDIENCE¹

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Introduction

Throughout the history, different kind of resistance, conflicts, defiances and rebellions have never been lacking in political and social life. Although the ideas about social movements are as old as human history, systematic analysis regarding the social movements started to emerge just from the 19th century onwards (Çetinkaya, 2008: 25-27). Social movements that emerged as a reaction to the capitalism of the 19th century demonstrated themselves as a stance against the social injustice that increased primarily with the early industrialisation process as modern society began to develop. Since the 1960s, new social movements approach has begun to develop with the feeling of the inadequacy of neo-Marxist models of social movements. New social movements tend to focus on environmental, cultural, identity and lifestyle issues beyond the interests of a particular social group (Işık, 2015: 17-34).

Social movements can be accepted as one of the ways of expressing the demands and needs of social groups as well as the expression of social disturbances produced by social change (Işık, 2015: 1-2). Civil disobedience,

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one of the forms of a social movement, can be defined as a peaceful protest movement, which is carried out publicly and illegally for the sake of the superior values of the rule of law, while not violating a superior right of third parties (Candan and Bilgin, 2011: 62).

This essay deals with Gezi Park events that took place 2013 as a crucial social movement in Turkish political life. Immediately after the evacuation of Gezi Park in Taksim/Istanbul, the ‘standing man’ actions began in Taksim Square and to spread in the various provinces of Turkey as a passive form of a resistance in a non-violent way. In this context, this study focuses on ‘standing man’ actions within the scope of civil disobedience.

When the literature is reviewed, it is seen that there is a significant number of papers on the Gezi Park events, but the quantity of studies on ‘standing man’ protests is few. Studies on the ‘standing man’ actions protests are generally connected within the Gezi Park events. Further, this study aims to fill the gap in the literature and to determine whether the ‘standing man’ actions can be considered as civil disobedience. This study tries to give an answer to the following research question: “Do the ‘standing man’ actions considered to be as an example of civil disobedience?” The hypothesis of this study is formulated as follows: “the ‘standing man’ actions are a sample case of civil disobedience”. The method of the study is the literature review and evaluations made in this context.

The work plan of this study is designed as follows. Firstly, social movements are explained briefly and especially the concept of civil disobedience is explained in the paper. Secondly, the Gezi Park events and the ‘standing man’ actions are discussed in detail. Thirdly, Gezi Park events are briefly mentioned. There is no in-depth analysis of the causes and consequences of the events, and only general information about the events is included. The purpose of the study is not to analyse the Gezi Park events, but to reveal whether the ‘standing man’ actions concurred in these events can be treated as civil disobedience. Within this framework, after giving general information about the Gezi Park events the ‘standing man’ actions within the scope of civil disobedience are evaluated in the conclusion part of the study.

1. Social Movements

Social movements can be defined as the actions, which are not organised by the ruling or official state organs or opposition parties, of various groups emerging

from the social structure related to a social problem (Kavuncu, 2014: 109). Social movements formed by the gathering of a group of people around a common purpose in a long or short period, creating a common identity and activity, had intensely affected politics and democracy since the first period when democracy started to be institutionalised. Social movements have assumed various functions to expand the freedom of individuals and society, in particular as in the women, worker and youth movements (Sanlı, 2005: 12). Such movements have been called “old social movements” in the sense of what they belong to the old (industrial) type of society. Because the dominant social movements of early modernity concentrated on economic interests and they were organised centrally to seize the political power with members of a single social class. The rapid developments and the transformations which are occurred has changed the type and the nature of social movements. The actors of the movement, its purpose, application method, duration and domain area have gained a new dimension. These social movements, which are described as ‘new’, aimed to draw attention to a disturbing issue rather than change (Bayhan, 2014: 26).

In brief, social movements appeared as the workers’ movements emerged in the late 19th century, and these movements, which aim at political power and have a structure shaped by economic interests, are called ‘old social movements’ (Karagöz, 2013: 134). There are two main approaches, namely the American-centered “Resource Mobilisation Theory” and the European-centered “New Social Movements Theory”, which conceptualise social movements that have emerged since the 1960s (Topal Demiroğlu, 2014: 135). While the resource mobilisation theory emphasises the economic and political aspects of social movements, the new social movements theory focuses on the cultural aspect of movements (Bayhan, 2014: 27).

The Resource Mobilization Theory focuses only on resources and the processes of collecting these resources. By evaluating the social movement within the same framework with other actors of the dominant politics, the theory explains the political activities of these movements such as collecting resources as the dominant groups do, persuading the target audience, developing relations with institutional political organisations. Resource Mobilization Theory is interested in why social groups create social movements, but not how this social movement is created, developed, succeeded or regressed. In other words, it focuses on the strategic dimension of the social movement (Kaderoğlu Bulut, 2014: 57-61). this analysis selects as the Resource Mobilization Theory as a

theoretical framework put social movement organisations in the centre, they focus on the internal resources of movements, resource management decisions, organisational dynamics, and the political context and changes in which the movements are located. Resource Mobilisation theorists point to the similarities and continuities, rather than describing the movements that emerged in the 1960s as a break from the movements that occurred in the previous periods (Topal Demiroğlu, 2014: 135).

Within the framework of the New Social Movements Theory, the movements considered as “new” in the post 1960 era are the emphasises that these movements focus on issues related to equality, difference, participation and identity construction instead of problems stemming from economic and institutional politics (Topal Demiroğlu, 2014: 135). In this context, the new social movements can be defined as the movements that are collectively organised and act globally through new information and communication tools. New social movements differ from previous social movements because they are identity-based, put the concepts of pluralism and difference forward, see the action as a mixture of individual and collective identities, rely on reconciliation instead of violence, and have flexible and decentralised structures. New social movements include affirming the identities based on gender, age, ethnic group, nationality, religion. It also includes fictionalising of the nation-state and generalising of a citizenship concept that comprises the environment, social gender, communication, local and supranational space referred to as ‘third-generation rights’. Besides, it involves ethnic identity and both individuals and collective structures, by criticising neoliberal globalisation for various reasons (Şener, 2006: 102).

Despite the significant differences, both theories proceed as social movements are based on conflicts between organised groups. Both theories establish that these organised groups are all autonomous institutions and that there are public and sophisticated forms of communication between them. Both the resource mobilisation theory and the new theory of social movements state that aggressive collective action is regular and that the participants are generally rational members and are those who are firmly attached to their organisations. According to both theories, social movements are precious in terms of pluralism with the autonomous institutions they have and mediate (Sanlı, 2005: 52).

1.1. Civil Disobedience

The emergence of the concept of civil disobedience, a form of the social movement, is based on Western thought in the 19th century. Henry David Thoreau, who was the first to introduce the term civil disobedience into political science literature, begins his book entitled “Civil Disobedience” by saying “The best government is the least ruling”, and states that majority government is not always based on truth. Saying that the only thing the government serves is to isolate people, Thoreau argues that the government should work but not be dissolved. According to Thoreau, the fact that those, who hold the power, act in accordance with the majority does not show either this is right or that it is just for the minority. He claims that everybody has the right to revolutionise, resist and refuse allegiance when the persecution and incompetence of the government are intolerable. He states that a minority who conforms to the wishes of the majority will be powerless. However, they will be irresistible when they stand with all their strength. So, Thoreau underlines that people prefer to obey the rule rather than to resist because they fear what will happen to their families or property. Thoreau concludes his book with the following sentences: “*I please myself with imagining a State at last which can afford to be just to all men, and to treat the individual with respect as a neighbor; which even would not think it inconsistent with its own repose if a few were to live aloof from it, who fulfilled all the duties of neighbors and fellow them*” (Thoreau, 2008: 39).

Thoreau argued that the governments could have rights over individuals’ themselves and property not in absolute terms, but only to the extent that they allow them. Developed by Gandhi, Thoreau’s thoughts have played a pioneering role in putting them into practice in the geography where it lives. Gandhi called his actions “satyagraha”, which he thought to differ from the concepts of passive resistance and civil disobedience, aiming to serve the truth without resorting to violence. Gandhi associated Thoreau’s views with “ahimsa” (non-violence) in the old Indian thought (Dağtaş, 2008: 30-36). According to Gandhi, the concept of civil disobedience refers to resisting all kinds of immoral laws and that the resistance, the opposition to the law, is in a non-violent manner. The person who takes part in the action willingly accepts the sanctions of the law and cheerfully endures the pain of imprisonment. Gandhi states that the path he follows is the “satyagraha road”. He also notes that civil disobedience is a branch of satyagraha (Gandhi, 2015: 88).

Gene Sharp, who was influenced by Gandhi's views, attributed the shift of power to dictatorship to the unconditional obedience of the citizens by various means. Sharp tried to prove that societies can be drawn to a more democratic line through peaceful acts of disobedience. Sharp suggested to use official statements (group declarations, collective petitions), mass communication (using the print and visual media), symbolic public actions (dressing in specific ways) group representation (lobbying activities), applying pressure on individuals (watching, criticising), using elements of drama and music, using marches and demonstrations, funerals politically, establishing popular assemblies, as well as social withdrawal and waiver (refusing awards) as the protest and persuasion methods among the peaceful actions. According to Sharp, the political dimension of the resistance is based on actions such as the denial of authority, passive disobedience to the government or not participating in elections (Kakışım, 2017: 34).

In brief, civil disobedience is conceptualised and developed based on Thoreau's views. It is used as a last resort at the point where legal possibilities are exhausted, against grave injustices in a democratic system in which fair relations reign to one degree or another. It can be defined as a non-violent and illegal political action based on the constitution or the understanding of common justice that finds expression in the social contract (Coşar, 2014: 10). Again, civil disobedience can be expressed as a peaceful protest movement that is open to the public and against the law for the sake of the superior values included in the idea of the rule of law, while not violating a superior right of third parties (Candan and Bilgin, 2011: 62). According to Rawls, civil disobedience is defined as a political action that aims to change laws or government policy, that is carried out in public, that is not based on violence, that is conscientious but illegal. In this context, sit-in acts, death fasts, occupations, sign collections, self-reporting, border crossings and banned demonstration marches can be considered among civil disobedience acts (Arşan, 2011: 56).

Based on the definitions of civil disobedience, the five essential characteristics of civil disobedience can be listed as follows. First, the civil disobedience admits the modern democratic legal order and its moral framework. Second, civil disobedience is an illegal activity. Thirdly, although the civil disobedience is an act of moral and political motives, directed at common interests and values, it is leastwise based on a rational justification. Fourth, it is based on public action and derives its strength from this action.

Finally, the psychological pressure and the desire to influence, replace physical violence in civil disobedience (Çelebi, 2011: 80, 81). On the other hand, Erdal Dağtaş lists the essential elements of civil disobedience as illegality, publicity, accountability, assuming political and legal responsibility, denial of violence, a call to the public conscience and collective action against injustice rather than the general system (Dağtaş, 2008: 47-49).

Civil disobedience is seen in the states of law. They are peaceful protest actions that are open to the public and against the law in the realisation of the ideal of the state of law, which does not violate a superior right of third parties. It also includes an opposition expressed in the form of non-obedience by obeying the essence of the law. The fact that the most basic meaning of the civil disobedience is non-violence makes it away from active resistance, but gets it close to passive resistance in terms of action styles (Anbarlı, 2001: 320, 321). Within this framework, the civil disobedience acts have four essential elements that are a violation of the law, non-violence, openness to the public, and tolerance of sanctions that would arise from the violated positive law norm (Anbarlı, 2001: 323, 324). Mesude Altunel, on the other hand, states that civil disobedience has six fundamental elements. These elements are causing a severe injustice due to implementing a legal norm, violation of the law, non-violence, openness to the public, accountability, and tolerance of sanctions arising from the violated positive law norm (Altunel, 2011: 447).

The civil disobedience action may occur in situations where there is no other remedy after democratic and legal solutions are applied. Resorting to such actions is considered a last resort. When the groups with a fair life expectancy resort to actions in order to ensure the implementation of democratic rules of law, they act contrary to existing laws or rules on purpose and express their opposition to a political decision in order to meet their demands. At this point, it is the belief in the sincerity of the action, which is shaped in the form of consenting to sanctions arising from breaking the laws (Anbarlı, 2001: 324).

2. Gezi Park Events

The decision of the Istanbul Metropolitan Municipality for the reconstruction of the Artillery Barracks, which was evaluated in integrity with the “Urban Design Project”, was not approved by the Istanbul No.2 Regional Board for the Protection of Cultural and Natural Heritage. Against the decision, as a result of the objection of the Istanbul Metropolitan Municipality to the High Council of

Protection of Cultural and Natural Heritage, the Board approved the Artillery Barracks planned to be built in Taksim Gezi Park. While the decision of the High Council for the Protection of Cultural and Natural Heritage is brought to the administrative court, owing to the removal of five trees in Taksim Gezi Park, a group of environmentalist young people started to gather around the park to protect it (Küçükaya, 2013: 95-99). In this context, the Gezi Park events were initiated by an environmentalist group on the 28th of May 2013 to prevent the park from collapsing and removing the trees, grew due to disproportional use of force of police, and spread all over Turkey by changing its nature.

On May 29-30, police intervened from many directions against the activists in the park. Upon this incident, the protesters kept watch in the park until the evening, and their numbers started to increase rapidly in those times. The 31st of May became a date when events in Istanbul gained momentum. After the harsh intervention of the police in Istanbul, the environment became tense, and protests were organised in many provinces to support the protests. Despite the Istanbul 6th Administrative Court's decision to suspend the execution of the Artillery Barracks project on the 31st of May, the actions continued increasingly throughout the country (Işık, 2013: 22).

In the early hours of the 1st of June, clashes took place between the police and hundreds of protesters trying to enter the park. After the police withdrew from Taksim Square at noon, protesters turned Gezi Park into their camps. Until the 11th of June, the police did not intervene in Gezi Park, and there were no violent incidents. In the demonstrations that spread to other provinces of the country, intense clashes took place between the police and activists. On June 11, 12 and 14, demonstrators and police confronted in Taksim. Representatives of Taksim Solidarity met with Prime Minister Recep Tayyip Erdogan twice and conveyed their demands. Although Prime Minister Erdogan announced that some demands would be accepted if the park was evacuated, the police evacuated the park by using force on the 15th of June, when the protesters decided to continue the demonstrations (Yörük and Yüksel, 2015: 134, 135). Following the evacuation of Gezi Park, the events across the country decreased and stopped until mid-July.

2.1. 'Standing Man' Actions

After the police intervened in Gezi Park and evacuated the park, a person named Erdem Gündüz, who protested the blocking of exits to Taksim, began to wait at

the Taksim metro exit beginning from the evening of the 16th of June, without moving or speaking. Some people, also, who heard about the protest from social media came next to Gündüz for support and started to stand still. At 01.50 at night, the police intervened to disperse the protesters, and those who insisted on standing were detained (Çağrı, 2013). Despite the police intervention, the 'standing man' protests continued increasingly. While some of the protesters who came to the Taksim Square and started to stand from early beam were reading a book, some of them stood with their eyes glued to the Atatürk Cultural Center. Some citizens supported the protesters with applause and some with short-term standings (Yıldırım, 2013: 12). The 'standing man' actions continued in different provinces of Turkey but particularly in Taksim Square, and people living abroad also stood and supported the actions (Küçükaya, 2013: 179-181).

In his meeting with the BBC Turkish reporter, Erdem Gündüz stated that his reaction was to the media that showed nothing and to the oppressive policies of the government. Calling his action civil disobedience, Gündüz said that the system had to change completely (BBC, 2013).

In sum, the 'standing man' actions, snowballing in social media, froze Turkey. Citizens attending the 'standing man' actions committed to the crime named 'resistance to the police by standing without using violence or any action', tens of hundreds 'standing men' was taken into the custody regarding this rationale, according to the police reports. Photos of the 'standing man' action pole to pole were shared on social media. There have been numerous 'standing man' demonstrations in New York in front of the Statue of Liberty, in Mexico, India and Europe. Ultimately, the passive resistance initiated by the 'standing man' in Taksim has spread all over the world. In the following days, the men standing against the 'standing man' took their place in the fields. While a group of police were reading a book in front of the protestors, eight people wearing white T-shirts with the text "standing man against 'standing man' also took action against them. Eight people who stood in front of the 'standing men' left the area for about 45 minutes later (Batur, 2014: 26).

According to Emre Kongar, the men who stood protested the oppression and violence in a peaceful and inertia manner and by just standing. At the same time, the actions developed only in line with democracy and human rights (Kongar, 2013: 60).

The Pieter Verstraete stated that the 'standing man' action occurred at the last days of the Gezi Park events can be seen as an outcry against Prime Minister

Recep Tayyip Erdoğan's growing authoritarian attitude, who is the greatest defender of neoliberalism in Turkey, and seen as the reason for the success of AKP at the last three general elections, for the advances of the Turkish economy, and of the construction sector, in particular, in Istanbul. He stated that it could be seen as an outcry against his authoritarian attitude. Verstraete stated that the 'standing man' declared that the current capitalist system did not work well after the Second World War and that he did it for the establishment of equal rights, right to life, freedom and right justice. He said that the "Standing Woman" in Ankara, Yonca S., told him that the feeling of discomfort stemming from the Prime Minister's unilateral communication pushed her to take a counter stance against him (Verstraete, 2013: 2-7).

3. Conclusion

According to the theory of new social movements originating from Europe, social movements do not primarily involve material interests such as the environment and anti-war, but rather focus on the maintenance of a particular lifestyle. The Gezi Park events fit more with the theory of new social movements, as they focus on the maintenance of lifestyle rather than material interest. Gezi Park events started as a reaction to neoliberal practices based on environmental awareness, development and consumption. However, it later turned into a rebellion in which merely those who opposed the government-allied and transformed into acts of violence (Bayhan, 2014: 33). One of the reasons for evaluating the Gezi Park events within the new social movements is that the movement communicated with the internet network and criticised the government by following an apolitical opposition in different ways. In a sense, Gezi Park has provided mobility with social networking and has succeeded in mobilising different identities around a single goal (Işık, 2013: 29). Although the Gezi Park events are accepted as a new social movement, the fact that they sometimes include violent acts does not allow to evaluate the events as civil disobedience as a whole. To sum up, Gezi Park events can be evaluated as a new social movement rather than an instance of civil disobedience.

After the evacuation of the Gezi Park by police, starting in Taksim Square and spreading to the various provinces of Turkey, the 'standing man' actions can be considered as sample cases of civil disobedience. That is to say, the civil disobedience can be defined as an illegal political action, applied as a last resort at the point where legal possibilities are exhausted, based on

the common understanding of justice that is expressed in the constitution or social contract, and refusing violence against the severe injustices that arise in, somehow, a democratic system where fair relations prevail (Coşar, 2014: 10). In this framework, the 'standing man' actions fit the specified definition. Besides, in the assessment given above, taking into account the characteristics of civil disobedience, it is seen that the 'standing man' actions accept the current legal order and its moral framework. Another characteristic of civil disobedience is that it is an illegal activity. Although 'standing' is not a crime legally, the detention of those was in on the 'standing man' actions shows that the actions considered illegal. Since the 'standing man' actions take place against the media's failure to fulfil its duties, police violence, and the harsh rhetoric of the government, it also meets the element of relying on a rational justification, another characteristic of civil disobedience. Yet the civil disobedience has to be based on public action, also the 'standing man' protests, already, took place in Taksim Square - in the public space - and was open to participation. Finally, in line with the characteristics of civil disobedience, physical violence was not used in 'standing man' actions, but only psychological pressure and desire to influence was tried to be realised by merely standing still. Moreover, it can be said that the 'standing man' actions own the elements those based on the four essential elements of civil disobedience (Anbarlı, 2001: 323, 324), which are the violation of the law, non-violence, openness to the public and tolerating the sanctions arising from the broken positive law norm.

As a result, it can be said that the hypothesis that "‘standing man’ acts are the sample cases of civil disobedience", stated in the introduction part of the study, is confirmed due to the facts that the actions do not include violence, is against the law, are open to the public and have the elements of tolerating sanctions arising from the positive law norm that is violated.

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CHAPTER XI

SICK, NEEDY OR UNDEREDUCATED? HOW DO IMMIGRANTS FROM SOUTH TO SOUTH CHOOSE WHERE THEY WANT TO LIVE?

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1. Introduction

According to the latest IOM report, the number of people living outside of their country of birth was 271 million in 2020 (IOM, 2020). The report shows that the number of immigrants and refugees are exponentially increasing every year. As the numbers increase, the anxieties over social and welfare policies also increase. As Huysmans (2000) points out along with the securitization of immigration policies, there has been a tendency of welfare chauvinism in the context of social policy in the West. The main argument is that the public support for welfare policies will be diminished as the very existence of immigrants will increase the heterogeneity in the host societies (Alesina and Glaeser, 2004). Hence, “welfare chauvinism is a strategy of introducing cultural identity criteria in an area in which belonging is determined on the basis of social policy criteria, such as health, age, disability and employment” (Huysmans, 2000, p.768). As far as the impact of immigration

on social policy concerned, the literature focuses on the interest and institutions of the host community.

In the receiving countries, both some institutions of the state and some sections of the society have perceived immigrants as undesirable but as an economic necessity. Until the 1970s, western countries like Canada and Australia demanded their immigrants assimilate into the host culture. Even though such receiving countries changed their Anglo-conformist policies to more pluralistic and tolerant multicultural policies after the 1970s, the stereotypical perception of the immigrant as an unwelcome freeloader who only wants to take advantage of welfare policies has not changed (Kymlicka, 1995, p.14).

There is a multitude of reasons why people choose to immigrate to another country. The major factor affecting the migration decision is the economic opportunities that the host country has to offer for the immigrants. However, one should not assume that people move from one country to another just for economic reasons. It is very difficult for an individual or a family to make a decision about leaving his home, relatives, language and tradition, and relocate to a different, and perhaps even challenging, environment.

In this paper, we argue that another major immigration reason from South to South, in addition to the economic opportunities provided by the host country is the existence of social policies that are geared towards self betterment. More specifically, we believe that public welfare expenditures will have no effect on the migrants' decision to move, but public educational and health expenditures will entice migrants, because they give them the opportunity to improve their lives.

We consider the above arguments in the context of developing countries. We focus on South-South migration, limiting our sample to developing countries and their level of migrant stocks. There are two main reasons explaining this choice. First, by directing our attention on the developing countries and their migration patterns, we aim to explore a different kind of migration that does not involve developed countries and their prime conditions. In other words, we are interested in migrants who are not solely attracted by the economic opportunities and the "dream" life offered by the West. We are concerned with the immigrants who move *horizontally*, from one developing to another developing country, who know that the host country will present similar economic development levels but different social policies. There is significant variation in the economic development levels of the developing

countries in our sample, even with the exclusion of the already industrialized countries. This variation allows us to test the effects of economic development, in addition to other factors, as a control variable. “With the world’s 82 million South-South migrants forming about 36% of the total stock of migrants, South-South migration is an increasingly significant factor in the economic and social development of many developing countries”(OECD, 2021). Second, the large majority of world migration happens between developing countries, giving us the intuition that there might be different reasons for the South-South migration than for the South-North migration. By looking at LDCs, and only at them, we can understand why there are large levels of horizontal migration in the world.

To summarize the purpose of this paper, we focus on South-South migration and that we claim the importance of certain social policies (education and health) and not others (welfare spending) on immigration. We believe that this is the case because of the *qualitative* differences between welfare vs. the other two types of social spending. We distinguish the latter from the former as “redistributive” vs. “investing” public policies. We posit that immigrants moving within the Southern parts of the world are not interested in benefiting from governmental economic support, but they look for opportunities such as good education for themselves and for their children, and to a lesser extent, health policies that can protect them from the consequences of unexpected illnesses. These social benefits represent significant pull factors for immigrants of the South. We also provide evidence for this reasoning using data from 59 countries for the years 1972-1996 in the empirical analysis section.

The remaining parts of this paper are organized as follows. The next section gives a comprehensive account of the state of the literature on migration and social policy. We draw arguments from a variety of political science sub-fields such as political theory and comparative politics; we also branch out to research in sociology and anthropology, albeit briefly. The third section discusses the data sources and methods used to provide evidence for our theory. The fourth section summarizes the statistical analysis and results. The fifth and sixth sections ensure that our results are not artifacts of statistical coincidence by conducting additional tests and address further concerns about the validity of our findings. The seventh section concludes with suggestions for future research.

2. Existing Research on the Relationship between Immigration and Social Policy

2.1. *Political Theory*

How do immigrants make such life changing decisions? From a Millian perspective, Anthony Appiah argues that immigrants should be perceived as global/cosmopolitan citizens who are concerned about development of their individuality. Appiah “proceeds to affirm that human beings, by their nature, are such that they conceive of their time on earth as a limited opportunity to make the best of it and give themselves form in a way akin to artistic creation” (Vacono, 2010, p.12). In this sense, immigrants change their lives in such a radical way because they want to improve their well-being in general. Well-being should not be directly associated with earning more money. In *On Liberty*, Mill argues that individual well-being and happiness can be achieved through self-improvement. However, self-improvement can only happen if there are some individual freedoms and state sponsored education in place. From this perspective, one can claim that state should provide self-improvement opportunities to overall society including immigrants.

In the political theory literature, most scholars studied the normative implications of justice theories for the duties of the host states and societies towards their immigrants. Generally, immigrant’s desire to improve her/his well-being is taken for granted. The idea to study the determinants of immigration from South to South emanates from our insistence to somehow apply purely theoretical approaches to practice. How do immigrants choose where they will settle? By which factors are their decision effected? Liberal democratic theory implies that immigrants would prefer countries where there are opportunities for self-improvement. The best way to measure the state provided opportunities for self-improvement is to look at welfare policies.

2.2. *Comparative Politics*

Comparative political science literature offers several answers and a list of usual suspects for the determinants of immigration. In this paper, we look at the determinants of immigration flows from South to South. More specifically, we try to understand the relationship between different welfare policies and immigrant stock in the receiving countries. Due to data constraints, this subject has seldom been studied directly in the literature. We nonetheless try to connect several

findings on different dependent variables to arrive at a reasonable understanding of our topic. To do this, we review the comparative politics research from two points of view. First, we introduce a brief literature review on the findings of the determinants of migration flows from South to North and discuss their relevance for our sample. We then point out that, even though there is extensive research on the vertical migration from developing to developed countries, the determinants of South to South migrant flow have not been studied properly. Nevertheless, we try to get some cues from this research in our second part of the literature review.

2.2.1. South-North Migration Flows

To begin with, most scholars (Borjas, 1987; Karemera et al., 2000; Hatton and Williamson, 2002; Mayda, 2010) show that economic factors affect the amount of immigrants in a country. “The flow is from countries with low GDP per capita to countries with high GDP per capita. In the late 1990s, the ratios of source-country GDP per capita to receiving-country GDP per capita among 15 OECD immigrant-receiving countries were all below one. The average of the ratios was 0.57, which implies that receiving countries had incomes that were 57 percent of those in source countries” (Freeman, 2006, p.152). “A 10 per cent rise in GDP per capita (holding education constant) reduces migration to the US by 12.6 per cent. A 10 per cent rise in income would reduce migration from the typical East Asian country by 4.3 per cent and from the typical South American country by 3.7 per cent. But for the typical African country, a 10 per cent rise in income per capita increases migration to the US by 0.3 per cent. Looking at the poverty effect alone (that is, assuming income also rose by 10 per cent in the US) there would be virtually no effect on the west European country but a 2 per cent rise in migration from the African country” (Hatton and Williams, 2002, p.17).

More recently, Mayda (2010) found that the well-being of the economy in immigrant receiving countries is significant to determine not only immigrants’ preferences, but also the flexibility of immigration policies. “Changes in mean income opportunities in the destination country not only affect migrants’ incentive to move there but also impact the political process behind the formation of migration policies. For example, in periods of economic booms, policymakers are better able to overcome political opposition to and accommodate increasing migration inflows” (Mayda, 2010, p.4). Moreover, Hatton and Williams (2002) showed that high destination wage is one of the important factors that positively

drive world migration. Economic factors are a driving force in immigrants' decision to relocate.

Second, Karemera et al. (2000) studied the effects of socio-political policies that are in place in the receiving countries on the preferences of immigrants to move to one country instead of another. By employing dummy variable techniques, they show that, in addition to economic factors (gravity model), domestic politics has a significant effect in migration flow. "Less freedom is found to be associated with reduced migration flows. Countries with known irregular transfer of power or which exhibit domestic instability are associated with reduced migration. (Karemera et al., 2000, p.1754). Finally, immigrant's age and skill, the stock of immigrants from the source country are among the determinants of immigration flow (Hatton and Williams, 2002).

Although these studies specifically look at the South-North migration, we can use some of their intuition to explain the South-South migration. More specifically, we control for the level of GDP, economic growth, and domestic stability factors in our models, acknowledging their importance for all countries. However, these variables are clearly dominated by the developed countries, which are superior in all these aspects with respect to developing countries. Therefore, we argue that there must be other reasons why immigrants move within the South. One of these reasons is the better, and perhaps cheaper, public educational and health facilities provided by neighboring countries. We believe this latter is a major dynamic in the South-South migration patterns in the world.

One might argue that the North also has good, even better educational and health practices, just like higher levels of GDP; and therefore the social policies do not distinguish the South in any way. We agree that developed countries also provide good educational and health policies, however, these services are not cheap and are therefore inaccessible to a large majority of migrants. By moving instead to a middle income country, immigrants ensure that they can potentially afford these public services.

A few anecdotal stories may help illustrate the point. A trend on health tourism has started to grow back in 2010s. The 2010 December issue of *The Economist* proposes the several middle income countries as the next medical hubs for the world. In the editors' own terms, "high prices and queues in the overstretched health systems of the rich world have driven many people to seek hip replacements, plastic surgery and other care in Thailand, India and

Costa Rica". Surely, several of these patients are only tourists. However, there is no reason to exclude the possibility that migrants might be interested in these emerging health providers both for job opportunities, and for the public, accessible nature of these services. Similarly, Turkey has become an attractive educational destination for the neighboring Caucasus and Arab countries with its publicly financed, therefore relatively inexpensive, and comparatively successful higher educational institutions. Several of these students arrive in Turkey with the sole intention of receiving education, but they end up staying as immigrants, who become permanent residents. These advantages may set the South apart from the North in attracting a different kind of immigrant, whose decision is affected by the public social policies of the receiving country.

2.2.2. South-South Migration Flows

All the findings described above on the determinants of immigration are specific to the data based on the migration flows from South to North. Research on the motivations behind migration has been mostly focused on the specific flows of immigration from South to North migration and little attention has been given to South to South movements of people. Hatton and Williams (2002) argue that this lack of interest will take the analyst by surprise since this latter probably exceeds South to North migration. This is due to the fact that the opportunities in slightly more developed countries in the South will be more preferable for immigrants than northern countries which are farther away and require higher skills from immigrants.

Moreover, Ratha and Shaw (2007) show that understanding the dynamics of migration between southern countries is important since "by a rough estimate, in 2005 two of every five migrants on the globe—some 78 million out of 191 million migrants—were residing in a developing country" (Ratha and Shaw, 2007, p.1). Even though nearly half of the immigration takes place in between mainly developing countries, the topic has not been studied in a statistical way because of the incomplete and unreliable data on migration within the southern hemisphere.

We believe that studying south to south migration is valuable because it is a pressing reality and brings new ways to think about the subject of immigration flows. In their 2007 article and 2010 edited book, Pier and Hujo pointed out the challenges that South to South immigration creates in the receiving countries with respect to their social and economic policies. They emphasize the necessity of

adapting the social policy regimes in developing countries in the face of vast and irregular immigration from other southern countries. This logic supports our idea that immigrants are interested in the public social policies of their host country. We follow this line of research by improving on it with a distinction of the *types* of social policies available to immigrants. We categorize social expenditures as redistributive vs. investing, the former referring to welfare disbursements and the latter to public education and health. We argue that immigrants are only attracted by investing social policies and not redistributive ones.

To our knowledge, there is only two studies which directly looks at the determinants of South-South migration flows. In the case of South to South migration, because of the research constraints, researchers use survey data and case studies. For example, Parrado and Cerrutti (2003) studied the socio-economic factors that effect migration flow from two Paraguayan communities to Argentina. They find that unlike the migration flows from Mexico to USA, immigrants from Paraguay to Argentina are selected with regard to their education and skills. Moreover, family networks and economic stability of the receiving country are other important factors.

Even though it is a preliminary and descriptive study, Ratha and Shaw(2007) inform us about the possible causal mechanisms behind this type of migration. According to this study, “income, proximity, and networks are the major drivers of migration from developing to industrial countries. As South-South income differentials are relatively modest, proximity and networks are likely to have a proportionally greater impact. Motivations for South-South migration also include seasonal patterns and flight from ecological disasters or civil conflict” (Ratha and Shaw, 2007, p.15). We attempt to control the variables outlined by Ratha and Shaw as potential factors for South-South migration, and we augment their intuition by also looking at the effects of social policy, an omitted factor so far.

Combining these streams of thought, we develop our hypotheses outlined in Table 1. We believe that immigrants move to other developing countries, among other reasons, because they want to improve their lives through affordable education and receive basic health services when necessary at a reasonable cost. Several of the developing countries have poor public services which motivate a portion of their citizens to look for other places to live, work and raise their children. We provide statistical evidence for this logic in the sections below.

Table 1. Hypotheses

Higher levels of public educational and health expenditures will attract more immigrants from South to South.

Higher levels of welfare expenditures will not have an effect on the level of migration between developing countries.

3. Data Sources and Methods

3.1. Data

The data used in this paper comes from three main sources. First, we use the dataset compiled by Rudra (2008) to measure the types of social expenditures provided by developing countries. Then we merge this dataset with the World Development Indicators compiled by the World Bank, to control for other factors that might affect immigration levels. Finally, we add the Polity IV measure collected by Gurr and Jagers (1994).

Rudra (2008) uses the Government Finance Statistics to collect data on welfare, health and education expenditures made by governments. These data are available in DVDs provided by the International Monetary Fund. We augmented this data with economic and social indicators such as GDP, portfolio investment, foreign direct investment, trade, urbanization and the number of migrants in a country using the World Development Indicators from the World Bank database. Detailed information about the descriptions and sources of the data can be found in Table 2.

The dependent variable indicates the total number of international migrants in a certain country. This measurement fits the theory of the paper better than other migration measures such as net migration, or the migrant stock as a percentage of the population. Net migration does not capture the relationships outlined in the hypotheses in Table 1. This measure refers to the number of immigrants minus the number of emigrants in a certain country. However, the reasons behind the decision to leave a country for *anywhere in the world* might be different from the reasons to choose a *developing* country to live in. In other words, the émigrés of a country does not fit the South-South migration which we are trying to get at, as it may include the ones leaving for the developed countries. These latter may have other reasons to choose a developed country to live. We are interested in the pull factors of developing countries, which do not provide the same opportunities as developed countries.

Table 2. Data Information

Variables	Description	Sources
Welfare spending	Government social security and welfare spending as a % of GDP	Government Finance Statistics (GFS)
Education spending	Government education spending as a % of GDP	GFS
Health spending	Government health spending as a % of GDP (Imports+Exports)/GDP	GFS
Trade openness	0-10 ranking of authoritarianism/democracy	World Development Indicators (WDI)
Regime Type	Urban population (% of total population)	Polity IV
Urbanization	Gross Domestic Product/population	WDI
GDP per capita	% change in GDP in a year	WDI
Growth	International migrant stock, total	WDI
Migration		WDI

The other available measure, migrant stock as a percentage of the population is not well suited to testing our hypotheses either. A measure for urbanization, calculated as the percentage of the urban population over total population is already included in the model as a control for population. We focus on the urban population in particular because research shows that migration typically flows to urban areas (McConnell, 2008). After controlling for urban population then, we use the absolute total number of migrant stock in a country as opposed to the ratio of the migrant stock with the population.

The international migrant stock data are collected by the World Bank on a 5-yearly basis. To transform the data into yearly observations, we use the “ipolate” command in STATA. This command linearly interpolates missing

internal values from the observed data that bracket them. This procedure is widely used for data which we can confidently assume will fall within that bracket (Bearce, 2011). For instance, the migrant stock in year 1994 will most probably fall within the values of year 1994 and year 1999.

Finally, the dataset covers a wide range of 59 developing countries from various regions such as Latin America, South East Asia, the Middle East and Sub-Saharan Africa for the years 1972-1996. These countries cover a representative sample of LDCs for a significant period of time. They also vary significantly across their development levels, their regime types, the level of migration they receive and their social policies, providing us with a meaningful testing opportunity for these variables.

3.2. Methods

Following DeBoef and Keele (2008), we believe that if our theory does not give us specific instructions about the lag structure of our models, we should start with the most general model at hand. Only after including all the theoretically viable lags and variables can we test whether they are necessary or not. These models are called “autoregressive distributed lag” models (ADLs) and OLS can be used to estimate them. In our case, the data are time-series cross-sectional, meaning the use of a fixed effects panel data model is appropriate.

We started our estimations with a very general ADL model which included the first, second and third lags of all the variables including the dependent one. The lags beyond the first were not significant, and their inclusion did not change the results. For this reason, we report the results of the most parsimonious ADL model of the form (1,1;5). In this model, the coefficients refer to the short-run effects of the regressors on the dependent variable. To sum up, our model includes the first lag of all the variables and uses fixed effects to control for country-specific variation in the data.

3.3. Results

Table 3 reports the results of our estimations. The dependent variable is the same across the four models: total migrant stock. The models vary by the type of social expenditure. The first model includes the total social expenditure variable which is the summation of the public welfare, health and education expenditures disbursed by governments. The second model only includes welfare

expenditures, the second only health, and the third only education expenditures. Using this modeling strategy, we aim to assess the individual effects of specific types of social policy on the migrant stock of a state.

Model 1 includes only three significant independent variables, one of which is the lag of the dependent variable. The lag of GDP shows that the wealthier the country, the more migrants it receives. Surprisingly, regime type, economic openness or the level of urbanization have no effect on the level of migrant stock. However, total social expenditures significantly increase the number of migrants in a country (albeit at the 10% level). These findings cast doubt on the theories positing that migrants prefer democracies for their levels of freedom or expansive welfare policies. Once we control for social expenditures, we find that South-South migration does not depend on regime type. This is not to suggest that polity drops out when we include total social expenditure: we also ran regressions omitting social expenditures and polity was still insignificant. However, all of our models imply that immigrants prefer countries with better social policies regardless of their regime type, urbanization and economic openness. Similarly, trade openness remains insignificant throughout the models, suggesting that migrants are not concerned with the liberal economic policies of governments. Instead, their primary motivation is to live in a country which provides them with basic services.

The remaining models distinguish between the type of social expenditures to further disentangle the motivations of migrants that move within the South. Model 2 shows that public welfare expenditures have no effect on the migrant stock. This non-finding is nonetheless significant. The argument that migrants move to a host country to benefit from the social policies geared towards the non-working population is rejected by this finding. In other words, migrants do not just change their country to find a way to maintain their livelihood without working. Welfare benefits do not play any role in their decision.

Model 3 looks at the health expenditures as a potential pull factor for migrants of the South. This indicator is significant at the 10% level, meaning that immigrants prefer countries with better public health services. Finally, Model 4 shows that educational expenditures are the main pull factor for Southern migrants moving within the South. Again, polity trade openness and urbanization remain insignificant. GDP is another factor pulling migrants into a host country, and so is the existing migration stock.

These results support the hypotheses in Table 1. Migrants traveling from one developing country to another are not pulled by welfare policies that these countries supply, but by education, and to some extent health provisions. What make a country attractive are the opportunities it is perceived to provide to its inhabitants. Migrants want to improve their lives in the host country, not just take advantage of or abuse the better welfare policies.

Table 3. The Effects of Social Policy on the Migration from South to South

VARIABLES	(1) Migrant Stock	(2) Migrant Stock	(3) Migrant Stock	(4) Migrant Stock
Migrant Stock _{t-1}	0.783*** (0.0238)	0.789*** (0.0236)	0.769*** (0.0229)	0.779*** (0.0231)
Ln(gdp) _{t-1}	1.111** (0.538)	1.124** (0.537)	1.199** (0.510)	1.054** (0.516)
Ln(gdp)	-0.782 (0.550)	-0.887 (0.548)	-0.919* (0.519)	-0.769 (0.526)
Urbanization _{t-1}	-0.0534 (0.0923)	-0.0360 (0.0930)	-0.0532 (0.0898)	-0.0425 (0.0903)
Urbanization	0.0239 (0.0898)	0.0156 (0.0904)	0.0228 (0.0875)	0.0145 (0.0880)
Trade Openness _{t-1}	0.00111 (0.00290)	0.00152 (0.00290)	0.000949 (0.00282)	0.00103 (0.00285)
Trade Openness	4.67e-05 (0.00290)	-0.000723 (0.00289)	7.39e-05 (0.00280)	0.000522 (0.00284)
Polity _{t-1}	-0.00391 (0.0128)	-0.00173 (0.0128)	-0.00379 (0.0124)	-0.00233 (0.0124)
Polity	0.00560 (0.0127)	0.00316 (0.0127)	0.00795 (0.0123)	0.00685 (0.0124)
Total Social Expenditure _{t-1}	-0.614 (2.494)			
Total Social Expenditure	4.567* (2.450)			

VARIABLES	(1) Migrant Stock	(2) Migrant Stock	(3) Migrant Stock	(4) Migrant Stock
Welfare Expenditure _{t-1}		-1.751 (3.906)		
Welfare Expenditure		0.449 (3.713)		
Health Expenditure _{t-1}			5.498 (7.298)	
Health Expenditure			14.66* (7.474)	
Education Expenditure _{t-1}				-3.489 (4.660)
Education Expenditure				13.18*** (4.825)
Constant	-3.879 (3.082)	-1.874 (3.080)	-2.513 (2.858)	-2.964 (2.902)
Observations	804	805	845	847
R-squared	0.623	0.620	0.628	0.623
Number of countries	55	55	55	55

Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

3.4. Robustness Checks

The ADL model used above is unbiased and efficient only under certain conditions. If there exists reverse causality between the regressors and the dependent variable, the inclusion of the lag of the dependent variable may bias the results. Moreover, the fixed effects, or the time invariant country characteristics may be correlated with the independent variables and/or their lags included in the model. To ensure these problems are not affecting the results, we perform a robustness check using the Arellano-Bond (1991) GMM estimator. This estimator deals with these problems by using instruments and first-differencing. The results are reported in Table 4 below.

Models 1 through 4 in Table 4 show that the results are largely unchanged even when we use the Arellano-Bond estimator, suggesting that the relationships we outlined above are robust to different model specifications. There are however small differences between the two methodologies in terms of results. This estimation method reports the lag health expenditures as significant whereas in the ADL model, it was insignificant. Also, health expenditures are significant at a higher confidence level (5%) than the ADL estimation. Finally, the Arellano-Bond estimator reduces the significance of the education expenditures to 5% from 10%. These small changes notwithstanding, both methods support the expectations of the hypotheses and the theory outlined in this paper.

Table 4. Robustness Check with the Arellano Bond GMM estimator

VARIABLES	(1) Migrant Stock	(2) Migrant Stock	(3) Migrant Stock	(4) Migrant Stock
Migrant Stock _{t-1}	0.633*** (0.0301)	0.632*** (0.0301)	0.628*** (0.0287)	0.644*** (0.0287)
Ln(gdp) _{t-1}	1.514*** (0.541)	1.583*** (0.534)	1.469*** (0.510)	1.363*** (0.517)
Ln(gdp)	-1.042* (0.546)	-1.162** (0.540)	-1.159** (0.511)	-0.882* (0.521)
Urbanization _{t-1}	0.0695 (0.124)	0.101 (0.124)	0.0937 (0.122)	0.0892 (0.123)
Urbanization	-0.126 (0.122)	-0.149 (0.122)	-0.147 (0.120)	-0.146 (0.121)
Trade Openness _{t-1}	0.00283 (0.00285)	0.00302 (0.00284)	0.00269 (0.00279)	0.00322 (0.00282)
Trade Openness	-0.000111 (0.00274)	-0.000610 (0.00273)	0.000112 (0.00268)	-0.000288 (0.00269)
Polity _{t-1}	-5.59e-05 (0.0123)	0.00253 (0.0123)	-0.000358 (0.0121)	3.86e-06 (0.0122)
Polity	-0.00295 (0.0131)	-0.00434 (0.0130)	-0.00183 (0.0127)	-0.00690 (0.0128)
Total Social Expenditure _{t-1}	-1.428			

	(2.498)			
Total Social Expenditure	4.660*			
	(2.530)			
Welfare Expenditure _{t-1}	-5.328			
	(3.907)			
Welfare Expenditure	1.649			
	(3.842)			
Health Expenditure _{t-1}			12.72*	
			(7.402)	
Health Expenditure			15.26**	
			(7.630)	
Education Expenditure _{t-1}				1.430
				(4.796)
Education Expenditure				11.64**
				(4.856)
Constant	-3.987	-2.807	-0.489	-4.619
	(4.744)	(4.751)	(4.655)	(4.605)
Observations	722	723	763	766
Number of countries	54	54	54	54

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

4. Additional Concerns

The above results are certainly preliminary and several objections can be proposed to the validity of the findings. First, existing research suggests that one of the main pull factors of migration is networks. In other words, migrants prefer host countries which received migrants they already know. These might be relatives, friends, coworkers, religious community or simple acquaintances. Second, economic conditions such as unemployment levels, inflation, and economic growth may contingently change the incentives of migrants in choosing a host country. Finally, political turmoil and instability can deter migrants from settling in a certain state. In this section, we discuss additional statistical evidence that supports the validity of our hypotheses.

Migrant networks create a powerful mechanism of support for the newcomers and the potential migrants considering moving (Zhao, 2003). Surely, the existing migrants in a country help their fellow expatriates already in the host country or citizens trying to get there. This might even be the biggest factor in migration patterns. Although, we are not interested in the micro-level mechanisms that affect migration per se, we acknowledge that we need to control for such effects. Unfortunately, the data we use does not give us any information about the nationality of the immigrants in a country because they are aggregated at the national level. This should not represent a big handicap, however, since we include the lag of the migrant stock in our models. Although this variable does not give us precise information about the nationalities of existing migrants or the incoming ones, it is a suitable proxy for the relationship. The more the existing migrants in a country, the more there are kinship, friendship or work ties to use for migration purposes. Our lag of the migrant stock on the right hand side accounts for this effect and makes our results more reliable.

The second objection to our results might arise from the exclusion of economic trend variables from our models, such as the growth rate, unemployment rate and inflation. These variables change the living conditions of the working population and may affect the migration patterns because most of the migrants change countries to reach better work opportunities. In the regression models not reported in this paper, we augment our models with the growth variable find no change in our results, growth remaining insignificant throughout. In addition, we control for trade openness in the models reported above. Trade openness measures the exports and the imports of a country compared to its GDP. Trade shocks, shifts in economic policy and economic openness are captured with this variable. We believe that trade openness captures the concept of economic fluctuations better than variables like unemployment and inflation, and therefore we use it in our models. International trade responds fairly quickly to economic crises and price changes. Controlling for trade openness gives us a fair sense of how economic trends affect migration patterns.

Third, political turmoil and instability may deter immigrants from choosing a country as their host. No immigrant wants to settle into the middle of a civil war or regime change. We already controlled for the polity variable which looks at level of democracy or autocracy in the host country. To analyze the effects of the *change* in regime types and political situation however, we conducted robustness checks with several other variables. First, we used an “authoritarian

transition” variable which is coded as 1 if the democracy code goes below 7 that year. Then we included the “new authoritarian regime” variable coded as 1 the first 3 years of the transition to authoritarianism. We also controlled for the obverse situation of transition to democracy and the first 3 years of democracy. All these political change variables were insignificant throughout the regressions and did not change the results on the social spending variables.

To sum up, we attempted to take into account the economic, political and social factors that could affect migration decisions and create a spurious correlation with our variables of interest, social expenditures. The inclusion of these variables did not change our results, increasing our confidence in the finding that educational and health policies are an important pull factor for migrants.

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CHAPTER XII

REGIONAL DEVELOPMENT AGENCY GRANTS AND INNOVATION ACTIVITIES: A SURVEY IN ERZURUM SUB- REGION¹

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1. Introduction

Establishment of regional development agencies (RDA) having a management structure that is independent from the central government began in 1930s with the aim of improving the socioeconomic conditions of a specific geographical region. The first example that can be given within this scope is TVA that was established in the USA in year 1933. In the following period, various European countries started establishing RDAs and the RDAs were structured under the effect of EU (Berber & Çelepçi, 2005: 151).

The first studies on RDAs in Turkey date back to 1990s. The main objective of the process was to accelerate the EU membership process, besides the inner development dynamics of the expected localities in the country. Moreover, the concept of RDAs was discussed after the 1999 Helsinki Convention, in which the candidate status of Turkey was registered. Playing role in the establishment of RDAs in Turkey, EU requested the establishment of development agencies

¹ A part of the field research of first author's MA thesis was utilized in this paper.

with a new perspective of regional development in countries, which will be member or candidate. Among the regulations to be made in the mid-term as specified in the Accession Partnership Document prepared by the Union, the legal regulation process of the development agencies was initiated (Hasanoğlu & Aliyev, 2006: 81).

The idea that regional studies might influence the innovative aspects of businesses arose from the increasing interest in examining the innovation at the regional level. There might be significant differences between the innovation activities of businesses; determining the local and regional actors encouraging the innovation and improving the private sector by having these actors provide the businesses with technical and financial support might make it possible to understand the innovation process and to detail the policy (OECD & Eurostat, 2006: 42-43). Eliminating the obstacles for the innovation activities of businesses, these actors might enable the businesses to improve their technical capacities and to provide goods and services needed in the region. Thus, besides the innovation activities in the region, they may provide a significant contribution to the increase in employment, production, and capacity usage rates and to the regional development.

In literature, regional development is referred to as the capacity of articulation to the local networks and local knowledge generation and distribution processes that are the sources of innovation. Since the simplest way of information exchange is the networks, they play an important role in innovation processes. Through the networks, businesses make use of positive externalities, which are external to the business but internal to the local, and make up a portion of information and document deficiencies. Hence, success in innovation processes depends both on the information and technology production capacity and the ability to establish connections with other businesses and institutions. As stated in the applied studies carried out before, it can be seen that the businesses that have established a network in the process of innovation have a higher level of success in innovation in comparison to the businesses that are insufficient in establishing networks (Köroğlu, 2005; Türko, 2006).

The present study aims to examine the innovation activities of businesses receiving financial support from the RDAs. In this parallel, the present study was structured over a field research on the businesses operating in the Erzurum sub-region benefiting from financial support programs of Northeastern Anatolia Development Agency (NADA). Within the scope of this study, businesses'

innovation activities, the sources of information that they have used for this purpose, the contribution of the agency's support to the innovation activities, and the changes in business after the support of the agency were investigated. It is thought that the results of this study would contribute to the support programs conducted by the development agencies.

In Turkey, no study specifically examining the innovation activities of businesses receiving financial support from RDAs has been carried out. Within the scope of studies on RDAs, the subjects such as structure and operation of agencies, comparison to the agencies abroad, and why these agencies are needed were discussed.

2. Innovation and Innovation Activities

Given the definition in Oslo Manual, innovation is defined as the implementation of a new or significantly improved product (good or service) or process, a new marketing method, or a new organizational method in intra-business practices, workplace organizations, or external affairs. The essential condition of an innovation for a business is the newness of or significant modification in a product, process, marketing method, or organizational method. It incorporates the products, processes, and methods that the businesses have developed for the first time or they have modified according to other businesses or organizations (OECD & Eurostat, 2006: 50). Innovation commonly refers to both a process (renovation/renewal) and a result (innovation).

The approach of new or significantly modified service, the innovation and modification in distribution and system of service, and the use of new technologies in providing the service constitute the service innovation. Such innovations require improvement of human resources skills and structuring in harmony with the conditions, together with the technological and organizational abilities of businesses operating in the service industry (Elçi, 2006: 5).

Innovation activities refer to the implementation of innovation activities or all the scientific, technological, organizational, financial, and commercial activities required for the implementation of innovation activities. While some of innovation activities are innovative per se, some others are not new activities but are needed for the implementation of innovations. Innovation activities include R&D activities that are not directly related with the development of a specific innovation (Türko, 2006).

Innovation activities significantly vary between the businesses from the structural aspect. Some businesses focus on well-defined innovation projects such as developing or introducing a new product, while some others continuously improve their products, processes, and activities in essence. An innovation may consist of the implementation of a single and important modification or it may include small-scale changes constituting an important modification when together. Both types of businesses can be innovative (Türko, 2006).

A general characteristic of innovation is the realization of the innovation. A new or improved product shall be realized when introduced to the market. The state of realization requires the active use of new processes, marketing methods, or organizational methods in business activities (Türko, 2006).

Innovative business refers to a business that has made an innovation within the period being examined. A wide definition for this might not apply to all policy and research necessities. Narrower definitions of innovation made for the sectors and business size classification might be useful (OECD & Eurostat, 2006: 51).

Innovation activity incorporates investment. This investment may include both obtaining the fixed and intangible assets and the other activities (wages, procurement of materials or services, etc.) that will provide a potential return in the future (OECD & Eurostat, 2006: 38).

Innovation activity is expansive. The benefits of creative innovation are utilized over the business inventing it. The businesses engaging in innovation activities by internalizing the innovation gain benefit from the distribution of information or the use of the innovation. For some innovations, the costs of imitation might be lower than the development costs; thus, an effective appropriation mechanism is needed for encouraging the innovation (OECD & Eurostat, 2006: 38).

Innovation activity includes benefiting from new information or the new use of current information or a combination of both. New information can be produced while making the innovation by the innovative business (via intra-business R&D) or it can be achieved from outside through various channels (procurement of new technology). The use of new information or the combination of current knowledge requires an innovative effort that can be distinguished from the standard routines (OECD & Eurostat, 2006: 39).

Innovation activity aims to improve the performance of a business through achieving a competitive advantage by shifting the business' cost curve or the

products' demand curve or improving the innovation capacity of the business (OECD & Eurostat, 2006: 38-39).

Establishment of R&D and foundation of an information source are important for regional innovation and development. Large-scale companies have higher R&D expenditures and they aim to continue the technological process. Large-scale businesses have an advantage in knowledge generation, whereas SMEs can benefit from the regional accumulation of tacit knowledge through the regional networks. As a result of the regional knowledge generation, the knowledge can be benefited by any party despite the generator of knowledge. For small-scale businesses, a way of overcoming the problem of increasing their innovative capacity is to focus on regional collective learning. From this aspect, collective regional knowledge can be used by SMEs in the region (Koroğlu, 2005; Türko, 2006).

2.1. Advantages Brought by Innovation

Innovation has been a subject that is of a strategic importance for businesses. Innovation strategies indicate at which level the businesses engage in innovation activities. In fact, the innovation strategies arising from the businesses' main strategies are considered as sub-strategies (Gökçek, 2007: 69). The businesses, which have gained a competitive advantage by making innovation, will continue this competitive advantage via innovation strategies (Örücü et al., 2011: 62). For a successful innovation in a business, the innovation strategy should be integrated with the general strategy of that business (Kuzu, 2008: 74).

With strategic innovation, businesses re-examine their operations in parallel with the changes in current conditions and objectives, renew and restructure their strategies, go through changes in harmony with the conditions and objectives, and continue their business operations in a more robust and smoother way (Kaygın, 2012: 98).

Innovation also brings growth, profitability, and success. Moreover, innovation ability is closely related with inherent experience and practices and is a special value of the business. The rapid introduction and harmony of new products and processes play an important role in gaining a competitive advantage (Sen & Egelhoff, 2000: 174).

Making innovation lays the foundation of competition (Bayındır, 2007: 245). The businesses that are successful in making innovation can

- more rapidly adapt to the rapidly changing market structure,
- take primacy in offering a customized product to their customers when compared to their competitors,
- establish the industry standards in new market areas,
- increase their profit margins by creating a monopoly in the first period of product,
- be known by the buyers and create an image,
- improve their products and increase their diversity until the rival product is introduced to the market,
- improve their knowledge and experience on the product, reduce their costs, and create scale economies before their rivals (Kavrakoğlu et al., 2002: 80).

3. Regional Development Agencies and Innovation

In the globalizing world, the economic power of regions depends on the level of their competitive power. For this reason, increasing the innovation and the competitive power in exports and facilitating the transition to the knowledge economy can be considered as the objectives of Europe's innovation policy. While determining policies in Europe, rather than taxes, profits, and labor elasticity playing a key role in the global competition in the long term, the attention gravitated towards innovation when the importance of innovative capacity, efficiency, and knowledge factor was understood. In this parallel, 35% of the changes in GDP per capita in EU explained with regional innovations and the fact that innovation and competitiveness were set to be the components of Lisbon Strategy (2007-2013), which was taken as base in regional policies of EU, emphasize the importance of innovation (Tuncel, 2010: 29).

From a narrower perspective, innovation is only to focus the new products and services. Many regional economies depend on regular operations, but our intellectual model explains the innovation generally from the aspect of technology. The most important point in establishing new opportunities and wealth sources in regions is to think about "region" concept in innovation. The concept of region includes all the processes about how the regions create, transfer, and construct the values. In creation of innovation, the factors such as new products, services, and technologies and new working methods, efforts made to establish better and more effective networks, and synergy between public and private sectors play effective roles (Leskovsek, 2007: 162).

Considering the change in regional policies, the Keynesian policies failed to overcome the stagflation arising especially from the oil crisis in 1970s and the Neo-liberal economic policies gained importance. The change mainly depends on the fact that crises cause uncertainties and globalization started increasing its effects. Entrepreneurs started to think of implementing competitive, innovative, and flexible regional policies in order to ensure the development of local regions and to eliminate the risk of leaving the local regions, where uncertainty is dominant, and the possible economic disruptions (Kaya, 2007: 62).

In a region, the units having a “knowledge economy” vision and constituting the innovation infrastructure such as industries, research institutes, support agencies, financial institutions, and local governments can direct all the local sources to the production of high added-value and it might accelerate the process of regional development. The establishment of industries with high added-value plays an important role for a region to become a point of interest and the increase in real and human capital can increase the level of welfare of everybody in that region. The main factor playing role in this process is the establishment of an innovation-oriented governance structure in the region. Within this governance establishing the RDAs, all the actors fulfill their roles in making the region competitive within the scope of the vision of the knowledge economy. Such a governance structure is the main determinant of the establishment of a regional enterprise capacity (Tuncel & Bakir, 2010: 32).

To date, central governments have implemented various plans and projects in reducing the regional disparities but they couldn't achieve successful results. Ninth Development Plan was prepared in parallel with the objective of Turkey growing with the stability and the RDA regulation, having competitive power at a global scale, sharing the revenue fairly, transforming into a knowledge society, and having completed the adaptation process for the EU membership. In order to achieve the objectives set in the plan, development indices addressing the increase in competitive power, employment, and quality and efficiency in public services, as well as ensuring the regional development were determined (DPT, 2006: 1-2). In the section of “Regional Development” among the development indices of the specified development plan, it is emphasized that regional innovation infrastructure should be prepared and innovative enterprises should be supported, that an information network supporting the innovation process will be established by forming a partnership between public institutions and organizations, development agencies, private sector, and CSOs (DPT, 2006: 91-94).

Together with the establishment of development agencies in Turkeyj, the infrastructure needed to make regional policies was constructed and the opportunities of implementing the innovation systems in governance process arose. Moreover, the objective of establishing the agencies is to eliminate the communication and partnership problems in the production industry. However, even though there is a CSO for every industry, the contributions of these institutions and organizations to the competitiveness and innovation remained limited. Similarly, development agencies might play role in achieving the targets such as resolving the partnership and communication problems in the industry, improving the competitiveness of sector, production of more added-value, and minimization of economic development and intra-regional development differences (Tuncel & Bakir, 2010: 33). The important contributions of development agencies to innovation process can be listed as follows (Yaman, 2008);

1. Preparation of regional innovation strategies; analyzing the infrastructure of knowledge generation and usage, determining the development strategies, and determining the strategic interventions.
2. Role of constructing a facilitating environment, gathering the units in the process of innovation, interacting at a local level, meeting in a common dialogue platform, and moving together.
3. Constructing the mechanism for network relationships; structure of gathering the public, private sector, and CSO organizations, partnership with technology transfer centers, making clustering analysis, determining the goals, and providing support.
4. Funding Source of innovation; direct support from the budget of the agency or the funds that it will receive as a participant or partner.
5. Laying the foundation of innovation; establishing a large-scale and continuously updated database about the region's innovation capacity and performance.

4. Applied Studies

In Turkey, no study examining specifically the innovation activities of businesses receiving financial support from RDAs has been carried out. In previous studies on RDAs, the structure and operation of agencies were examined, they were compared to the agencies abroad, and it was examined why these agencies are needed.

However, innovation in businesses is a frequently discussed topic. The results reported by the studies examining the innovation activities of businesses can be summarized as follows.

Türko (2006) examined the innovation activities of manufacturing industry businesses operating in Erzurum sub-region. In this research, it was determined that there was a positive relationship between innovation level and export level, that the level of innovation decreased with increasing infrastructure problems, that the level of innovation increased with increasing real capacity utilization rate, that the level of innovation increased with increasing level of technological capability, and that the level of innovation increased with increasing rate of personnel sufficiency.

In their study carried out in Erzurum sub-region, Özen and Bingöl (2007) found that level of innovation had a significant relationship with the use of information technologies in the process of manufacturing and sales, owning a computer, and rate of designing an educational program. Aksoy and Demirel (2008) determined that the SMEs operating in Elazığ have tendency towards the innovation but this tendency couldn't be utilized sufficiently. Terzioğlu et al. (2008) reported that, in businesses operating in the textile and ready-made clothes sector in Denizli province, the size of enterprise, R&D activities, investments, procurement of technology service, and ownership of quality certificate increased the businesses' probability of making innovation. Examining the businesses operating in Mersin province, Şahin (2009) analyzed the reasons for making innovation and the factors preventing SMEs from making innovation in all the functions of the businesses. Yeşil et al. (2010) studied the innovation activities of businesses operating in Kahramanmaraş province.

Analyzing the firms operating in leading sectors (furniture, machinery, and textile) in Kayseri Organized Industrial Zone, Ünlü and Yıldız (2013) addressed the innovation purposes and the factors discouraging them from innovation. Examining the SMEs operating in Kayseri Free Zone, Tutar et al. (2007) aimed to determine how these firms used the advantages offered by free zones and if these advantages facilitated the innovation activities of these businesses.

Karahan and Dinç (2015) reported that, for the period of 2010-2012, the rate of enterprises engaging in innovation activities in Turkey was 48.5% and the rate of enterprises engaging in product and process innovation activities was 27%. Moreover, it was also determined that 58.6% of enterprises engaging in marketing innovation have used new methods in pricing the products and services.

Iraz et al. (2016) revealed that, in SMEs operating in Konya 2nd Organized Industrial Zone, managerial skills that constitute an aspect of organizational skills had a significant effect on the innovation performance. Çetin and Gedik (2017) reported that the innovation and export performance of the businesses operating in Karaman province increased with expanding market area and there was a positive relationship between innovation and export performance.

5. Method

The universe of this study consists of 43 businesses operating in Erzurum sub-region and having received financial support from NADA in years 2013, 2014, and 2015. It was preferred for the universe to consist of businesses that have completed the project implementation process 1-3 years before. By using the www.surveysystem.com website, the sample size was calculated to be 39 at the confidence level of 95% and confidence interval of 5% (Survey System, 2017). The surveys were conducted with 38 businesses with face-to-face interview method in June 2017 by one of the authors.

The survey form was prepared as a result of a literature search by researchers and the scales used in previous studies and the Oslo Manual were utilized (Türko, 2006; OECD & Eurostat, 2006).

6. Analysis

Frequency (N), percentage (%), arithmetic mean (*M*), and standard deviation (*SD*) values were used in order to summarize the basic data and to form an opinion about the distribution. The analyses were performed using IBM SPSS for Windows 22 package software.

6.1. General Information

Considering the main areas of activity, it was determined that 20 of the businesses were operating in the manufacturing industry, 5 in tourism, and 3 in agriculture and animal husbandry. The mean founding date of businesses was found to be 1998. The oldest business in the sample has been founded in 1967 and the newest one in 2014. It was determined that 15.8% of businesses were exporting.

The sample consisted of SMEs and there were no big or giant companies. It was determined that 28.9% of enterprises benefited from NADA's financial support program in 2013, 31.6% in 2014, and 39.5% in 2015.

The educational level of business owners was asked. It was found that 26.3% of business owners were elementary/secondary school graduates, 18.4%

were high school graduates, 42.1% were college/university graduates, and 13.2% were postgraduate. Almost half of the sample has received education in higher education institutions.

In 39 businesses, only 1 enterprise was found to employ uneducated employee. It was determined that 52.6% of businesses were employing elementary/secondary school graduates, 79% were employing high school graduates, 60.6% were employing college/university graduates, and 10.5% were employing postgraduates.

Moreover, 92.1% of businesses stated that they have difficulties in finding qualified personnel.

6.2. Innovation Activities

The businesses were asked about their innovation activities in the last 3 years and they were asked to rate these activities between 1 and 5 points (1- none, 2-1 innovation, 3- 2 innovations, 4- 3 innovations, 5- 4 and more innovations).

The innovation activities that the businesses have engaged in the last 3 years are presented in Table 1. The innovation activities of these businesses were stated to be getting into new markets (marketing innovation) ($M=4.11$; $SD=1.429$), making changes in production processes (machinery and software procurement) (process innovation) ($M=3.68$; $SD=1.579$), starting to produce a product or service that they haven't produced before (product innovation) ($M=3.63$; $SD=1.699$), changing the package or distribution of product (marketing innovation) ($M=3.42$; $SD=1.855$), and changing the management structure of business (organizational innovation) ($M=2.45$; $SD=1.655$).

Table 1: Innovation Activities of Businesses in the Last 3 Years

	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)
Have you started to produce a new product or service that you haven't produced before?	3.63	1.699
Have you made a change in the production processes? (Have you bought a machine, software, etc.?)	3.68	1.579
Have you made an innovation in package or distribution of the product?	3.42	1.855

	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)
Have you changed the management structure of the business?	2.45	1.655
Have you get into new markets?	4.11	1.429

In order to determine the product innovation status of businesses, they were asked about how many products or services, which they haven't produced before, they have started to produce. The results are presented in Table 2. It was determined that 68.4% (26 businesses) stated that they have produced a new product or service in the last 3 years, 7.9% (3 businesses) stated that they have engaged in few innovation activities in the last 3 years, and 23.7% (9 businesses) stated that they haven't engaged in any innovation activities.

Table 2: Have You Started to Produce a New Product or Service That You Haven't Produced Before? (Product Innovation)

	Frequency (N)	Percent (%)
None	9	23.7
1 product/service	3	7.9
2 products/services	0	0
3 products/services	7	18.4
4 and more products/services	19	50.0
Total	38	100.0

In order to determine the process innovation status of businesses, they were asked about how many changes they have made in their production processes in the last 3 years and if they have purchased machines or software in the last 3 years. The results are presented in Table 3. It was determined that 18.4% (7 businesses) of businesses have not engaged in any innovation activity, 10.5% (4 businesses) have engaged in 1 innovation activity, and 71% (27 businesses) have engaged in 3 or more innovation activities in their production processes.

Table 3: Have You Made a Change in the Production Processes? (Machine and Software Procurement) (Process Innovation)

	Frequency (N)	Percent (%)
None	7	18.4
1 change	4	10.5
2 changes	0	0
3 changes	10	26.3
4 and more changes	17	44.7
Total	38	100.0

In order to determine the marketing innovation status of businesses, they were asked about how many innovations they have made in packaging or distribution of their products in the last 3 years and the results are presented in Table 4. It was found that 28.9% (11 businesses) haven't made a marketing innovation, whereas 13.2% (5 businesses) have made 1 marketing innovation and 55.3% (21 businesses) have made 4 or more marketing innovations.

Table 4: Have You Made an Innovation in Package or Distribution of the Product? (Marketing Innovation)

	Frequency (N)	Percent (%)
None	11	28.9
1 innovation	5	13.2
2 innovations	0	0
3 innovations	1	2.6
4 and more innovations	21	55.3
Total	38	100.0

Table 5: Have You Changed the Management Structure of the Business? (Organizational Innovation)

	Frequency (N)	Percent (%)
None	18	47.4
Slightly	6	15.8
Moderately	0	0
Largely	7	18.4
Completely	7	18.4
Total	38	100.0

In order to determine the organizational innovation status of businesses, they were asked about to what extent they have changed the management structure of the business and the results are presented in Table 5. It was determined that 47.4% (18 businesses) businesses stated that they haven't made a change in management structure, 15.8% (6 businesses) reported slight innovations, and 36.8% (14 businesses) reported large or complete changes in the management structure of business.

Table 6: Have You Get into New Markets? (Marketing Innovation)

	Frequency (N)	Percent (%)
None	5	13.2
1 new market	2	5.3
2 new markets	0	0
3 new markets	8	21.1
4 and above new markets	23	60.5
Total	38	100.0

In order to determine the marketing innovation status of businesses, they were asked about how many new markets they have got into in the last 3 years. The results are presented in Table 6. It was found that 81.6% (31 businesses) of them have got into 3 or more new markets, whereas 13.2% (5 businesses) of them stated that they haven't get into any new market.

Table 7: The Sources of Information Used in Innovation Activities

	1st degree importance	2nd degree importance	3rd degree importance	No Comment
R&D Activities	44.7%	18.4%	0%	36.8%
Suppliers	39.5%	23.7%	10.5%	26.3%
Customers	68.4%	15.8%	7.9%	7.9%
Rivals	36.8%	34.2%	10.5%	18.4%
Advisors, commercial laboratories, or private R&D centers	36.8%	23.7%	7.9%	31.6%
Universities	18.4%	10.5%	0%	71.1%

Sectoral publishing	15.8%	31.6%	5.3%	47.4%
Domestic and foreign expos	36.8%	18.4%	5.3%	39.5%
Professional and Commercial Chambers/Unions	18.4%	21.1%	23.7%	36.8%

The sources of information, which the businesses have used in their innovation activities, were rated by their importance and the results are presented in Table 7. It was determined that 68.4% of businesses stated the most important 1st degree source of information to be the customers and 44.7% to be R&D activities, while 34.2% of businesses stated the 2nd degree source of information to be the rivals and 31.6% to be sectoral publishing. Moreover, 23.7% of businesses considered the professional and commercial unions/chambers to be the 3rd degree important information sources.

Table 8: The Effects of Development Agency Support on the Business

	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)
Nothing has changed	1.82	.834
Production efficiency has increased	4.29	.835
Quality of products/services has increased	4.32	.933
Competitive capacity has increased	4.16	1.128
Technical knowledge and skills have increased	3.97	1.197
Prestige and recognition have increased	4.26	.921
Number of personnel has increased	4.16	1.001
Product diversity has increased	3.92	1.239
Revenue has increased	4.11	1.085
Export volume has increased	1.53	1.133
We have got into new markets	3.92	1.239

The effects of development agency on the business were rated using 5-point Likert-type scale (1- I don't agree at all, 2- I don't agree, 3- neutral, 4- I agree, 5- I completely agree with it) and the results are presented in Table 8. The means

of the answers of the businesses are listed as follows; product/service quality has increased ($M=4.32$; $SD=,933$), production efficiency has increased ($M=4.29$; $SD=,835$), prestige and recognition have increased ($M=4.26$; $SD=,921$), the number of personnel has increased ($M=4.16$; $SD=1.001$), revenue has increased ($M=4.11$; $SD=1.085$), technical knowledge and skills have increased ($M=3.97$; $SD=1.197$), product diversity has increased ($M=3.92$; $SD=1.239$), we have got into new markets ($M=3.92$; $SD=1.239$), nothing has changed ($M=1.82$; $SD=,834$), and the export volume has increased ($M=1.53$; $SD=1.133$).

Table 9: The Support of Development Agency has Significantly Contributed to the Innovation Activities of Our Business.

	Frequency (N)	Percent (%)
I don't agree at all	0	0
I don't agree	3	7.9
I'm neutral	1	2.6
I agree	8	21.1
I completely agree	26	68.4
Total	38	100.0

In order to determine the perception level regarding the contribution of development agency supports to the innovation activities, a statement was proposed and the results are presented in Table 9. It was determined that 89.5% (34 businesses) of them were thinking that development agency supports had significant contributions for them to fulfill their innovation activities.

7. Results and Conclusion

As a result of the field survey, it was determined that the businesses have got into new markets (86.9%), made changes in the production process (81.5%), produced a new product/service (71.1%), made an innovation in packaging and distribution (57.9%), and made organizational innovations (52.6%). Moreover, businesses also stated that development agency support significantly contributed to them fulfilling the innovation activities (89.5%).

The information sources used by businesses in innovation activities were ranked by the order of importance. It was found that 68.4% of businesses considered their customers to be the 1st degree information source and 44.7% reported the R&D activities, while the 2nd degree information sources stated to

be rivals by 34.2% and sectoral publishing by 31.6%. Besides that, 23.7% of businesses specified the professional and commercial unions/chambers to be the 3rd degree information sources.

In this research, it was revealed that the grant support given to the businesses within the scope of financial programs of regional development agencies had positive effects on the innovation activities of businesses. This finding is in corroboration with the literature.

In another study carried out by Türko and Kadiroğlu on Erzurum sub-region, the situation of exporting businesses and businesses that have quit exporting was discussed within the theoretical frame of local economic development. In that study, it was emphasized that the sample benefited from the government supports at a low level and they could not make use of various institutions' services such as training, briefing, technical support, and project production regarding benefiting from these supports. Businesses couldn't receive sufficient support for resolving the problems in the export process and they quitted exporting (Türko & Kadiroğlu, 2017). Given these findings together with the research results, designing new RDA financial support programs addressing the new foreign markets can be recommended for Erzurum sub-region.

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CHAPTER XIII

THE MUSIC STREAMING INDUSTRY HISTORY, FACTS AND BUSINESS MODELS

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1. Introduction

Music has been an essential element in the lives of human beings. Its presence in individual communities, societies, and occasions has been a significant source of joy, interaction, and a piece of art that creates a sense of belonging to all people that associate themselves with a particular genre or type of music. The art of music evolved over the years; from age to age and generation to generation, the music sector has changed with the current technology and socio-economic framework of the society at the time. The evolution of the music industry gradually improved through the adoption of various techniques to communicate to the users of members of the public. These include the use of phonographs, vinyl, record cassettes, compact discs. The above existed during an inferior technological era; however, novel music transmission methods have evolved, such as the MP3, internet radio, and finally, since the prevalence of the internet in the world, music streaming has become the critical source for millions and millions of individuals globally. Music streaming has become the novel approach for transmission of music from the 20th century, and currently, it is the largest source of music for the majority of the world population.

The first music streaming platforms began in the year 1993 through the inception of the Internet Underground Music Archive (IUMA). It was majorly

geared towards the upcoming artists and the independent artists to share their music to millions across the world (Barker, 2018). The platform gave them a window of active interaction with the members of the public and their fans. The IUMA had different forms of roles to play as recording and publishing of music at the moment was rather costly for small and upcoming artists; hence a remedy was established to help in allowing them to share their music with the public and build their careers and portfolios. The primary reason for the IUMA was to assist in establishing a platform to share music and distribution of music content in an informal context rather than through the use of record companies (Barker, 2018). This entailed the use of free URLs and a unique webpage that allowed the majority of the upcoming musicians and artists to make their music available for people throughout the world. This helped their music to be downloadable and also in the format of internet radio hence allowing the public to be able to listen to the music adequately and at their convenience. The system was also very beneficial for the various musicians that had inadequate capital to record their music on recording stations and vouched to use the bands provided by the platform (Barker, 2018). This platform provided bands for the upcoming artists allowing them to upload their music at no cost at all. Therefore, it became remarkably useful and essential for the novel musicians to upload their music and have an opportunity to share their music with the rest of the world. In the year 1999, the music streaming industry took a progressive step. It began developing new music websites that allowed millions of musicians to share their music with the rest of the world.

The conception of the Napster website became a burning sensation for young Americans, especially college students, as they were able to share music at no additional cost. The Napster website was tied to numerous benefits, such as being able to download videos for free. Still, the site gave exclusive access to classified and live versions of their favorite musicians' hits. Also, some cuts that were made on some music videos of mp3 files were readily available for the audience to interact with and have access to them conveniently (Barker, 2018). It also gave them the chance to watch and listen to the demo versions made by numerous artists. The Napster website was created in the year 1999 by two teenagers to help in ensuring that the younger generation would have an opportunity to access thousands of music files at their convenience, and this led to the development of the music streaming industry in the music sector. Music streaming entails the transmission or relaying of audio or video files from the

server to the client. Through music streaming, the music that clients have access is stored in an undisclosed database where the clients go and download and have the privilege to listen to their favorite musicians. Music streaming has developed tremendously since its conception in the late 20th century (Barker, 2018). This has resulted in the development of various music streaming websites that allow millions to access their favorite music and also have an opportunity to access a wide array of multiple music genres and from numerous musicians. During the 20th century, the music streaming industry proved to be very lucrative even though the record labels had a stronghold of the music industry.

2. Improvements of the Music Streaming Service

During the early 20th century, big companies such as Sony Entertainment possessed a significant market share in the music industry. They would pay a fraction of the profit margins as royalties to the music artists. The traditional and conventional management structures within the music industry maintained a firm grip of the market until the year 1999, when two teenagers began the Napster platform (Datta et al., 2017). The Napster platform focused on peer to peer sharing of Mp3 files among individuals who increased relations and diffusion of music content in the market. However, not long after its conception due to poor management and illiquidity, the company collapsed, and the new unconventional music industry was questioned dramatically because the Napster platform did not last long. However, since then, there has been an evolution in the music industry and primarily through the adoption of online music streaming services (Datta et al., 2017). Due to the advent of technology and the internet, physical forms of music such as cassettes and vinyl were rendered obsolete, and the digital era began with the incorporation of technology in the music industry with the aim of increased diffusion of music in the untapped market. This has significantly affected the direction of the music industry, and currently, the online music streaming services have become the most lucrative music platform in the entire music industry. However, there are some improvements and advancements implemented over time that has led to the success of the online music streaming music industry (Datta et al., 2017). As compared to the past traditional music forms, the iPods brought a sense of convenience, which has resulted in high levels of customer satisfaction. Through the iPods, the users were able to copy their music from compact discs and into the iPods. However, in past times, people had to purchase a cassette or Compact Disc to listen to a

song, which resulted in increased costs and spending resulting in inconvenience and huge expenses (Datta et al., 2017).

The online streaming services have greatly improved over the years, and another critical phenomenon is the personalized consumer attention which has been implemented through the use of the streaming services. This is seen in online services such as the Pandora radio stations, whereas a consumer would only select the convenient songs that he or she wanted to listen to. This up-close personalized attention has significantly generated income from users due to increased customer satisfaction from the users. Compact discs and cassettes were composed of collective albums hence one had to fast forward or skip some music to have access to their desired song, but this is not the case in online streaming as the consumers build their music portfolio and mix hence time practical and also leads to excellent customer satisfaction leading to increased sales which give more revenue to the online companies.

The value proposition of the online streaming service is relatively high, and this is seen by the need for the streaming services to understand the needs and wants of the consumers. This is clearly defined by the Last. Fm platform that had a built-in music recommendation algorithm that focuses on collecting and interpreting data from the consumer's device and provides the consumer with music recommendations based on the tastes and preferences of the clients. The algorithm built portfolios and profiles of the consumers, which resulted in the convenience of the consumers to choose from the vast array of music from the recommendations made by the music platform. The level of autonomy provided by online streaming services is among the key factors that have helped in propelling the music industry to another level. Autonomy has benefited the consumers to have a wide selection of music files that they did not even hear about, which exposed the consumers to new music files that they have not heard ever before. Through the sophisticated level of autonomy based on the client's tastes and preferences, the music subscribers were provided with daily updates of all the new music videos and audio files. Hence increased their level of commitment and consequently, their customer satisfaction level of the music lovers.

The online music services also provided a platform for the development of independent artists. This includes online streaming services such as the Bandcamp, which gave the platform for all the independent artists to be able to share their music with other members of the society. Bandcamp is among the music streaming services which have focused on establishing the independent

artists in the market. Therefore, online streaming services have provided an ambient platform in developing new artists in the market and nurturing their talents and skills. Compared to traditional music platforms, online music streaming services have created growth in the music sector and also provided room for increasing ability in the market. Significant improvements have been established through online streaming services since they have been geared towards developing convenience and integration with other mobile devices such as smartphones and also the creation of mobile applications, which make the services much accessible to all consumers and buyers. For example, Spotify developed the Appfinder, which gave room for integration with android devices and Apple phones; hence this made the streaming services accessible to all the consumers within the market. The Appfinder allowed all the subscribers to have access to all information located within the Spotify website. The online streaming services have majorly been based on optimization of the dynamic competencies within the organization and ensuring that the business models employed have led to increased profit margins and increased subscriptions in the consumer markets. Therefore, the level of autonomy, convenience, full accessibility has contributed significantly to the growth and prevalence of online music streaming services in the world. Consumers have the opportunity to access millions of music videos and audio files on one platform rather than purchasing millions of cassettes or compact discs, which led to overcrowding in the house. At the convenience of the phone or laptop gives access for consumers to tons of music. Platforms such as SoundCloud enhanced interactions and also the sharing of music, which improved communication and interactions within music lovers. Therefore, cordial relations have been established through the use of online music streaming industry and has also become a reliable source of income for the artists and the online streaming companies.

3. Evolution of Online Music Streaming from 2000-2020

The music streaming service has become a significant phenomenon in the 21st century. Through the prevalence of the internet and stable implications of the internet and much-improved technology, the music streaming industry has grown significantly, and since the year 2000. There have been significant enhancements and improvements that have led to the growth of the music sector after the collapse of Napster, which incorporated a peer to peer sharing framework allowing all college students and peers to share music files among each other in the form

of Mp3 files (Lee et al., 2016). Various companies joined the music streaming services, which have led to the growth and elevation of the music streaming industry to become the most preferred industry within the music sector. After the Napster peer to peer sharing company collapsed., the iPod was introduced in the market. Steve Jobs was the pioneer of the iPod, and this was launched in the year 2001 on 23rd October (Lee et al., 2016). This was the most innovative and compatible Mac product in the market. Its compatibility allowed the Mac OS. It was small and therefore became very popular in the market. Due to the size of the iPod, it became the leading portable source of entertainment for numerous Americans in society. Some of the advantages include that people were able to feed music from the compact discs to their iPods; hence this made it convenient for the users to copy music files from the compact discs (Lee et al., 2016).

3.1. Last F. M

In the year 2002, the company Last. Fm was launched in the United Kingdom in January. This music streaming industry was majorly geared towards the favorite music of the individuals. It was constituted of receptive social features, plus they showcase the recommendations of music for individuals in terms of the users. The users' favorite music was narrowed down and recommendations put in terms of the specifications and preferences of the users, due to its unique algorithm that was founded on music recommendation known as the audioscrobbler that focused on the profile of the users and then selected the recommended music files to the individual user. Through the audioscrobbler, the patterns of the user were developed based on the information collected, and their profiles were built in terms of the tastes and preferences of music. Enhanced connectivity between data from the user and the database focused on ensuring that all the personal information is recorded to the company's database. This was collected through devices used by users and their data via directly outsourced through the music files downloaded from the computer and also via plugins, which aided the organization to collect the necessary data from the user to help build personalized recommendations to listen to.

3.2. iTunes

Apple started the iTunes store in April 2003. Since at the moment, most of the users within the music streaming industry were able to quickly transfer music files from the online stores to the compact discs and finally to the iPods. Hence,

this played a significant role in the development of the iTunes store, which was a virtual store that allowed consumers to have access to have a wide array of music catalog for a relatively small fee. This allowed people that owned iPods as they were able to access numerous songs to their iPods, plus people could download multiple music files to various iPods. This also allowed Mac users and iPods to have an endless supply of music. The iTunes stores allowed the consumers to purchase music files at meager rates; however, there was no subscription fee charged during the period. This helped in increasing their consumer base and increased its sales of iPods.

3.3. Pandora Internet Radio

Pandora Internet radio was launched in the year 2005 and brought out a new twist for the users to have much individualized and personalized attention. The online radio station focused on providing a personalized experience for music lovers as they could have access to only the music that befits their tastes and preferences. Pandora also offered a much-integrated music streaming service; however, there were no free services or product offerings provided within the online radio station. Hence, later on, the business model of the station changed drastically and developed into a streaming website that offered free content to their consumers, which was always accompanied with tons of advertisements. Therefore, this gave users a strong sense of control in terms of the selection of music genres that they wanted to listen to. Hence, all one could do is to tune the online radio station in terms of the preferred taste and have access to unlimited content in that genre. The Pandora radio station was among the first music streaming services that focused on establishing a much determined personal experience for each consumer. Therefore, the online radio stations were channeled to help the users to only listen to what ignited satisfaction from within. Thus, the Pandora online radio station provided a personalized experience in music selection.

3.4. SoundCloud

The SoundCloud was launched in the year 2007. The Soundcloud was derived from providing music lovers the opportunity to share their music with the rest of the world. The structure of the SoundCloud was compared to that of YouTube in terms of video, in which various users upload videos allowing others to watch them online. Therefore, the SoundCloud application provided

access to many music lovers to share their favorite music files. Additionally, the SoundCloud allowed independent artists to share their masterpieces globally. Hence, it was a platform for advertising and the nurturing for small and upcoming music artists in the market. Therefore, the Soundcloud platform grew significantly, and many music lovers and artists took this opportunity to share their music with the rest of the world. Consequently, many musicians gained recognition through the SoundCloud platform. The sound sharing platform was a source of comfort for music lovers and musicians as they had an opportunity to appreciate music from other musicians and also share with millions of fans throughout the world.

3.5. Amazon Music Unlimited

The Amazon Music Unlimited was launched in the year 2007, which allows giving access to a wide range of media platforms such as Android, iOS, and the web platform. The music streaming service focuses on various advantages such as the Alexa integration, discounts for their consumers and also has a beautiful and nerve cracking music collection.

3.6. Spotify

Spotify was developed in the year 2008 in Sweden. The company has significantly grown as is currently the leading music streaming service in the world. The company commenced with contesting against the licensing and copyright laws and ensuring a well-streamlined legal compliance structure hence giving them access to millions of songs during their premiere in the year 2008 (Naveed et al., 2017). Therefore, during its premiere, Spotify had over ten million songs on its database, giving the users a wide array of music files to choose from, and hence the consumer base grew exponentially. The company employed a freemium business model to help in attracting more and more subscribers to their music streaming service (Naveed et al., 2017). The Freemium business model gave free users access to content within site for a particular time frame. Therefore, the main aim of the Freemium business model to help in converting free users to premium users of the paid packages.

Thus, the company strongly believed that the model would help in translating the free users to premium paying members over a small time frame. Therefore, this would lead to the generation of large profit margins for the company. Spotify utilized the digital. Rights management(DRM) which allowed the company to

protect the content that was derived from the record labels. However, Spotify has been unable to make sustainable profit margins despite its massive consumer base. This is because of the incremental costs that are associated with free users within site. The majority of free users do not pay for premium services, and this is due to sharing platforms such as Soundcloud, etc. Therefore, these are huge losses which are incurred by the company. This is because, for every music video watched by free users, this shall lead to the payment of licensing fees to the record labels (Naveed et al., 2017). Hence the company records some losses expected to be paid by the premiums collected from paid subscriptions for premium packages. Therefore, the profit margins of Spotify are calculated through the difference between the payments for music subscriptions and the payment made to the record labeling companies. Hence the company needs to improve its pricing model and revenue model to help in ensuring that there are high and sustainable profit margins for the organization. Spotify needs to implement a streamlined revenue model that shall help the company to ensure sustainability in terms of profitability and revenue margins (Naveed et al., 2017). Through the business model, Spotify shall have to enhance its conversion rate to make a large percentage of free users to become paying subscribers. Hence, the organization needs to implement a much-integrated revenue model, which shall help to ensure there is an increased revenue collection for the corporation (Naveed et al., 2017).

3.7. Tidal

Tidal was launched in the year 2014 in Norway by a company known Aspiro that focuses on the provision of audio music to their clients. Their major strengths are high quality and also provides exclusive content that is not readily available to other streaming services (Vnoučková, 2018). This focuses on paying services as there are no free services offered within the streaming platform.

3.8. Apple Music

Apple Music is the Apple streaming music service that was launched in the year 2015. The company employed the model just as the existing music streaming services and allowed all music lovers to access the music of their choice and increase its revenue basket to ensure growth and sustainability. There are more innovative technologies employed by Apple Music streaming service but just the contemporary model of other existing streaming services.

3.9. *YouTube Music*

YouTube Music was established on 12th November 2015. This led to the development of free versions for free users and the administration of advertisements allowing them to access free content on their websites. The music streaming service provides an excellent integration with Google applications and versions.

The music industry has developed exponentially, especially during the 20th and 21st centuries. Since the conception of Napster, the music industry has become one of the most lucrative markets in the world. This is because of the onset in advanced technology, which has led to wireless communication devices such as cellphones, laptops, etc., and this has paved the way for the music streaming industry to grow substantially and become lucrative for the futuristic time (Barker, 2019). The music industry has grown exceptionally primarily for music streaming. For example, in the year 2016, the music market grew by a whopping margin of 6%, which is among the most substantial margins ever registered globally and since the commercialization of the music industry to ensure a broad reach of music to subscribers across the globe. In the same year 2016, the profit margins and sales revenues from the music industry were at a whopping \$16 Billion signifying how much of a cash cow the music streaming industry is and its futuristic implications for growing and becoming a lucrative market for future entrants in the market to venture into (Barker, 2019). However, despite the large profit margins and revenue generated, there has been the inadequacy of an appropriate and candid business model which is sustainable for the growth and profitability of the music streaming industry.

During the commercialization of music in the past, the only source of music was for the consumers and fans to visit the stores and purchase songs from them. The music was processed in physical formats such as vinyl albums, cassettes, and compact discs (Barker, 2019). However, there has been an exponential growth during the end of the 20th century which was generated through websites such as the Napster, which was geared towards peer to peer sharing of music files from one consumer to another, and this grew remarkably contributing to the uprising of the music streaming industry. In the past, the business models for the music giants were majorly geared towards ownership of music. The ownership of the music business model is focused on making physical sales, which are consisted of music placed in physical formats such as

compact discs and cassettes (Vnoučková, 2018). However, the music industry has changed drastically due to the advancements in the technology world. These include mobile payment, smartphones, and wireless telecommunications, which have enhanced interactions and convenience in accessing music files in the form of songs and videos through the convenience of smartphones, computers, or laptops. Profitability is a crucial reason for the development of business models. The music streaming industry has been challenging, and therefore there is a need for sustainable business models to help in ensuring an increased consumer niche and well-paying subscribers for music audio and video files (Vnoučková, 2018). Over the years, several business models have been developed to aid in expanding their consumer base and generation of large profit margins for the organizations. Some of the existing music streaming industries that have established themselves intensely in the 21st century is Spotify, iTunes, Soundcloud, Pandora, Last f. m.

4. Disruptive Innovation Theory

The music streaming industry has been built in the disruptive innovation theory. The theory focuses on providing alternatives in the market towards existing products; however, much consideration is taken on pricing models and the nature of the products to help in establishing a much broader consumer niche as compared to the existing markets of the organization. (King, 2017) It is built on innovation and incorporation of value proposition factors, which attracts a much larger consumer base for the new products or services. This is the foundation of the music streaming industry as it opened a new framework on how fans and users can access and listen to music conveniently (King, 2017). The theory of disruptive innovation theory focuses on encompassing innovations that provide new markets for establishing new customers, and this is done by incorporating unique benefits absent in the market. These include convenience, quick accessibility, simplicity (easy to use), and finally, easily affordable to the consumers. The music streaming industry has majorly relied on the internet, and advances in technology are creating a definite competitive advantage in the music industry (King, 2017). Therefore, the level of innovation in the music streaming industry has been the source of its success in the 21st century. One of the key business models that have been utilized in the music streaming industry is the freemium business model.

5. Freemium Business Model

This is a business model that focuses on the provision of content or any form of product offerings freely to establish recurring purchases from subscribers of the websites or users. It majorly aims to persuade subscribers or users to continuously make payments for much advanced and perfect content from the sites (Holm & Günzel-Jensen, 2017). The business model has been employed by major music streaming companies such as Spotify with the hope of providing free services with the confidence of the users upgrading their services efficiently. The freemium model is concerned with establishing value in free users. Therefore, this model has deemed a sales and marketing strategy that provides access to the user of all catalogs and music genres available within the website. Later on, the user is persuaded or convinced through the free content available to upgrade by paying designated premium fees to access the product offerings within a stipulated time frame (Holm & Günzel-Jensen, 2017). The profit index of the model is channeled towards the creation of a relationship between the fees paid by the premium users concerning the free user. The difference between the new customers and the premiums paid by the high-end clients results in massive profit margins for the organization. The free user interface has been a more significant factor for the music streaming industry to attract new consumers and establishing a definite competitive advantage in the market (Holm & Günzel-Jensen, 2017). Hence, this leads to cost efficiency and effectiveness in the operation ability of the music streaming operations. There have been four key models of freemium models that have been implemented over time that have effectively led to great consumer-based and conversion to premium-paying customers. These include the following:

5.1. *Feature Limited Framework*

The feature limitation framework provides some features of the website for a particular time frame. The sites offer a short sneak peek to the elements displayed in the premium paying offers or packages. This first-time interaction of these features or benefits acts as a catalyst for the user to pay to enjoy more services from the paying packages (Holm & Günzel-Jensen, 2017). This is among the most useful frameworks as clients or users need to enjoy features, and they are obliged to pay for them to enjoy their product offerings.

5.2. Time-Limited Framework

This framework has been widely spread throughout various streamline websites. In this framework, the free users are provided with a clearly defined and fixed timeframe whereby they can access their favorite content. After that, then they need to pay some premiums to enjoy more content and services from the music streaming website. This time frame is set to create a sense of anxiety and urge to have more content, and hence most of the free users turn into premium paying subscribers. However, at times things don't fall as anticipated, and some clientele stops using the website, and thus, the company incurs a huge loss (Holm & Günzel-Jensen, 2017).

5.3. Seat Limited Framework

This framework is comprised of providing a free incentive to the limited volume capacity of individuals (Holm & Günzel-Jensen, 2017). For example, only the first 1000 subscribers shall have the opportunity to watch the music video freely. This ensures that the rest of the users that did not meet the quota shall have to pay a premium fee to continue enjoying the service (Holm & Günzel-Jensen, 2017). Additionally, the music video or audio might be intriguing to the lucky viewers and force them to subscribe to continue enjoying more product offerings from the streaming websites. This results in increased sales revenue, consumer niche, and significant market share.

5.4. Customer Type Limited Framework

This is majorly categorized through the use of demographic factors such as age. This segregates a bracket of consumers from viewing or accessing the content being offered freely. Therefore, they are obliged to pay for a subscription to the premium services and have an opportunity to interact with all the content available on the music streaming website (Maftei et al., 2016). This helps in encouraging the working population demographic group to subscribe to the premium packages to have access to the music. This increases the profitability of the firm and its consumer base. This framework creates a sense of urgency for the other demographic profiles to have access to the information or content barred from their access (Maftei et al., 2016).

5.5. Significant Features Derived From The Freemium Business Model: These are the most used business models used by the market in freemium business.

5.5.1. Value Proposition

The value proposition is among the primary sources of variation in which an organization creates value for its customers through its products and services. The Freemium business model increases value proposition through the free services and the premium services through. In the free services, the music streaming company provides access to free music to their free users plus incorporate advertisement, and they need to upgrade to a premium package to have access to unlimited music content. In the premium services, the clients are provided with high-end services such as the unlimited access of music files and videos plus other access to much-limited music videos and audio files. Hence, creating value for the premium fees paid by the users and subscribers.

5.5.2. Conversion Rates

The freemium model focuses on creating free services and therefore resulting in the free users enrolling for premium services for an additional fee (Maftei et al., 2016). The conversion rate majorly focuses on turning the value propositions to become sources of revenue. This creates a robust framework that focuses on measuring the rate at which the free users are subscribing to premium packages. Hence, the increased conversion rate communicates that there is increased revenue for the company (Maftei et al., 2016).

5.5.3. The User Framework

The user framework entails the size of the customer base within the music streaming industry. This focuses on the increased growth of the users within the music streaming platform. The model focuses on establishing a large consumer base that is recurring and eventually enrolls for premium packages within the organization (Maftei et al., 2016). The efficiency of the acquisition channels needs to be implemented to help in ensuring that there is an increased conversion rate leading to an increased consumer base.

5.5.4. Value System Position

The position in the system needs to create value for both the firm and its customers. The system needs to ignite customer retention and ensure that all services and

products produced within the websites generate high income for the company (Maftai et al., 2016). For example, for Spotify, there is the incorporation of an on-demand platform that gives all access to free users to various musk catalogs for a particular time frame monthly (Maftai et al., 2016).

5.5.5. Acquisition Channels of Consumers.

The musk streaming companies incorporate strategies on how to increase their customer base by generating new subscribers. This is carefully executed through the use of social media platforms or email marketing to reach out to leverage an increased number of online users within the internet to have an increased online presence within the music streaming platforms. Through the use of available social media platforms and online tools, music streaming companies can reduce their marketing costs through the utilization of social media and email marketing, which are cost-effective.

5.5.6. Lock-in Effects.

This focuses on the customer retention rate of customers by developing a durable competitive edge from m the players in the market. The establishment of customer loyalty consequently affects the switching or conversion costs, which are associated with the conversion of free users to premium paying clientele. Therefore, the system needs to provide high-end services product offerings, which result in high customer loyalty, subscriptions, and retention.

5.5.7. User Community

Despite this, it has been the most adopted business model for interactive music streaming platforms. There are still increased losses incurred and expenditures experienced. The scenario of Spotify, whereby its freemium model has led to its large consumer base in the entire world, the company has implemented the model to have a broad consumer niche and more subscribers daily (Jones, 2019). Due to its on-demand interface, a significant market share of the music market consumer base has significantly been affiliated to Spotify. However, the expenditure and costs incurred from the model questions profitability and viability of the firm in its operation ability. The company pays licensing fees to the record labels owning the music content, and this includes the content listened to by the free users (Jones, 2019). Hence, the company hopes for more paying customers to help in creating a feasible profit pattern for the company.

However, this is not the case as the majority of the costs incurred are geared towards paying the licensing fee, which constitutes a whopping 70% of the revenue made by the music company.

6. Recommendations

The online music streaming services industry has been the source of revenue in the music industry, and its fame in the market has grown exponentially. Despite the growth of the online streaming platform, the revenue capacity of the firms has been relatively low that their sustainability has been vulnerable to help in the growth and development of the services (Pongnumkul & Motohashi, 2018). The Freemium business model has been the most adopted strategy, especially by the most successful online streaming service, Spotify; however, the model has not generated adequate revenues to enhance the growth and increases the profitability of the organization. The impact of establishing and attracting new users to turn them into premium paying clients has been rather ineffective until now. Therefore, the online streaming service companies need to adopt an integrated business model that enhances revenue generation at both the free and premium levels of their websites (Pongnumkul & Motohashi, 2018). Most of the online streaming services focus on advertisements for free users and focuses on premiums paid within the paid packages. The online streaming services need to adopt a proper revenue model to help in balancing the finances earned from the subscribers. For example, Spotify pays almost 70% of its revenues to the record labels as licensing fees for the music content being purchased within their platforms. This is very expensive for the firm as they lack adequate operating costs to run their operations and pay their employees, for example, such as Spotify, which has over 1800 employees (Pongnumkul & Motohashi, 2018). Therefore, the rates paid to the record labels need to be decreased to help the firms increase their profit margins and consequently increase their sustainability.

7. Conclusion

The online music streaming industry has grown significantly, and there is a need for the establishment of novel business models, which shall aid in securing large profit margins. The music industry has gradually evolved, and it has the use of technology played a significant role in its evolution. Online music streaming services have evolved and provided multiple benefits within the music

industry, such as convenience, autonomy, a wide array of products, and many other benefits that have been derived from these music streaming platforms. The online music streaming services have become the cash cow in the music industry. However, the pro-rata model has been a substantial disadvantage in its revenue model, and through informative and decisive reforms to negotiate the rates of payments for paying the record labels is necessary to help in ensuring the companies have sustainable financial positions. Futuristic strategies of the online streaming music services should be employed based on the cost-effectiveness and implementation of an integrated revenue model to ensure cost minimization and large profit margins.

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CHAPTER XIV

THE ROLE OF RELIGIOUS SYMBOLS IN PUBLIC SERVICE ADS PROMOTING NEW NORMALS DURING COVID-19 OUTBREAK

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1. Introduction

Religion has been among the strongest drives throughout human history (Rosmarin & Koenig, 1998). The states in which religion shapes human behavior have been the subject of many disciplines. Religion can be considered as one of the critical socio-cultural motives in marketing (Lindridge, 2005; Nestorovic, 2016) and religious symbols as a message component have been the subject of numerous studies in advertising and consumer behaviors (Delener, 1990; Mathras, Cohen, Mandel, & Mick, 2016). Integrating sacred figures and metaphors into profit-oriented efforts is a notable propensity to achieve desired consumer goals (Taylor, Halstead, & Haynes, 2010). Religion and holy figures can turn into a key motivation for the target audiences other than commercial purposes as well. The social campaign efforts in which religious figures are used as a persuasive message approach to ensure source credibility are quite common (Ahn, Paek, & Tinkham, 2019; Salmon & Atkin, 2003). PSAs carried out in this context play an important role in achieving many social goals like behavioral outcomes including health-related issues. For example, it is obvious that altruistic feelings, which are known as the driving force for helping others, are significantly influenced by strong internal religious beliefs (Blogowska & Saroglou, 2011). Looking at the incentives promoting blood

donation, the altruistic feelings are the main motives lying behind the helping behavior for those who need a blood-related treatment (Ferguson & Lawrence, 2016; Wildman & Hollingsworth, 2009). Therefore, religion as a belief system rooted in a socio-cultural context is one of the antecedents of one's core values (Minton, Kahle, & Kim, 2015).

Although religion stands out as an important reference concept in the field of health, the number of studies addressing the message effectiveness of religious and sacred figurative elements on desired outcomes is far from sufficient levels. During the Covid-19 period, the need for persuasive perspectives on health communications has emerged. As all mankind has experienced, the fighting against coronavirus continues rapidly across the world. However, it is a well-known fact that there were extensive challenges in adapting to the health measures announced by World Health Organization. Consequently, in the communication phase for acquiring the habit of complying with the measures, numerous public announcements have applied several appeals into messages to keep people motivated in engaging the precautions. For instance, in some public ads employing religious implications, the citizens were reminded of religious sentences regarding health, hygiene, and the responsibility to comply with the rules to get encouraged them to follow the precautions.

The present study seeks to contribute to the pandemic literature by questioning the sacred appeals in public service announcements (PSAs) having an impact on people's attitudes toward the COVID-19 measures. In particular, the correlations between the adherence to protective measures recommended by World Health Organization (WHO) and religious symbols during the COVID-19 pandemic were investigated in terms of message effectiveness and attitudinal persuasion. To the best of our knowledge, the impact of the sacred figures as a message content during the pandemic process on attitudes towards measures will be discussed for the first time within this study. Specifically, the current study addresses three objectives: (1) identifying viewers' motivations towards the use of religious contents in health communications, and in particular, messages for preventive measures, (2) understanding the possible effects behind the viewers' processing of the religious messages and attitude formation, and (3) inquiring the ad immersion in terms of the mediating roles and direct effects for the positive evaluations of the viewers. Therefore, this paper may be considered valuable in terms of apprehending to what extent the

trilogy of mask-distance-hygiene, which was conceptualized as new normal during the COVID-19 period, was predicted by religious symbols in public service announcements.

2. Literature Review

Prior researches reveal that religious contents influence behavioral outcomes which mean it can empower the effectiveness of the ad message (Delener, 1990; Lindridge, 2005; Taylor et al., 2010). Zehra and Minton (2020) state that using sacred symbols as a message appeal is widespread use especially when a religious influence is desired and has diverse impacts due to persuasive strength. Therefore, a brand or a product associated with cultural symbols like religion would have the power to influence desired consumer behaviors (Dotson & Hyatt, 2000). However, religiosity has often been neglected in health communication studies (Lumpkins, 2010). Despite the increased concerns about health behaviors during the COVID-19 outbreak, the pandemic brought many adaptation difficulties towards personal protective measures, as humanity has experienced in the last few years. The issue of adaptation of new normal, which humanity was not familiar with, has been the subject of various communication approaches and message appeals. This research aims to develop an understanding of whether a religious symbol (the Islamic figures) performs as a motivation in the persuasion process in a health message to promote COVID-19 preventive measures across Turkish university students the age of 18-25. Additionally, the goal is to define the interaction among the advertising engagement and the religious figures together with the personal attitudes toward religion (Attachment to God, religious coping, religious responsibility, and religious orientation) that influence the formation of attitudes towards protective behaviors. First of all, defining the key elements is crucial to brightening the role of the engagement to a health message which leads to an attitude towards desired health behaviors. Next, we will focus on personal religious characteristics that are assumed to predict preventive measures in cooperation with advertising immersion.

2.1. Advertising Message Engagement as the Predictor of Attitudes

Engagement as an experience of focused cognitive capacity is associated with constant attention and imagery (Chang, 2009; Green & Brock, 2000). Advertising campaigns incorporating sacred figures draw viewers' attention

and match the advertised brand or the promoted behavior with the consumers' moral beliefs through religious symbolism/ imagery (Zehra & Minton, 2020). According to a definition by Wang (2006) engagement is the degree of the self-involvement towards message context in which the framed claims of the brand are introduced.

Advertisers are willing to boost ad engagement as a way to elicit attitudes (Wang, 2006). Consumers shape certain attitudes about goods, services, and ads due to cultural links as sacred symbols (Dotson & Hyatt, 2000). Therefore, it may be expressed that religious figures both predict ad engagement and interact with it on behavioral attitudes. In other words, ad engagement likely mediates the effects of religious figures on attitudes. However, that message engagement may likely be experienced by the viewers not only in a commercial ad but also in PSAs depending on the message appeals presented. The advertising communication might lead to viewers' attention and get them to process the ad message through engagement due to contextual involvement (Wang, 2006). Individuals may prefer to see the use of religious figures in a message hence raise a contentedness for the ad through emotional responses triggered by ad-context (Lumpkins, 2010). Therefore, exposure to sacred symbolism could lead to greater emotional reactions which mean a deeper immersion into the ad message. Public service ads (PSAs) are one of the key instruments of social marketing (Bagozzi & Moore, 1994). PSAs utilize message constituents that reveal the emotional potential to a large extent to persuade the target audience toward the desired action (Bagozzi & Moore, 1994; Weber, Westcott-Baker, & Anderson, 2013). For that reason, in the ads associated with social issues, manipulating the religious figures as the message appeal can contribute to the creation of the emotional impact. Thus, ad engagement becomes an experiential process that can boost behavioral attitudes through message believability and advertisement recall based on emotional strength (Dahlstrom, 2014; Wang & Calder, 2006). At this point, it is likely to speak about a double effect. First, advertising engagement primarily supports attitudinal formation, and second, engagement mediates the influence of religious symbolism on attitudes. The latter is especially crucial in terms of perceived religious meanings. In other words, while the individual's perspective about religion creates an effect on the behavioral plane, message engagement can also mediate the impact of a religious perspective on attitudes.

2.2. Bonds to the Sacred: Attachment to God

Ainsworth (1985) characterized the attachment ties with a basis in which individuals could express themselves within the need for shielding and mount. Attachment bond was associated with the efforts to keep affinity with attachment figure and thinking the figure given a safety shelter (Beck & McDonald, 2004). Therefore, the initial order of the attachment for believers in their religious lives is primarily to believe in God or people or prophets who are considered important to a religion (Subaşı, 2012). For almost any religious followers, “an almighty, omniscient, and omnipresent God is the primary religious figure to attach” (Bradshaw & Kent, 2018, p. 672).

There is not ample evidence produced by scholars on the relationships between media exposure and the effects of attachment to God. However, experimental designs are widely conducted in which religious symbols and the meanings attributed to them that are used as mediators or moderators of media exposure (Dotson & Hyatt, 2000; Homan, 2012; Taylor et al., 2010). In addition, it may be assumed that the religious symbols could become practical in line with the meanings attributed to the figures by the individual and his/her closeness to God. In this case, attachment to God would enhance engagement in media messages using sacred symbols, and next allow behavioral attitudes to grow up. Therefore, within the scope of the current study, it is hypothesized that advertising engagement can mediate the effects of attachment to God on preventive measure attitudes.

2.3. The Religious Coping as Motivation for Covid-19 Messages

Coping could be comprehended as a “process through which individuals try to understand and deal with significant personal or situational demands in their lives” (Pargament et al., 1990). Coping is generally viewed as an act of the individual to feel safe when confronted with any threat and “could be an element in the motivation behind seeking attachment figures” (Cooper, Bruce, Harman, & Boccaccini, 2009). A recent study by Thomas and Barbato (2020) revealed that religious coping was associated with lower levels of anxiety scores during the COVID-19 outbreak. According to Belavich and Pargament (2002) attachment to God was the main motivation of coping and that religious coping was the predictor of an adaptation to any challenging situation. Therefore, coping could be considered in terms of the attachment ties, and also the result

of an individual's degree of adherence level to sacred life (Cooper et al., 2009). The links individuals build with the creator and the way they interpret their weakness might be the key part in the development of their belief systems and they can approach coping with a semantic point of view (Harris, Allen, Dunn, & Parmelee, 2013). Therefore, this meaning-based form of coping may become a feature that can increase individuals' interest in messages composed of religious symbols. To hypothesize within the scope of this study, individuals' immersion into PSA messages regarding Covid-19 measures increases in line with their religious coping power. Afterward, the level of engagement towards the message mediates the impact on attitudes towards preventive behaviors.

2.4. Religious Responsibility to Adhere the Pandemic Rules

Since having the reason and will, individuals are responsible for the tasks they perform and the decisions they make (Acar, 2014). Religious responsibility may refer to a wide range of meanings, including respect to an individual's right. As a value, the rightful due has an encompassing quality in every area of human life and needs the responsibility to consider (Gürer, 2013). The right is defined as the tasks done under the requirements of wisdom, and its original and correct manner, belief, and knowledge gained in this way, work that occurs to the required extent and when necessary (Gürer, 2013). In an inspiring study of religious responsibility, Lowe and Medway (1976) indicated that responsibility takes shape under intense and severe conditions that entail a high level of involvement. Considering the Covid-19 measures, religious sensitivities of individuals under stressful and difficult conditions may lead them to engage in responsibilities about health concerns. In other words, individuals' esteem for the rights of others may result from their religious responsibility. In this case, likely, positive attitudes towards both PSA messages about the pandemic and preventive behaviors might occur.

2.5. Intrinsic and Extrinsic Motivation towards Engagement

The religious orientation of individuals to sacred creeds and activities is viewed in terms of intrinsic and extrinsic motivations. Intrinsically or extrinsically motivated religious individuals appraise religiosity and sacred practices as a way of getting or achieving their goals (Smither & Walker, 2015). The religious people who are motivated intrinsically consider the religious acts as an aim

by themselves. However, those who are motivated extrinsically engage in sacred practices to achieve some personal or institutional objectives as getting acceptance from the public (Smither & Walker, 2015). “To be high intrinsic is to be a true believer in religious practice for its own sake and to be high extrinsic is to view the religious practice as an avenue to a social or personal end” (King & Crowther, 2004, p. 86). From this point of view, it might be assumed that individuals will be able to engage in a COVID-19 themed PSA, just because including sacred symbols, in terms of intrinsic and extrinsic motivations that shape their religious orientation. In addition, it is likely to state that individuals will exhibit a positive attitude towards pandemic measures just because they are exposed to a religious message. In brief, it could be mentioned that there is a causal association between behavioral attitudes and intrinsic/extrinsic religious orientations.

Prior literature suggests that embedded religious symbols in an advertisement have influential persuasive outputs in terms of emotional and cognitive information processing (Dotson & Hyatt, 2000; Zehra & Minton, 2020). Consumers appraise the message senders based on the presence of the sacred figures or their religious experiences attained cognitively and emotionally (Lumpkins, 2010). The positive attitudes caused by ads with a religious signal confidently influence not only brand evaluations but also the perceived drives behind religious cue usage (Zehra & Minton, 2020). Thus, sacred figures in an advertisement have a decisive role in beliefs and attitudes towards the ad and the brand, which can be envisioned as persuasive message content on behavioral intentions. From this point of view, it might be required to investigate social impact or desired behavioral outcome depending on the use of religious figures in public service ads (PSAs).

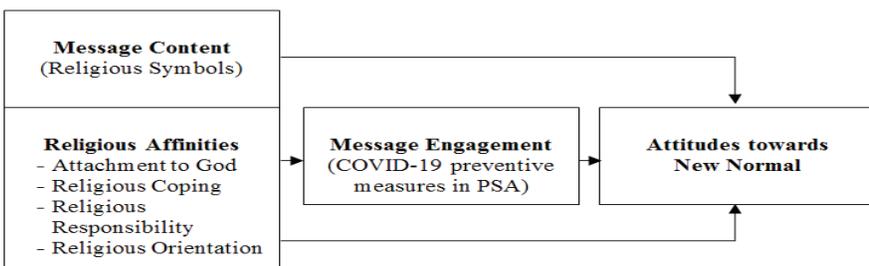
Given the lack of studies investigating the predictors of adhering to pandemic rules in terms of religious perspective during the COVID-19 pandemic, and the need to understand the role of PSAs in promoting preventive measures, the researcher employed a combination of constructs that measures the individual religious profiles including attachment to God (AGI), religious responsibility, religious coping and orientation. In addition, the transportation scale, which aims to measure message engagement, was accompanied these structures. On account of that, the current study can fill a gap in the literature, unlike previous studies in which a correlation was built between religious figures and commercial aims. Based on the prior studies,

the researcher hypothesized that religious states of individuals (attachment to God, the level of religious responsibility, and coping belief) would positively be associated with the PSA message engagement and behavioral attitudes, and assumed that the message involvement would mediate the influence of religiosity on preventive measures. In other words, it might be assumed that religious symbols used in public service ads (PSAs) generate engagement in the PSA message. Next, the level of absorption into the message may also mediate the impact of individual religious affinities on COVID-19 preventive measures. Therefore, considering the above literature, the research model depicts the paths among variables as follows (Figure 1). The impact of religious status and sacred figures on the hypothesized associations were explored.

3. Research Design and Procedure

This study examines the use of religious figures in PSAs promoting pandemic preventive measures. Additionally, the impact of individual religious orientation and being immersed in the message evoked by the sacred figures on behavioral attitudes were analyzed. Accordingly, the current study used a real public service announcement stimulus containing religious figures to encourage preventive measures during the pandemic period in Turkey. The aforementioned PSA was designed by the Turkish Presidency of Religious Affairs as an informative poster work reminding the citizens of the pandemic rules at the entrance to sacred places like mosques.

Figure 1: Research Model of the Study



Even though this was the real announcement about COVID-19 measures, almost all people in Turkey were assumed to be unfamiliar with this PSA. On account of this presumption, the subjects were informed that the ad design

was officially used during the pandemic period. Thus, it was ensured that the participants felt that they were dealing with a real application rather than an ordinary stimulus designed for this experimentation. Additionally, images of both genders were included in the selected PSA design. Instead of using imaginary institutions and improving message content regarding the preventive measures, created didactic information was used, providing the sense of real-life experience to message exposure. Even no minor modifications were applied to the placement of images and the COVID-19 message content. As a conclusion of this procedure conducted in the selection of the stimulus PSA, it might be expressed that the current paper focuses on the influence of a real PSA designed to promote measures on behavioral attitudes during the COVID -19 pandemic period. Participants were exposed to read the poster PSA and as a manipulation check, they were asked whether the religious symbols in the ad were the main stimulus or not, and based on the answers the awareness of the sacred figures was investigated in terms of the regression models.

One hundred and ninety university students were recruited for the study. The questionnaire was administered to the participants online and outside of the distance education course hours during the pandemic conditions. Most respondents (more than 85%) were between 19 and 25 years old and 52% were males. The subjects were randomly assigned to the experiment among students studying in the field of social sciences. First, it was aimed to measure the religious profiles of the participants individually by asking questions about their religious orientations such as attachment to God, religious coping beliefs, religious responsibility, and their intrinsic/extrinsic values. After rating the individual religious orientation scales, respondents were asked to examine the PSA and answer the manipulation check questions measuring the awareness levels towards the religious symbols. The manipulation check was followed by the statements of transportation scale (Green & Brock, 2000) which measures the subjects' cognitive processing and emotional responses. Subsequently, subjects rated their attitudes towards COVID-19 pandemic measures. All scale items were measured with a 5-point Likert type, except for demographic statements. The survey was administered and the feedbacks were received during May and June 2021. Further information on internal reliability, scale items, and their sources are shown in Table 1.

Table 1: The Descriptions for the Research Items

Measure	Cronbach's alpha (α) μ (sd)	Item
Attachment to God (AGI) Beck & McDonald, 2004	$\alpha= 0.77$ $m= 2.78$ $sd= 1.55$	I worry a lot about my relationship with God.
		I am dependent upon God for everything in my life.
		I am jealous of how God seems to care more for others than for me.
		It is uncommon for me to cry when sharing with God.
		Sometimes I feel that God loves others more than me
		My experiences with God are very intimate and emotional.
		I often worry about whether God is pleased with me.
		I crave reassurance from God that God loves me.
		I worry a lot about damaging my relationship with God.
I let God make most of the decisions in my life.		
Religious Coping Activities Scale (RCS) Pargament et al., 1990	$\alpha= 0.93$ $m= 4.08$ $sd= 1.12$	Trusted that God would not let anything terrible happen to me
		Experienced God's love and care
		Realized that God was trying to strengthen me
		In dealing with the pandemic I was guided by God
		Took control over what I could, and gave the rest up to God
		My faith showed me different ways to handle the problem
		Accepted that the situation was not in my hands but in the hands of God
		God showed me how to deal with the situation

Measure	Cronbach's alpha (α) μ (sd)	Item
Religious Responsibility (RRS) (Kaya, 2000)	$\alpha = 0.89$ $m = 3.97$ $sd = 1.19$	I try to be beneficial to people because of my religious belief.
		I take care to protect the trusts given to me due to my religious belief.
		A religiously responsible person struggles with the evils around her/him.
		It bothers me to commit an act that is religiously forbidden.
		Fear of Allah is effective in obeying various religious orders and prohibitions.
Religious Orientation <i>-Intrinsic Motivations</i> (Brimhall & Butler, 2007)	$\alpha = 0.92$ $m = 4.07$ $sd = 0.93$	I enjoy reading about my religion.
		It is important to spend time in private thought and prayer.
		I have often had a strong sense of God's presence.
		I try hard to live all my life according to my religious beliefs.
Religious Orientation <i>-Extrinsic Motivations</i> (Brimhall & Butler, 2007)	$\alpha = 0.89$ $m = 3.55$ $sd = 1.15$	I go to mosques because it helps me to make friends
		I pray mainly to gain relief and protection.
		What religion offers me most is comfort in times of trouble and sorrow.
		Although I believe in my religion, many other things are more important in life.
Manipulation Control Statements	$\alpha = 0.81$ $m = 4.03$ $sd = 1.23$	The use of religious figures in this advertisement draws attention.
		I know that the institution that made this ad is interested in religious affairs.
		In this PSA, a relationship was established among hygiene, pandemic measures with religion.

Measure	Cronbach's alpha (α) μ (sd)	Item
Message Engagement Scale Green & Brock, 2000	$\alpha = 0.92$ $m = 3.49$ $sd = 1.36$	I felt like I was in what was described in the ad.
		I was able to mentally participate in this ad.
		The religious expression in this PSA impressed me.
		While reading this ad, nothing else occupied my mind.
		I easily embraced this ad.
		This ad aroused positive thoughts and ideas in me.
Attitudes Towards Pandemic Measures	$\alpha = 0.82$ $m = 4.55$ $sd = 0.88$	I comply with pandemic measures without exception
		I think that the mask-distance-hygiene rules are still valid.
		Mask-distance-hygiene rules should continue to be used despite vaccination.
		Mask-distance-hygiene rules are the most effective protection methods known in the pandemic.
		I have no problems in complying with pandemic measures.

Following the initial check for the data through descriptive statistics, the researcher investigated differences in mean levels of constructs in terms of message engagement and attitudes towards preventive measures. Subsequently, structural equation modeling analyses were performed via LISREL software. During the structural equation modeling process, the impact of each structure on preventive measures was investigated, as well as the message engagement status was subjected to mediation analysis.

3.1. Results

An initial examination of the categorical mean scores which were calculated by a median split on the religious status measures (attachment to God, religious orientation, responsibility, and religious coping) indicated that the average results

of PSA message engagement were differentiated within the levels of religious measures. Message engagement mean scores were weak in the lower levels of almost all religious scales. The Attachment to God scale had the closest scores in lower and higher levels for the message engagement. It was observed that the mean scores differed slightly from each other in this group. Nevertheless, scores viewed at different levels of religious attitude scales regarding PSA immersion were statistically significant ($p < .001$) except attachment to God measure ($p = .155$).

In contrast, the participants who reported low and high levels of religious attitudes have insignificant differences between the scores towards pandemic measures. Exceptionally, a significant difference in pandemic measures was reported at different levels of the Attachment to God scale ($p = .009$), while statistical significance was not found in all other religious situations. Further, attachment to God, responsibility feeling, religious coping, and motivations varied profoundly in PSA message engagement. Individuals with higher religious scores had significantly stronger PSA involvement than participants having lower scores from a religious perspective (Table 2).

Table 2: Descriptive Statistics on Categorical Scales by PSA Engagement and Behavioral Attitudes

Religious Status		PSA Engagement m (sd) Significance	New Normal Attitudes m (sd) Significance
Attachment To God	Low	3.37 (1.17)	4.43 (0.79)
	High	3.61 (0.99)	4.68 (0.62)
		$t(182)=1.42, p=.155$	$t(182)=2.63, p=.009$
Religious Coping	Low	2.93 (1.00)	4.47 (0.71)
	High	4.05 (0.87)	4.63 (0.63)
		$t(182)=8.01, p<.001$	$t(182)=1.63, p=.105$
Religious Responsibility	Low	2.77 (0.90)	4.54 (0.57)
	High	4.21 (0.74)	4.57 (0.75)
		$t(182)=11.76, p<.001$	$t(182)=2.19, p=.827$
Intrinsic Motivation	Low	2.96 (0.96)	4.46 (0.70)
	High	4.01 (0.95)	4.65 (0.62)
		$t(182)=7.42, p<.001$	$t(182)=1.90, p=.059$
Extrinsic Motivation	Low	3.09 (1.05)	4.53 (0.60)
	High	3.84 (1.00)	4.58 (0.73)
		$t(182)=4.92, p<.001$	$t(182)=3.61, p=.718$

The proposed structural equation models for the effects of religious orientation on preventive behaviors, in which PSA message engagement was assumed to have mediating roles provided a good fit to the data. Within the structural model, the message involvement towards the PSAs promoting pandemic rules was predicted to affect directly preventive measures and also mediates the individual religious influences. Total, direct and indirect paths in structural models were calculated according to unstandardized regression coefficients through the bootstrapping procedure that benefited 5000 subsamples with a %95 confidence interval. According to the initial mediation tests conducted by that goal, it was observed that attachment to God had direct effects neither on measures nor PSA immersion. Therefore, no mediation path regarding the message engagement was found in the hypothesized model. On the other hand, religious coping predicted message engagement and pandemic measures directly, while message engagement mediated its influences on measures. Further, the relationship between religious responsibility and preventive measures were mediated by PSA message engagement. To examine the aforementioned associations further, we conducted the above-hypothesized model independently but with message engagement as a mediator and preventive measures attitude as the dependent variable.

Table 3: Fit Index of the Structural Model Based on the Religious Attitudes

The goodness of Fit Index	Suggested Criteria	Construct Performance					
		RS	AGI*	RCS	RRS	RIM	REM
χ^2/df	≤ 5	3.646	3.731	4.654	3,802	3.767	3.593
RMSEA	≤ 0.80	0.041	0.122	0.041	0.054	0.032	0.049
CFI	≥ 0.90	0.960	0.810	0.911	0.095	0.965	0.953
NFI	≥ 0.90	0.931	0,761	0.973	0.913	0.927	0.922
GFI	≥ 0.90	0.942	0.840	0.920	0.994	0.906	0.946
AGFI	≥ 0.80	0.852	0.766	0.843	0.912	0.838	0.882

*Poor Model Fit

RS: Religious Symbols in PSA, **AGI:** Attachment to God Index, **RCS:** Religious Coping Scale; **RRS:** Religious Responsibility Scale; **RIM:** Religious Intrinsic Motivation; **REM:** Religious Extrinsic Motivation

Having tested the structural model, the proposed paths were almost entirely confirmed in a way that the religious attributes had an influence on pandemic rules and it was mediated by the religious involvement in the PSA. Out of six religious variables, five of them showed a good fit index that was above the suggested threshold. Accordingly, the findings of the structural analysis for the religious categories represented a well model fit with the data. The performance of the structural model for the Attachment to God variable revealed that the proposed pathways were unacceptable for any analyzes (Table 3).

The structural mediation analyses proved that the paths among religious attitudes, PSA engagement, and pandemic measures had a yielding characteristic mainly on message involvement, except for the attachment to God status ($\beta > 0.608$, $p < 0.001$). The religious responsibility attitude had the highest coefficient score on PSA engagement ($\beta = 0.802$, $p < 0.001$). This was followed by intrinsic motivations ($\beta = 0.735$, $p < 0.001$), religious coping ($\beta = 0.7112$, $p < 0.001$) and extrinsic orientation ($\beta = 0.608$, $p < 0.001$), respectively. While many religious status variables, on the other hand, predicted preventive measures within moderate coefficient levels ($0.576 < \beta \leq 0.472$, $p < 0.001$), attachment to God status was the exception ($p > 0.05$). In the light of these findings, it is obvious that religious perspective predicted preventive behaviors and was mediated by message engagement. According to the statistical results, it is very likely to state that the structural paths of all variables except AGI were confirmed (Table 4).

Table 4: Regression Weights Based On the Mediation Path Analysis

Predictors	PSA Engagement	Measures Attitude
	β/SE	β/SE
AGI (c path)		0,088/0.097
Total Effect (R^2)		0.252
AGI (a path)	0.246/0.159	
R^2	0,013	
AGI (c' path)		0.-067/0.094
Engagement (b path)		0.632**/0.044
R^2		0.538
Indirect Effect (significance)		0.155 (-0.65 - 0.396)
Religious Coping (c path)		0.518**/0.062
Total Effect (R^2)		0.276

Predictors	PSA Engagement	Measures Attitude
Religious Coping (a path) R ²	0.712**/0.067 0.384	
Religious Coping (c' path) Engagement (b path) R ²		0.114/0.063 0.568**/0.054 0.545
Indirect Effect (significance)		0.404** (0.273-0.539)
Responsibility (c path) Total Effect (R ²)		0.576**/0.058 0.353
Responsibility (a path) R ²	0.802**/0.059 0.548	
Responsibility (c' path) Engagement (b path) R ²		0.144**/0.068 0.538**/0.061 0.504
Indirect Effect (significance)		0.431** (0.300-0.580)
Intrinsic Motiv. (c path) Total Effect (R ²)		0.472**/0.067 0.214
Intrinsic Motiv. (a path) R ²	0.735**/0.069 0.381	
Intrinsic Motiv. (c' path) Engagement (b path) R ²		0.017/0.065 0.620**/0.055 0.537
Indirect Effect (significance)		0.456** (0.335-0.580)
Extrinsic Motiv. (c path) Total Effect (R ²)		0.480**/0.91 0.133
Extrinsic Motiv. (a path) R ²	0.608**/0.104 0.156	
Extrinsic Motiv. (c' path) Engagement (b path) R ²		0.116/0.072 0.599**/0.047 0.544
Indirect Effect (significance)		0.364** (0.235-0.486)

**p<0.001

4. Conclusion

The current study employed a combined framework to foresee the attitudes towards COVID-19 preventive measures through the use of sacred figures in a PSA and individual religious perspectives. Even though many influences were leading to a rationale that explains to adhere the pandemic rules as wearing a mask, social distance, and personal hygiene, religiosity could be an exceptional issue rather than a health-related concern. Accordingly, this paper suggested that the associations among individual religious approaches, a PSA message as a stimulus that induces adhering to pandemic rules and employing sacred symbols as an appeal within the message might lead to a behavioral attitude. During the COVID-19 pandemic, people reacted uncommonly to message stimuli and had different attitudes and behaviors. In the light of this, the promotion of the preventive rules which are unfamiliar so far has been investigated from a religious perspective and the performance of the sacred symbols has been tested.

The use of religious figures in PSAs and individual religiosity becomes evident to have a significant influence in promoting COVID-19 preventive measures. Further, there is strong evidence to propose that regardless of levels of individual religiosity among participants, a very high mean of preventive measures attitude has been revealed. This means that it is required to claim that both the use of sacred figures as an appeal and individual religious perspectives are influential in the rise of social sensitivity towards pandemic reactions. While participation in the preventive measures did not vary according to religious levels, it caused a noticeable difference especially in PSA message engagement among individuals who are highly and lowly involved in religious concerns. While this finding supports the studies carried out on the use of religious figures in ads, it shows that an uncommon message stimulus might work in promoting COVID-19 measures.

Not surprisingly, the proposed models revealed that the religious framework and sacred symbols lead a strong motivation towards message engagement, as well. A similar motivating force for measures was also associated with individual religiosity. All constructs, except Attachment to God, significantly predicted attitudes towards COVID-19 measures. The findings revealed that Attachment to God as an individual comprehension of the sacred ties has no influential power in following the preventive measures. It has been found that believing in God or believing in prophets or teachings did not motivate one to avoid a

source of health concern. The notion that distinguishes Attachment to God from other religious perspectives in this research model might also explain why this variable did not predict preventive attitudes and PSA engagement. Attachment to God is all about identifying God as the individual's primary and foremost abutment. Thus, Attachment to God is a way of approaching and establishing bonds with God by evaluating him with feelings of safety and fear. In addition, the research instrument, which aims to measure Attachment to God, consists of two basic subscales. Subscales of "Avoidance" and "Anxiety" were integrated by selecting 10 items to be compatible with the scope of the research, and it was aimed to explain the individual's closeness to God with a single variable. However, the measurement tool consisting of mixed items was insufficient to predict PSA engagement and attitudes towards preventive rules.

There appeared to be a greater engagement for the ad with the religious symbols which means the viewers had mentally and emotionally involved in the PSA message. Furthermore, individuals declared positive attitudes to adhere to pandemic rules after being exposed to the PSA. These results revealed that there was a strong link between the pandemic measures-themed advertisement containing religious symbols and the effectiveness of the message. Although health concerns are the primary motivation to comply with COVID-19 measures, this study demonstrated that religious attitudes and sacred figures could transform into a behavioral stimulus as a message attribute. In this context, PSA engagement might be considered consequential as the individual internalized the arguments in the ad and created emotional bonds towards the message. Sacred figures that stimulated individual religious sentiments also brought positive attitudes towards a public service ad. Although individual religious orientation levels were significant on measures attitudes, PSA message engagement predicted behavioral attitudes with the same intensity and mediated the effect of religious perspective.

Yet, these inferences should be considered within the boundaries of the research. The convenience sample was limited to the younger individuals who were mostly college students between the age of 20-25, requested to review their attitudes when they were exposed to a PSA message with religious symbols. Almost identical means of the engagement scores for lower and higher levels of religious attitudes could have arisen from that reason. On the other hand, the perceived pandemic threat for the experiment participants might have been lower due to the young sample. Undoubtedly, this condition might be considered as the

necessity to select a more appropriate sample for the study in which the effects of sacred symbols and individual religious differences on message engagement were investigated. Furthermore, the experimental conditions could also have influenced the responses of the participants including being exposed to the PSA message. PSA stimulus applied in online settings could not have as much effect on young individuals as a real-time advertising stimulus.

It is very likely to reach similar results among most of the samples influenced by the COVID-19 pandemic. Therefore, the findings of the current research ensure the initial insights towards the COVID-19 message engagement benefitting sacred figures and individual religiosity. Advertising communication scholars and professionals need to appraise pervasive religious attitudes and using sacred symbols not only in promoting products and services but also to incite adhering to pandemic rules. These findings might be expected to guide the professionals through the planning of the PSA design and measuring the results of the ad campaign. In addition, the existing paper could be the onset of research to comprehend how religious factors might be employed to boost individuals' compliance with the rules about extraordinary situations such as the COVID-19 pandemic.

Creating desirable attitudes in promoting a social behavior might be linked to stimulating the cognitive and emotional cues through the PSA message. This supposition needs to be tested by future studies. Testing the impacts of cognitive and emotive paths of the religious figures in PSA content on individuals' perceptions of being congruent to the pandemic rules becomes essential to boost the general influence of the results. Besides, the present study investigated individuals' closeness to the sacred figures through their religiosity. The cognitive and emotional consequences of sacred cues on participants, regardless of individual religious orientations, might be explored in detail by future studies in terms of some key persuasion concepts. Elaboration Likelihood Model (ELM), Extended ELM, persuasion resistance, transportation model, flow and being hooked concepts, and the viewers' involvement in the message are some of the key concepts that explain the favorable attitudes towards the desired social behaviors. As a result, this paper asserts that using sacred figures might require consideration of some key individual religious orientations to a socially desired behavior. In this context, the current study might serve as an onset for further research for practitioners and scholars to apprehend the role of religiosity in promoting PSA goals.

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CHAPTER XV

STYLISTIC ANALYSIS OF A MIXED-MODE NARRATIVE: ALICE MUNRO'S "IN SIGHT OF THE LAKE"

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1. Introduction

It is a fact that an entire novel or a passage of a narrative text may have characteristics of more than one narrative situation resulting in a dynamic or mixed-mode narrative situations. The prevailing phenomenon is the “authorial-figural narration” that contains a figural medium, an internal focalizer in addition to an authorial narrator.

One example of this kind of texts is a short story called “In Sight of the Lake” written by Nobel-prize-winning Canadian writer Alice Munro. The story is about a dementia patient Nancy, and her trip to the office of a specialist for her mental examination. What follows is Nancy’s experience at Lakeview Rest Home. Through the end of the story, she feels increasingly paranoid as the outside light fades. When she realizes that all the building doors are locked, she starts to panic and feels suffocated. However, she still hears a voice inside telling her to calm down. When this is interrupted by the voice of a staff member of the rest home (Sandy), readers suddenly realize that Nancy is a patient lying at the Lakeview Rest Home, and all the events actually happen in her dream that eventually turns into a nightmare.

The story begins with the authorial narration of a heterodiegetic narrator and then is replaced by the figural medium to provide a first-hand account. After

presenting the story's events through the eyes of internal focalizer Nancy, the authorial narrator assumes the position again at the end of the story. As a matter of fact, it¹ does not fully resign during Nancy's focalization, it occasionally interrupts her. So, there is no clear-cut borderline between authorial and figural narrative situations in the story. The authorial narration shifts almost seamlessly into the figural one that readers cannot realize all the events Nancy experiences actually happen in her dream. Marlene Goldman writes appositely on this feature of the story:

'In Sight of the Lake' effects a vertiginous shift in perspective that plunges the reader into the world of dreams. In the end, the reader returns to 'the real world' only to realise that she is still within a dream; the ending of the story, which locates the reader in the nursing home, is still part of Munro's fiction. (Goldman, 2017: 296, emphasis in original)

Thus, with the help of various tools such as deixis, techniques of speech and thought presentation, and *verba sentiendi*, the overarching aim of this study is to analyze conspicuous stylistic features in Alice Munro's mixed-mode narration "In Sight of the Lake". The story is reproduced in the present study with sentences numbered for convenience. Moreover, throughout the article, the theoretical discussion will accompany the analysis of extracts from it.

2. Stylistic Analysis

In his seminal book *A Theory of Narrative*, F. K. Stanzel develops a typology of different forms of narrative situations: The authorial narrative situation identified by the dominance of external perspective, the figural narrative situation by the reflector mode, and the first-person narrative situation (Stanzel, 1986: 55-56) by "the identity of the narrator and the characters' realms of existence." (Cohn, 1981: 164)

Manfred Jahn defines the term "authorial narrative" as:

An authorial narrative is told by a narrator who is absent from the story, i.e., does not appear as a character in the story. The authorial narrator tells a story involving other people. An authorial narrator sees the story from an outsider's position, often a position of absolute authority that allows her/him to know everything about the story's world and its characters, including their conscious thoughts and unconscious motives. (2017)

¹ For Mieke Bal, the narrative agent or narrator, whether linguistic or visual or cinematic, is a function, not a person. (2017: 11) Following Bal, Munro's narrator will be referred to as "it" throughout the present study.

In the same vein, Monika Fludernik, in her *An Introduction to Narratology*, explains this type of narrative situation:

Many authorial narratives dispense with an intrusive narrator and are only identifiable as authorial because they present a bird's-eye view of the fictional world, offer an extensive introduction to the story world or are capable of depicting the thoughts of several protagonists. They are authorial by default, since the story is not focalized consistently from the perspective of one of the characters. (2009: 143)

Thus, in the wake of Stanzel's typology and definitions given by Jahn and Fludernik, the knowledge privilege exhibited by the narrator in the opening of the story confirms that Munro's story is a heterodiegetic narrative involved in the typical authorial narrative situation. It, from an external perspective, offers a wealth of reader-friendly expository information about the main character Nancy:

- (1) A woman goes to her doctor to have a prescription renewed. But the doctor is not there. It's her day off. In fact the woman has got the day wrong, she has mixed up Monday with Tuesday.

This is the very thing she wanted to talk to the doctor about, as well as renewing the prescription. She has wondered if her mind is slipping a bit.

"What a laugh," she has expected the doctor to say. "Your mind. You of all people."

(It isn't that the doctor knows her all that well, but they do have friends in common.)

Instead, the doctor's assistant phones a day later to say that the prescription is ready and that an appointment has been made for the woman – her name is Nancy – to be examined by a specialist about this mind problem. (Munro, 2012: 217)

Direct Speech in which reported clauses are usually enclosed within the quotation marks, and reporting clauses are placed before or after the quoted content is another remarkable stylistic choice that Munro makes consistently in the story. Instead of the tense shift in the reporting clauses, Munro, as in the rest of the story, prefers to use the simple present tense because she adopts the informal language, thereby makes the direct speech more vivid and dramatic and gives the narrator control over the characters' speeches or actions. However,

as is realized at the end of the story, sentences introduced as Direct Speech are actually Direct Thought (DT).

In addition to DT, the narrator reminds readers of its presence through some other techniques: One technique Munro avails herself of is the Narrative Report of Speech, a mode used as a tool to compress a sequence of extended dialogue. It implies that "speech or thought has taken place but without offering any indication or flavour of the *actual* words used." (Simpson, 2004: 32, italic in original) For example:

(2) She explains about not being sick, just having an appointment tomorrow, and not wanting to be running around in the morning looking for the place. (Munro, 2013: 225-26)

The narrator also interrupts the text with some explanations and comments that appear within brackets:

(3) (It isn't that the doctor knows her all that well, but they do have friends in common.) (Munro, 2013: 217)

(4) (or she – like most people of her age she does not automatically allow for that possibility) (Munro, 2013: 220)

(5) (This once she has put herself out of earshot.) (Munro, 2013: 221)

However, as the story unfolds, there is a gradual shift in narrative orientation because what readers have is actually a figural narrative in the present tense, with Nancy as the focalizer. All distinct voice-indicating emotional expressions that appear during the course of, as we realize at the end of the story, the dream more likely relate to the internal focalizer than the narrator.

To illustrate this further, the heterodiegetic narrator tries to reproduce Nancy's dream in an internal focalization. It effectively hides itself or its voice behind Nancy's voice, (declined) perceptions, or (un)consciousness. Stanzel calls this combination of the heterodiegetic narrator and internal focalizer figural narrative situation.

Jahn's definition of this second type of narrative situation also confirms this feature of the story:

A figural narrative presents the story's events as seen through the eyes of (or: from the point of view of) a third-person internal focalizer. The narrator of a figural narrative is a covert heterodiegetic narrator presenting

an internal focalizer's consciousness, especially his/her perceptions and thoughts. Because the narrator's discourse will preferably mimic the focalizer's perceptions and conceptualizations the narrator's own voice quality will remain largely indistinct. One of the main effects of internal focalization is to attract attention to the mind of the reflector-character and away from the narrator and the process of narratorial mediation. (2017)

While creating a story of this nature, Munro enables readers to track Nancy's thoughts via Free Indirect Thought (referred to as FIT from now on), a device employed to signalize especially figural narration or a "midway between the authorial and the figural narrative situations". (Cohn, 1981: 172) Not only does FIT provide readers with Nancy's thoughts, but also it suggests that the narrator and Nancy's thoughts blend smoothly. Munro purposefully uses this duality in the narratological structure to foster intimacy between Nancy, the narrator, and readers. Examples include:

(6) It isn't mind. It's just memory (Munro, 2013: 218)

(7) The evening is beautiful. But when she turns off the highway, driving west, she finds that the sun is just low enough to shine into her face. If she sits up quite straight, however, and lifts her chin, she can get her eyes into shadow. Also, she has good sunglasses. She can read the sign, which tells her that she has eight miles to go to the village of Highman.

Highman. So that's what is (sic) was, no joke. Population 1,553.

Why do they bother to put the 3 on?

Every soul counts.

She has a habit of checking out small places just for fun, to see if she could live there. This one seems to fill the bill. A decent-sized market, where you could get fairly fresh vegetables, though they would probably not be from the fields round about, okay coffee. Then a Laundromat, and a pharmacy, which could fill your prescriptions even if they didn't stock the better class of magazines. (Munro, 2013: 218-219)

(8) But wouldn't she have put their minds at ease by this time, stopping and asking them, Please, can you tell me, where is the doctor's house? (Munro, 2013: 221)

As clearly seen, there is no temporal shift in extract (6), however, it can still be treated as FIT because it fits perfectly with Nancy's denial of her dementia.

Within extract (7), the sequence beginning “Highman. So that’s what is (sic) was, no joke. Population 1553” signals a shift into the (un)conscious thought processes of Nancy as she drives through the street. Although there is no shift in verb tense, this sequence can also be treated as an example of FIT due to its content and context. “Why do they bother to put the 3 on?”, for example, is very likely a representation of thought going through Nancy’s head, not the narrator. Besides, the retention of evaluative expressions such as “a decent-sized market” and “the place has seen better days” and the interjection “okay” haul this example over to the internal focalizer. The temporal shift in the first part and the word “please” in extract (8) also push it away from the narrator towards Nancy. The absence of a temporal shift in examples (6) and (7) contributes to the feeling of immediacy, and it links Nancy’s (dream) thoughts to the present without establishing any time-lapse between the situation described and readers.

Another feature of stylistic interest is that Munro utilizes what the Russian linguist and narratologist Boris Uspensky (1973: 85) calls *verba sentiendi* to denote her feelings, thoughts, and perceptions, as embodied in Michael A. Halliday’s transitivity model, particularly in mental processes and uses verbs such as “see”, “feel”, and “think”, pertinent in example (9):

(9) She goes up to one of these possibly accessible doors and knocks, then tries the knob and cannot budge it. Locked. She cannot see through the window properly, either. Close up the glass is all wavy and distorted.

In the door directly opposite there is the same problem with the glass and the same problem with the knob.

The click of her shoes on the floor, the trick of the glass, the uselessness of the polished knobs have made her feel more discouraged than she would care to admit.

She does not give up, however. She tries the doors again in the same order, and this time she shakes both knobs as well as she can and also calls out, “Hello?” in a voice that sounds at first trivial and silly, then aggrieved, but not more hopeful.

She squeezes herself in behind the desk and bangs that door, with practically no hope. It doesn’t even have a knob, just a keyhole.

There is nothing to do but get out of this place and go home.

All very cheerful and elegant, she thinks, but there is no pretense here of serving the public. (Munro, 2013: 231)

Through FIT and engaging readers in Nancy's cognitive field, Munro makes readers immerse themselves in her feelings, thoughts and perceptions. Therefore she aims to create empathy, which ultimately leads to an awareness of one of the important diseases of the age, that is, dementia.

A close stylistic analysis has also revealed that, through some deictic² markers, locative expressions, adjuncts that express location and spatial relationship, Munro enables readers to shadow Nancy throughout her trip to the rest home and when she is in the rest home building. So, they can feel inside her excitement for finding the doctor's office and reaching her appointment in time. Another case in point appears when Nancy sticks within the building and feels suffocated. It is that moment when readers also feel they are stuck there with her, and they feel the same tension. If readers feel what she feels, think what she thinks, or perceive what she perceives, they will be highly affected by Munro's surprise ending and show more sympathy towards Nancy. Examples include but not limited to:

turns off the highway
 driving west
 into her face
 eight miles to go to the village of Highman
 walks up to the door
 gets inside
 goes up to
 go home
 through the window
 in the door directly opposite
 on the floor
 behind the desk

The foregoing discussion has intimated then that Munro's story accommodates an authorial narrator who manifests itself at the beginning and end of the story, also identified with its parenthetical interruptions throughout Nancy's focalization of her dream. This kind of structure enables the authorial narration to shift almost seamlessly into the figural one and fits perfectly with the explanations made by Stanzel:

² **deixis; deictic; deictic shift theory (DST)** (1) From the Gk 'pointing' or 'showing', deixis in linguistics refers generally to all those universal features of language which orientate or 'anchor' our utterances in the context of proximity of space (here v. there; this v. that), and of time (now v. then), relative to the speaker's viewpoint. (Wales, 2011: 105)

[...] On the one hand, a reduction of the narrative and an increase in the dialogue parts of the narrative text occur; on the other hand, there is a displacement of the authorial reportorial narrative of events of the outer world by figural presentation of events of the inner world, or the reflection of events of the outer world in the consciousness of a figural medium or reflector-character who assumes the transmittal function of the authorial teller-character. These two phenomena appear side by side or successively in the diagram of the typological circle, but in the individual work they often overlap or appear within each other like a Chinese box puzzle. (1986: 187)

Jahn, too, offers a definition of this interplay between authorial and figural narrative:

In authorial-figural narration there is both an authorial narrator and a figural medium. While some stories begin with an authorial exposition and continue as figural narration (e.g. most of the stories in James Joyce's *Dubliners*), some others begin and end with authorial narration, and in between they have figural narration in which events are presented from an internal focalizer's point of view. (2017)

The narrative situation also implies three divergent levels of narration in the story: The highest level told by an omniscient narrator covers the fictional present when Nancy is found out to be in the rest home and wakes up from her dream with her caregiver's interruption to put on her nightie, and when she talks to her. The middle level concerns an allusive account of Nancy's past, how and when she has come to the rest home, relayed through her eyes and perceptions, and it leads up to her dementia. However, this level is debatable because it may be the work of her dream or mere delusion³ that penetrated her unconscious. The deepest level of narration is different from the other two levels because it encompasses what Nancy sees in her dream (universe). The movement from the deepest level to the highest level occurs at the end of the story, with Sandy's interruption.

It is also interesting to note that, despite these different levels of narration, Munro presents all the events, whether told by the narrator or focalized by Nancy, in chronological order. Moreover, she uses the present tense in the entire

³ Delusion is defined as "a belief that is clearly false and that indicates an abnormality in the affected person's content of thought" (*Understanding delusions*) and one of the important symptoms of the sixth stage of dementia. (*Stages of Dementia*)

story: in Nancy's dream and the text-actual world, so readers cannot realize that they are reading Nancy's dream-thoughts until they see the end.

Another feature of stylistic interest that causes readers not to notice this fictional reality is that Munro describes the places that appear during Nancy's trip to the Lakeview Rest Home by presenting small, even seemingly unimportant details to make them as imaginable as possible. So, they do not have the slightest doubt about the (fictional) reality of events and places.

As I have noted in passing, apart from the name Nancy, readers have the honour of learning a second proper name at the very end of the story. However, Nancy's dementia causes the narrator not to know the staff member's name (Sandy), and to give it when Nancy can see it on her brooch:

(10) There is a woman here whose name is Sandy. It says so on the brooch she wears, and Nancy knows her anyway. (Munro, 2012: 232)

Further to that, other characters in the story do not have names. Munro prefers to refer to them as "woman" or "man. For example:

(11) A woman who might be too old to be his mother – but who is very trim and lively looking all the same – is standing out in the street watching him. She is holding on to a skipping rope and talking to a man who could not be her husband – both of them are being too cordial. (Munro, 2013: 222)

(12) A man has come along one of the paths, carrying a pair of shears. (Munro, 2013: 224)

(13) The man with her takes no notice of them, but his voice has dropped. (Munro, 2013: 227)

It is indeed quite plausible not to know the woman and man's name mentioned in example (11) because Nancy sees them on the street. However, she should have known the other man's name in examples (12) and (13) because she talks to him for a while, and he helps her to find the doctor's office.

Munro may adopt this deictic element that denotes a distal relationship because names, as well as places, have disappeared from Nancy's mind, and in connection with this, although the omniscient narrator keeps company with Nancy and conveys all the events and even her unconscious thoughts, it cannot find any trace for them in her effaced mind.

Concerning this point, Fludernik avers that:

The omniscience of the authorial narrator is also a controversial issue. Clearly, the narrator is not all-knowing, and certainly not all-telling. Authorial omniscience is highly selective: it includes reading the minds of some characters but not of others; it holds back information in order to create suspense; it produces ellipses that will be filled later, and so on. In fact, many authorial narrators admit to not knowing things, or play with the topos of withholding information. (2009: 127)

Munro's stylistic choice is indeed a pertinent example of what Genette calls "paralipsis". According to Katie Wales, it means the "giving of less information than the norm of focalization would seem to require. (2011: 301) As for Jahn's explanation of the term "paralipsis", it is as follows:

An infraction caused by omitting crucial information; saying too little; typically, an authorial narrator pretending "not to know" what happened in her/his characters' minds, or what went on at the same time in another place, or distortively censoring a character's thought, or generally pretending to be restricted to ordinary human limitations. (2017, emphasis in original)

Likewise, Jose Angel Garcia Landa defines the term as: "[...] Genette's paralipsis, an information which suddenly reveals itself to have been skipped while it should have been available under the existing mode of presentation." (2005)

Doubtless then, the underlying reason why the omniscient narrator play ignorant is to reflect all the events and people from Nancy's perspective, particularly to create empathy and make readers realize how a dementia patient feels or perceives the world around him or her.

Special mention should be made here that instead of explicitly stating, Munro prefers to imply that Nancy suffers from dementia symptoms. She is in the early stage (fourth stage) in the dream (universe) because she denies the symptoms (Stages of Dementia):

(14) It isn't mind. It's just memory. (Munro, 2013: 218)

However, in the mild stage (sixth stage) in the fictional now because she needs assistance with dressing (Stages of Dementia):

(15) What are we going to do with you?” says Sandy. “All we want is to get you into your nightie... (Munro, 2013: 232)

Before concluding the analysis section of the present study, it is worth dwelling on the opening sentence of the story “A woman goes to her doctor to have a prescription renewed.” (Munro, 2013: 217). When readers read this very first sentence, as Goldman also stated, they highly likely have a feeling that they will read a joke about a woman:

The opening sentence of ‘In sight of the lake’ – ‘A woman goes to her doctor to have a prescription renewed’ – relies on the diction and cadence of a joke, including the deferred expectation of a punchline. (2017: 294)

3. Conclusion

Upon a close reading, it appears that, at the beginning and end of her story, and occasionally in Nancy’s dream, Alice Munro employs an omniscient third-person narrator speaking in the present tense. This narrative situation is called authorial by Stanzel. However, the paragraphs following the first sentences slide so smoothly from expository background information into a presentation of more concrete events and actions. More clearly, the dream is projected through the eyes and consciousness of a character, a reflector figure, Nancy, and her viewing position is created with some locative expressions and deictic markers. When an authorial narrative jells into a figural one in this way, it is called mixed-mode narration or sometimes dynamic narration.

Although the story is composed of both authorial and figural narrative situations, there is no clear boundary between these two. To put it baldly, Munro intertwines them so ingeniously that readers cannot detect the events that befall Nancy actually happen in her dream.

It would not also be wrong to say that with her surprise ending and telling only one patient’s tragic story, Munro wishes to make readers feel empathy and sympathy for all dementia patients and create awareness about this disease. Some stylistic features such as employing an internal focalizer and presenting her thoughts through FIT and *verba sentiendi*, and using DT and NRT when the narrator dominates the process of mediation help her achieve this goal.

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CHAPTER XVI

PARENTING PRACTICES AMONG MOTHERS: THE PREDICTIVE ROLE OF CHILDBEARING MOTIVATIONS AND BURNOUT

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1. Introduction

Parenting practices are examined under the field of Clinical Psychology due to their direct relationship with well-being of children and adults. Despite parenthood is associated with fulfillment and happiness in many cultures (Arikan et al., 2020), parental burnout may occur due to accumulated parenting burden, stressors, and challenges (Mikolajczak et al., 2018). Although interest in parental burnout has been growing, there are still unexamined antecedents and consequences.

In Turkey, by taking responsibility for household chores and childcare, mothers employ parenting practices more often than other family members (Arikan et al., 2020). Even though the higher risk of maternal burnout is foreseen, research is limited. Generally, these studies have focused on parents of children with disabilities (e.g., Aydın, 2017; Ardiç & Olcay, 2020) from broader age categories, such as 2 to 15 (Çengelci, 2009) or 4 to 30 (Ersoy & Buluş, 2019). However, middle childhood includes milestones such as

forming body image, the appearance of physical differences and growth, developing learning and verbal expression skills, and peer interactions (Kaneshiro, 2019). Therefore, focusing on mothers who have children of this age group was considered crucial because of its burnout risk due to difficulties.

On the other hand, while the leading factors of maternal burnout have received much attention (e.g., Séjourné et al., 2018; Lebert-Charron et al., 2018), there is little research on the effects on children, especially on the parenting practices side research has been only focusing on neglect and abuse (e.g., Mikolajczak et al., 2018; Brianda et al., 2020; Hansotte, 2021). As this study seeks to examine the effects of maternal burnout on parenting practices from a broader perspective, it is valuable for future studies on the outcomes of maternal burnout regarding children.

Parental roles and standards are formed not only during parenthood but also before becoming a parent (Nachoum et al., 2021), and these parental motives are believed to play a significant role in parenting practices. Additionally, these standards may turn into parenthood expectations that lead to unattainable perfection and increase the risk of parental burnout (Kawamoto et al., 2018; Stănculescu et al., 2020; Sorkkila & Aunola, 2020).

This study intends to interpret the motivations for mothering before parenthood, burnout that may have been perceived during motherhood, and their detrimental impact on parenting practices which are critical to the mother, the family, and the child. As a result, the findings may help reduce the literature gap on antecedents and consequences of maternal burnout.

2. Literature Review

2.1. Parenting Practices

Parenting practices are observable behaviors and tools aligned with parental goals, influence a child's level of socialization adjustment (Kahraman et al., 2017), and significantly predict child behavior, including problematic ones (Stormshak et al., 2000). Baumrind (1971) investigated parenting patterns and developed the concept of parenting styles based on the level of authority and warmth reflection toward the child, which includes attitudes toward various practices as well as other facets of parent-child interaction, such as tone of voice, body gestures, interest, and temperament. Darling and Steinberg (1993) distinguished parenting

styles and practices, concluding that styles reflect general attitudes, emotional and psychological approaches, whereas practices are context and socialization goal-oriented. Accordingly, practices mirror the parenting style and whereas the style indirectly affects child outputs, parenting practices have a direct influence (Darling & Steinberg, 1993).

Although many different practices, such as monitoring, punishment, engagement, consistency, warmth, discipline, and reactivity have been classified worldwide (e.g. Strayhorn & Wiedman, 1988; Frick, 1991; Arnold et al., 1993), in Turkey, the number of metrics for investigating practices of parents with primary school-aged children was quite limited. Kahraman et al.'s scale (2017), which has six sub-scales, was used to assess the mothers of this group of children in the present research. The sub-dimensions are (1) *positive problem solving* which reflects parents' constructive problem-solving techniques and effective communication style with their children in contrast to (2) *negative problem solving*, which indicates parents' inadequate problem-solving strategies, such as showing aggression or making the problem seem more complicated; (3) *over-reactivity* which constitutes unreasonable negative parental responses including physical violence and extreme discipline; (4) *consistency*, which reflects if the rules that children are expected to follow are applied by parents as planned; (5) *interaction*, which examines parental activities with children as well as parent's presence and interest in the activities; (6) *functional family*, which measures the consistency of functioning between family members, such as adherence to household rules or maintaining a supportive climate among members.

2.2. Sociodemographic Variables Related to Parenting Practices

The total number of children, child gender, and age are used as the control variables of this study since they are child-related factors that have a role in parenting practices and may affect both parent and child behavior (Amato & Fowler, 2002). The child number was stated as an important factor that may lead to variations in parenting practices (Yavuzer, 1990) and Fox et al. (1995) discovered that mothers with more than one child living in the same house were less likely to use positive practices. However, Aydoğdu and Dilekmen (2016) found only that parents with a single child tend to be more overprotective in a sample consists of parents with children ages 2 to 6. Child gender also differs practices on the level of harshness (McKee et al., 2007), responses to emotional

expressions of early aged children (Chaplin et al., 2005), and controlling (Endendjik et al., 2017). Boys are concluded as receiving more controlling and harsh practices and less response toward their emotions, especially from their fathers. These differences were explained by Social Role Theory (Eagly et al., 2000) which states that gender roles based on societal norms produce different expectations and behaviors from different gendered children and because of that, the difference in parenting practices arises and Gender Schema Theory (Bem, 1981) which emphasizes that this difference is related to parents own gender-related stereotypes and beliefs which are socially constructed. Practices can also show variations regarding the child's age. Parents seem to spend less time with their children as well as children depend more on their peers than parents (Lam et al., 2013). They are showing less intimacy, and being less rewarding (Van Holland De Graff et al., 2018) across their children's transition of middle childhood to adolescence. However, they give more autonomy to the child as s(he) grows (Roche et al., 2014).

2.3. Parental Burnout

Being a parent entails a variety of day-to-day responsibilities as well as managing sudden or chronic stressors. If parents do not have adequate tools to manage them on a regular basis, they would be at risk of parental burnout because of an imbalance in support-stressor balance (Mikolajczak et al., 2018). Roskam et al (2017) highlighted that it is a distinct mental health problem than depression, stress, or work-related burnout. It has been concluded that mothers are at greater risk compared to fathers because they are considered primary caregivers and have higher levels of mental load (Robertson et al., 2019) and responsibilities within the family that include not only physical demands but also psychological demands (Baruch et al., 1987; Arikan et al., 2020).

Parental burnout involves four dimensions: (1) *Excessive emotional exhaustion related to parenting role*, particularly when waking up in the morning and thinking of "having to face" another day with the children and feeling emotionally drained by the parenting routines; (2) *emotional detachment from the children*, resulting in becoming less and less responsive to parenting, performing poorly towards responsibilities; (3) *loss of enjoyment of parenting and feeling fed up*, and finally, (4) a sense of *contradiction between the image of ongoing and past parenting* (Mikolajczak et al., 2018; Arikan et al., 2020).

Parental burnout has serious negative consequences for parents such as suicide, or addiction for the ways of escaping thoughts (Mikolajczak et al., 2018) but also for children due to the increase in parental neglect and violence (Mikolajczak et al., 2019).

2.4. Parental Burnout and Parenting Practices

Burned-out parents have been demonstrated to be more inclined to engage in harmful practices such as neglect, verbal or physical violence, even if they feel guilty afterward (Mikolajczak et al., 2018). The primary causes were concluded as higher levels of stress (Holden & Banez, 1996) and emotional distancing because parents who perceive higher levels of burnout displayed more neglect and violence than parents who are also exhausted but not yet emotionally disengaged (Hansotte et al., 2021). Emotional detachment is also connected to the implication of less stable parenting practices in the first six years of childhood (Dallaire et al., 2005).

Moreover, exhaustion has been associated with the deterioration of cognition and resources which are necessary to provide more constructive responses to the child's behavior, resulting in overreactions (Lesniowska et al., 2016) and impulsivity towards the child, as a result of both parental stress and incompetence (Ward & Giallo, 2008; Cooklin et al., 2012). Inconsistent discipline is another activity that has been linked to burnout (Mikolajczak et al., 2017). This relationship may be because mothers should overcome exhaustion and keep track of the child's behavior with patience to act consistently (Ceder, 2020), which becomes more challenging for those who perceive burnout. Another dimension of burnout, loss of enjoyment in parenting, was correlated with less adaptive, more negative parenting practices due to incompetence and intolerance (Lerner & Galambos, 1985; Zimmer-Gembeck et al., 2015).

2.5. Childbearing Motivations

Childbearing motivations are classified as positive and negative. They are not opposed, but they reflect being intimate with or distant from the concept of parenting (Miller, 1995). However, motivations are not limited to the decision itself. There are multiple other forms that enhance being supportive or reluctant about the decision, such as lineage continuity, emotional attachment, care in later life as the positive ones and social strain, economic difficulties, and

physical concerns as the negative ones (Cassidy & Sintrovani, 2008; Guedes et al., 2013).

2.6. Childbearing Motivations and Parenting Practices

Deciding to be a parent because you like caring for children and becoming a parent to satisfy societal and parental standards or enhance the couple relationship may result in differences in parenting (Nachoum et al., 2021). This is because the internal motivations such as personal fulfillment tend to consider pleasure or interest in the preferred activity itself more, and wherein the activity is identified as necessary and consistent with the individual's values. In contrast, external motivations, such as socio-economic aspects, are the results of outside manipulation, typically followed by incentives or punishment, and wherein the individual either tries to escape from the feelings of guilt and shame or receive acceptance of the external world (Ryan & Deci, 2017; Nachoum et al., 2021).

The developmental standpoint indicates that prenatal childbearing motivation may indirectly affect the later socioemotional behaviors of children, and early parenting style may be the connection between the two (Nachoum et al., 2021). Adopting more internal motivations is positively correlated with parental self-efficacy, maintaining supportive relationships within the family, and improving marital and personal quality of life, but negatively correlated with feelings of anxiety, unhappiness, guilt, and inadequacy (Gauthier et al., 2007; Brenning et al., 2015).

2.7. Childbearing Motivations and Parental Burnout

The positive motivations of having children are also facets and aspirations of imagined parenthood for would-be parents. Although they are aware of the pressures or costs experienced in parenting, they continue to internalize positive motivations as standards, which may feed unrealistic expectations. In the literature, this phenomenon is explained as people set perfectionist standards for parenthood due to cultural and societal emphasis on family and parental roles (Thompson, 2000; Chae, 2014).

As The Balances between Risks and Resources theory explained, the disparity in the equilibrium of meeting demands and expectations and the resources that are supposed to meet them cause parental burnout. The demands are classified as the risk factors in this theory since they may differ,

and parents may not necessarily be able to locate sources to meet them (Mikolajczak & Roskam, 2018). If we think of the unreasonable, “perfect” standards, they will be far more difficult to uphold and achieve because no perfect resources will be available. The reasons for having a child may become the demands themselves. Indeed, in many cultures, burned-out parents have susceptibility to perfectionism (Kawamoto et al., 2018; Stănculescu et al., 2020; Sorkkila & Aunola, 2020). While there is no direct evidence in the literature to support a correlation between childbearing motivations and burnout, many studies with infant mothers showed that the form of motivation predicts postpartum depression (Gauthier et al., 2010; Nachoum et al., 2021).

To sum up, due to parenting practices have a direct effect on the wellbeing of parents, this study aims to examine the predictive role of childbearing motivations and burnout among women during the COVID-19 pandemic.

3. Method

3.1. *Participants*

Participants consisted of 209 volunteer Turkish women. The inclusion criteria were being women and above 18, and had primary school children (6-13 years). Most of the participants were from Istanbul (74.2%), married (87.6%), university graduates (46.9%), and non-worker (53.6%).

3.2. *Measures*

Demographics: To obtain participants’ demographic characteristics, a self-report measure, which the researchers designed was used. Participants were asked their demographics such as age, education level, working status, total monthly income, additionally age and gender of their children.

Parenting Practices Scale (PPS): The Parenting Practices Scale (PPS) was developed by Kahraman et al (2017) to evaluate the parenting practices of parents with school children. The scale consisted of 52 items with six sub-dimensions, namely, negative and positive problem solving, functional family, over-reactivity, consistency, and interaction on a 4-point Likert scale (1= never, 4= always) ranging from the total scores of 52 to 208. A higher score demonstrated using more positive parenting practices. The overall Cronbach Alpha value of the scale was .91 and found .89 for this study.

Childbearing Motivations Scale (CMS): The original Childbearing Motivation Scale (CMS) was designed by Guedes et al (2013) and the Turkish version was adapted by Huseyinzade Simsek (2017). The scale consists of two sub-scales as negative and positive childbearing motivations. The negative childbearing motivations scale investigates why individuals did not want a child while the positive childbearing motivations scale investigates the importance of reasons for childbearing. Therefore, in this study, this sub-scale which consisted of 22 items with a 5-point Likert scale (1=least important, and 5=the most important) was used. The scale of positive childbearing motivations includes three sub-dimensions: Socioeconomic aspects, the couple relationship, and personal fulfillment. Cronbach Alpha value of the scale was .91, and in the current study, it reached .93 while all other sub-dimensions demonstrated an acceptable level of internal reliability with values of .76, .80, and .91. The scale's total score was not used since an overall score given by each mother will not show which kind of motivations they mainly preferred. For this purpose, total scores of each sub-dimension were calculated, and they were considered as three separate variables besides the rank order of each item for the mothers. The higher scores indicated that the motivation type was preferred more than others.

Maternal Burnout Assessment Scale (MBAS): The Maternal Burnout Assessment Scale (MBAS) was developed by Roskam et al. (2017) to assess maternal burnout. The Turkish version of the scale was adapted by Arikan et al (2020). The scale consisted of 23 items and four factors, namely, emotional exhaustion, contrast with previous parental self, feelings of being fed up, and emotional distancing on a 7-point Likert scale (0=never, 6=everyday). The overall Cronbach Alpha value of the scale was .91 for the Turkish adaptation and .94 for the current study. Cronbach Alphas of the sub-scales were .84 for emotional exhaustion, .80 for contrast with previous self, .55 for feelings of being fed up, which they improved by removing two items until .77, and .51 for emotional distancing which could not be improved. For the current study, values were at the acceptable levels as .88 for emotional exhaustion, .83 for contrast with previous self, .81 for the feeling of being fed up. However, it was .64 for emotional distancing. The higher scores received from this scale points to higher levels of burnout.

3.3. Procedure

After the ethical approval (Date: March 30, 2021) of the Ethical Board of Psychology Department, FMV Isik University, an announcement was shared via

social network sites with the inclusion criteria information. The questionnaires were administered through Google Forms. After the participants had checked a box to indicate consent, they were provided with the survey battery, which takes approximately 20 minutes. The data was collected during April 2021.

3.4. Data Analysis

Before analyses, all the measures were examined of data transfer, missing values, and fit between the distributions. After calculating all the scores, descriptive statistics were analyzed, and hierarchical regression analysis was performed. Among 234 people who consented to participate, 25 were excluded due to not meeting being a mother or child age criteria. Therefore, 209 Turkish mothers were retained for this study. The survey's forced-choice option was employed, which resulted in no incomplete data except four missing values in the demographics section.

4. Results

Beyond the sociodemographic variables (number of children) and variables related to children (child age and child sex), to see if burnout and childbearing motivations predict parenting practices, hierarchical multiple regression was conducted. It is aimed to determine the variables related to parenting practices. The variables were entered into three steps via the 'enter' method.

Sociodemographic variables (number of children) and child-related variables (child age and child sex) were added to the model as the first step. In the second step, while the childbearing motivations variable was added, burnout was added thirdly. Results were presented in Table 1. In the first step, variables explained 29% of the variance and the model was statistically significant ($F[3, 205]=6.59, p<.05$). While the number of children was found to be significant, neither the child's sex nor age were significant. In the second step, variables explained 35% of the variance and it was statistically significant ($F[3, 202] = 4.88, p<.05$). While socio-economic aspects predicted negatively, the other dimensions did not. In the third step, variables explained 47% of the variance and it was statistically significant ($F [4,198]=5.85, p<.05$). While contrast with previous parental self and emotional exhaustion sub-dimensions predicted negatively, the other dimensions did not.

Table 1. Hierarchical Multiple Regression Table

<i>Step</i>	<i>Predictor</i>	B	SE	B	P	R²	R²	F	p
						Change			
I						.29	.08	6.59	.00
	Number of child*	-4.12	1.18	-.24	.00				
	Child Sex	2.05	2.02	.06	.31				
	Age of child	-.60	.46	-.09	.19				
II						.35	.12	4.88	.00
	Socio-economic aspects*	-.41	.14	-.31	.00				
	The couple relationship	.15	.22	.06	.48				
	Personal fulfillment	.48	.30	.17	.11				
III						.47	.22	5.85	.00
	Feeling of being fed up	.80	.62	.19	.20				
	Emotional distancing	.08	.44	.01	.85				
	Contrast with previous parental self	-.70	.32	-.23	.03				
	Emotional exhaustion	-.57	.25	-.31	.02				

Note: *: $p < .005$

In addition to hierarchical multiple regression analyses, to examine the childbearing motivations, the items were ranked. According to the rank order of the childbearing motivations, the couple relationship sub-type items came in first, second, and third. The most important motivations for more than half of the women were “*Feeling the familial spirit*” ($n=133$, 64%) and “*Creating my own family*” ($n=126$, 60%) both of which were related to their nuclear families. Surprisingly, items belong to socio-economic aspects dimension, the

ones related to their extended families, such as “*Meeting my extended family’s expectations*”(n=130, 62%) or “*Ensuring my familial lineage*”(n=123, 59%) were voted as the least important by the majority of the respondents, in contrast to the items related to their nuclear family, which were located on the top. Personal fulfillment sub-type with internal motivations which were on their maternal instinct, moral obligation and creating a personality by childbearing followed the couple relations items on the top. On the other hand, there were no items from socio-economic aspects in the first six, and they were overwhelmingly selected as the least significant. In particular, the items of “*Making real a project of my partner*” (n=155, 74%) and “*Having a source of economic support*” (n=185, 89%) were voted as the least important motivations.

5. General Discussion and Conclusion

The study investigated the predictive roles of maternal burnout and childbearing motivations on parenting practices among Turkish women with primary-school-aged children. The results were partially consistent with the literature; some sub-scales of burnout and motivations negatively predicted parenting practices. These sub-scales were *contrast with earlier parenting image* and *emotional exhaustion* for burnout and *socio-economic aspects* for motivations.

The outcome of exhaustion was expected and observed in the literature with different practices (e.g., Lesniowska et al., 2016; Ward & Giallo, 2008). However, in the present study, emotional distance and loss of parental enjoyment sub-dimensions did not predict practices, contradicting the literature (e.g. Zimmer-Gembeck et al., 2015; Hansotte et al., 2021). This might be because the sample did not show burnout in higher levels frequently. This is important because, with the latent profile analysis of Hansotte et al.’s study (2021), parents’ burnout levels were divided into five, and the fourth level, one step before being burned-out, was categorized as ‘emotionally exhausted and distanced’. Although these two sub-scales were merged, it was identified that exhaustion leads to distancing in the latter stages of burnout, and according to Hansotte et al.’s categorization, this study’s sample would not show adequate emotional distance to show a prediction, instead showed exhaustion since it is the earlier step goes to burnout. The second explanation may be found in cultural differences. The sacred understanding of parenting and valuing the emotional bond between mother and child in Turkey might be a barrier to report

emotional distancing or loss of enjoyment in parenting, as also Arikan et al. (2021) mentioned.

However, the dimension of contrast with the earlier parenting image predicted, although there was no direct sign related to this sub-scale in the literature, it may be related to parental standards since this sub-dimension compares earlier and presents parenting. Parental standards may turn into parenthood expectations that leads to unattainable perfection (e.g. Kawamoto et al., 2018; Stănculescu et al., 2020) and may create resource and expectation imbalances (Mikolajczak & Roskam, 2018). Consequently, the degree to which those standards are met influences parental attitudes toward the children. Early parenting styles and their reformation during parenthood need to be assessed to understand this connection deeply.

The socioeconomic aspects of childbearing motivations also negatively predicted practices. This was consistent with Ryan and Deci's theory (2017), Nachoum et al.'s examples (2021), as well as Gauthier et al.'s findings (2007), which were all on internal and external motivations as socio-economic motivations are classified as external. However, the sample overwhelmingly opted for couple and personal motivations as the most important ones, especially couple relationship items related to family sense, followed by personal fulfillment, all of which are considered as internal motives, although they did not predict practices. On the other hand, the least important ones were determined as socio-economic aspects, including items concerning the mothers' extended families. This contradiction may be an interesting indication of how despite the same concept of the family sense was dominant, preferences can differ depending on whether they reflect external or internal motivations. The reason why internal motivations did not predict parenting practices might be because they were widely accepted across the current study's sample. To overcome, different samples with varying selections can be examined.

However, only one of the control variables predicted parenting practices. Mothers with fewer children were more likely to engage in more positive practices, which were in line with the findings of Fox et al (1995). Contradictorily, child gender and age did not predict parenting practices. The majority of research that has revealed differences related to child gender has focused on a specific practice (Endendjik et al., 2017) rather than general practices as in the current study and this might be the reason for the lack of prediction. Additionally, to distinguish gender differences, parental gender schemas and beliefs that may

lead to differences in practices need to be addressed. Regarding child age, this contradictory result compared to literature might arise because the current study focused on middle childhood, which includes similar milestones and practices rather than a wide range of ages.

The study has some significant implications. First of all, to improve the positive parenting practices, it is necessary to prevent maternal burnout, particularly contrast with previous parental self and emotional exhaustion. In other words, prevention studies on burnout should lead to positive parenting practices. In addition, before being a parent, motivations; particularly socioeconomic aspects dimension is a crucial factor for positive parenting practices. More specifically, having inner motivations to being a parent lead to positive parenting practices. To sum up, the findings provide clinicians a basis for prioritizing the burnout among women to have positive parenting practices. Also, during the decision of being parents, the couple's tendency on socioeconomic aspects should be assessing.

This study has some limitations. First of all, this study is a cross-sectional and self-report study. Due to the study's cross-sectional methodology, sample size, and demographic dispersion, further investigation over time and comparisons were not allowed. It is recommended deep-interview studies to assess these variables. Second, most mothers were from Istanbul, which is the biggest and metropolitan city in Turkey, in were caused a representativeness issue. Third, the current study included limited child and mother characteristics. Other major factors, such as temperament and health condition of the child and personal traits of mothers, should be considered since these factors can affect the burnout level and practices. The same issue occurred with childbearing motivations, which the pregnancy's condition may strongly influence, whether it was planned or unplanned, and the order of birth, which were not examined in this study.

6. References

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CHAPTER XVII

PREDICTING COVID-19 PREVALENCE FOR TURKEY: AN AUTO-REGRESSIVE INTEGRATED MOVING AVERAGE (ARIMA) MODEL APPROACH

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1. Introduction

In December 2019, a new type of virus, which is a member of the coronavirus family and was a communicable disease, was detected in Wuhan, Hubei province, China (World Health Organization [WHO], 2020a). The World Health Organization (WHO) has temporarily named this virus 2019-nCoV. However, later, WHO collaborated with the World Organization for Animal Health and Food and Agriculture Organization of the United Nations, renaming this virus to “COVID-19”, an abbreviation for coronavirus disease 2019 (WHO, 2020b).

The genetic code of the COVID-19 is highly similar to the two previously identified members (SARS ve MERS) of the coronavirus family. However, the fact that the COVID-19 virus is very new, there is limited information about this virus, the absence of many more pieces of the puzzle, and the lack of a proven antiviral therapy for this virus has increased international concerns towards this

virus (Lancet, 2020; Wang, Zhang, 2020; Zhang et al., 2020). Another major source of concern about the COVID-19 is that this virus has a very high rate of spread. Accordingly, as of September 3, 2021, the COVID-19 virus has spread to many countries, areas, or territories and total confirmed cases of 218,946,836 and total confirmed deaths of 4,539,723 were detected in the World (WHO, 2021).

The first the COVID-19 case has been detected in Turkey on March 11, 2020, and after the first cases were detected, the COVID-19 the number of cases has increased very rapidly. September 3, 2021, total confirmed the COVID-19 cases 6,435,773 and total confirmed the COVID-19 deaths 57,283 were found to be in Turkey. At the same time, as of September 3, 2021, the total number of the COVID-19 vaccine doses administered was 94,167,554 (WHO, 2021). In Turkey, the number of cases is high, but the number of deaths is low. This situation is one of the most important reasons is the high rate of young and middle-aged population in Turkey. Accordingly, by the year 2018, the ratio of the 0-14 age group is 23.5, the ratio of the 15-64 age group is 67.8 and the rate of 65 and over age group is 8.7 in Turkey (Turkish Statistical Institute [TÜİK], 2018). .the COVID-19 outbreak, as well as all over the world is also a major health threat for Turkey. However, as it is evident from the above data, the COVID-19 outbreak is more dangerous in terms of its rate of a spread than being fatal. Therefore, it is necessary to examine how this outbreak will spread in the coming days. Therefore, this study, it was aimed to estimate the COVID-19 prevalence for the next 10 days.

2. Methods

Data available on July 22, 2021 / September 04, 2021 date (45 days) for the prevalence of the COVID-19 outbreak in Turkey are used to make time series analysis and forecasting. The related data were obtained from the Ministry of the Health Republic of the Turkey source (Ministry of Health, 2021) and a time series database was created in Ms. Excel program.

Auto-Regressive Integrated Moving Average (ARIMA) model was used as the time series method in the study. Also called the Box-Jenkins method (Stellwagen & Tasman, 2013) this model approach is frequently used because it does not contain independent variables that explain the prediction series and gives good prediction models (Gahirwal, 2013). In order for the ARIMA

model to give good estimates, at least 30 observations are needed (Bönner, 2009).

In the implementation of the ARIMA model, basically, five stages are followed: (1) evaluation of the stability of the time series by graphics and unit root test, (2) taking the difference to provide stationary when the time series is not stationary, (3) autocorrelation coefficient (ACF) and partial autocorrelation coefficient (PACF) plotting used to estimate of ARIMA models (4) evaluating the prediction models according to the evaluation criteria such as Akaike info criterion (AIC) and Schwarz criterion (SC), (5) evaluating residuals whether the selected model is valid and making forecasting (Ma et al., 2018). ARIMA model consists of AR, MA, and I sections and is shown as ARIMA (p, d, q). Here, “p” refers to the degree of the autoregressive model (AR), “d” indicates the degree of difference (I), and “q” refers to the degree of the moving average model (MA) (Mondal et al., 2014).

Firstly, in this study, the stability of time series was tested by drawing the line graph regarding prevalence and ACF and PACF plots and it was found to be non-stationary. For this reason, the difference of the series was taken to stabilize. In addition, the stability of the series was evaluated using the Augmented Dickey-Fuller (ADF) unit root test. Based on the ACF and PACF plots, estimated ARIMA models were created and evaluated according to AIC, SC, and adjusted R2 criteria the most used evaluation criteria. The model that will give the best estimation has the lowest AIC and SC values, while has the high adjusted R2 values. After deciding on the ARIMA model, the residuals were examined to evaluate the validity of the model, and then 10-day forecasted values were obtained. Eviews 10 program was used to analyze the data.

3. Results

The COVID-19 outbreak in Turkey regarding the prevalence values using time series analysis was performed and there have been estimates for future periods. When the line graph of prevalence values is analyzed, it is observed that there is an increasing trend. This shows that the series is not stationary, in addition, ACF and PACF plots were drawn to see more clearly and to decide the ARIMA models. When the plots were examined, it was understood that the series was not stationary and therefore the first-order difference process was applied (Supplementary). However, since the series is still not stationary, the

second-order difference process has been performed and it has been observed that the stability has been achieved (Figure 1). Stability was also evaluated with the ADF test and the series was found to be stationary ($t = -4.927$; $p < 0.001$).

Figure 1: ACF and PACF Plots for Prevalence (2nd order difference)

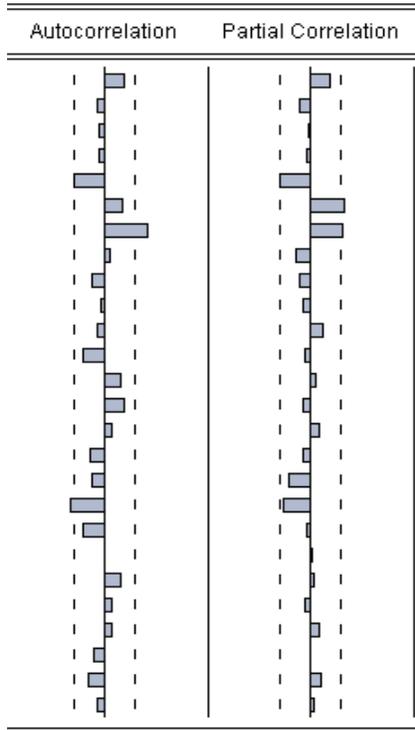


Table 1: Comparison of ARIMA Models

Model	AIC	SC	Adjusted R ²
ARIMA (0 2 1)	18.47795	18.59960	0.51
ARIMA (1 2 0)	17.95805	18.07970	0.72
ARIMA (2 2 0)	18.75854	18.88019	0.37
ARIMA (1 2 1)	17.92162	18.08382	0.73
ARIMA (3 2 1)	18.94031	19.06196	0.37

AIC: Akaike Info Criterion; SC: Schwarz Criterion

ACF and PACF plots, which are used for second-order difference, were evaluated to estimate ARIMA models. The evaluation criteria for the predicted models are

given in Table 1. When Table 1 is examined, it is decided that the model that will give the best estimation according to the evaluation criteria is ARIMA (1 2 1). In order to decide whether the model is a valid model for forecasting, ACF and PACF plots were drawn for the residuals and it was seen that the model was a valid model (Figure 2). The findings regarding the parameters of the selected model are given in Table 2. Also, actual, fitted, and residual values are shown in Figure 3. As can be seen from Figure 3, the relevant model makes predictions quite close to the actual values.

Figure 2: ACF and PACF Plots for Residuals

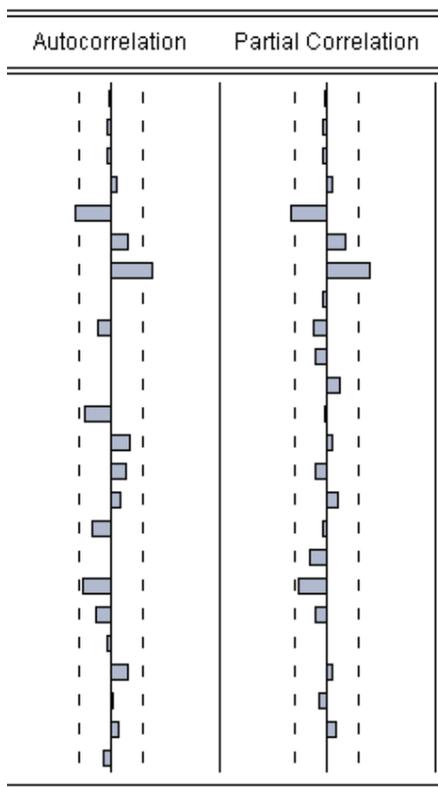
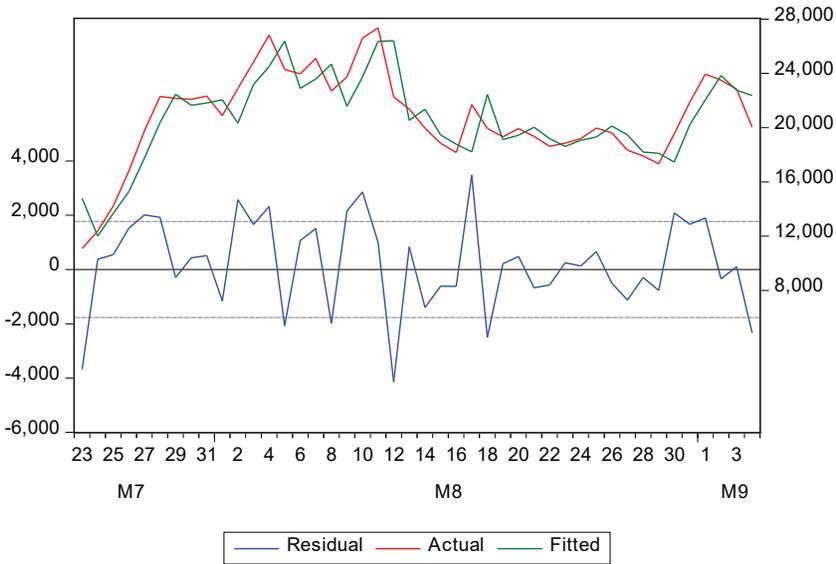


Table 2: Parameters for the ARIMA Model

Model	Parameter	Coefficient	Standart Error	t-statistic	p-value
ARIMA (1 2 1)	AR (1)	0.8369	0.0752	11.124	<0.001
	MA (1)	0.3129	0.1803	1.734	0.090

Figure 3: Residual-Actual-Fitted Graph



As a result of the analysis, 10-day forecasts were made. The graph of the values related to the estimates is shown in Figure 4 in the 95% confidence interval and the forecasted values are given in Table 3. According to Table 3, the COVID-19 outbreak prevalences in Turkey for the next 10 days were found to vary between 6,392,792 and 6,569,658.

Figure 4: Forecasted Values with %95 Confidence Interval

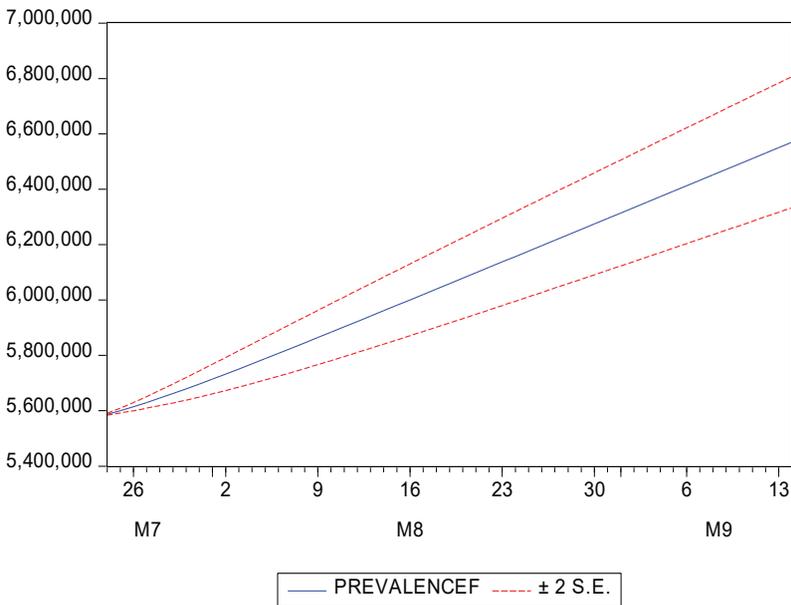


Table 3: Prediction of Prevalence of The COVID-19 with %95 Confidence Interval for Next 10 Days According to ARIMA model

Date	Forecast	95% Confidence Interval- Lower	95% Confidence Interval -Upper
05/09/2021	6,392,792	6,355,914	6,429,670
06/09/2021	6,412,443	6,412,443	6,412,443
07/09/2021	6,432,093	6,432,093	6,432,093
08/09/2021	6,451,745	6,451,745	6,451,745
09/09/2021	6,471,396	6,471,396	6,471,396
10/09/2021	6,491,048	6,491,048	6,491,048
11/09/2021	6,510,700	6,510,700	6,510,700
12/09/2021	6,530,353	6,530,353	6,530,353
13/09/2021	6,550,005	6,550,005	6,550,005
14/09/2021	6,569,658	6,569,658	6,569,658

4. Discussion and Conclusion

The COVID-19 outbreak which affected the world in a short time and the number of cases increased day by day has become a common problem of all countries in recent days. In this context, it is an important curiosity how this outbreak will progress in the coming days. Within this scope, while countries take many measures to combat the outbreak, they also make some future predictions. Accordingly, in this study, July 22, 2021, between September 4, 2021, the COVID-19 prevalence values are used to estimate the next 10 days prevalence of linked cases in Turkey.

Within the scope of the research, various ARIMA models that can make the best estimation were compared in terms of AIC, SC, and Adjusted R^2 criteria. As a result, the ARIMA model, which made the best estimation in terms of all three criteria, was found to be ARIMA (1 2 1) and the estimates were made at a 95% confidence level.

According to the results of the analysis, it is estimated that the number of cases related to the COVID-19 outbreak will increase in the next 10 days and the prevalence will be 6,569,658 on September 14, 2021. These findings are similar to the results of the study conducted by Bayyurt and Bayyurt (2020) and found that the number of cases in Turkey was expected to increase. Similarly, in the study conducted by Singh et al (2020) number of cases in Turkey was found to show an upward trend.

In conclusion, cases of the COVID-19 will continue to increase in the coming days, and especially in these days that Turkey has started to normalize need to be very careful. Otherwise, it should be remembered that the upward trend may be higher than the foreseen values. As part of the struggle with the COVID-19 in Turkey, many precautions have been taken readily like social isolation (e.g. partial curfew, many closures of businesses), and improvement of health-related services (e.g. recruitment of new health workers, the establishment of the pandemic hospitals). According to the results of this study, precautions in Turkey is recommended to continue in the coming days. In this context, if the relevant precautions are not followed, it is recommended that the enforcement should be applied in the most severe manner.

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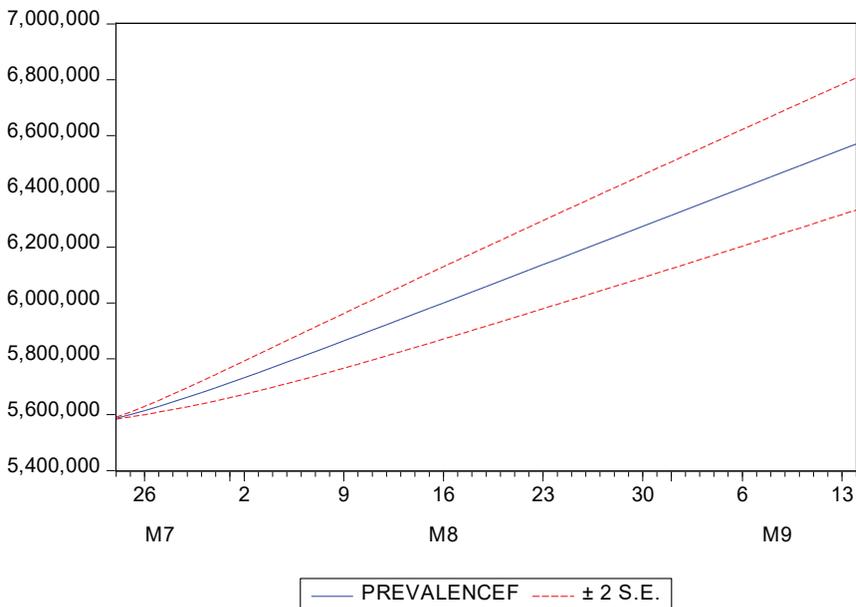
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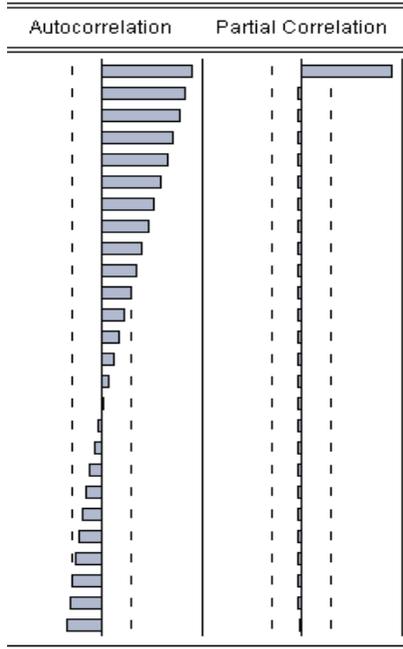
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Supplementaries

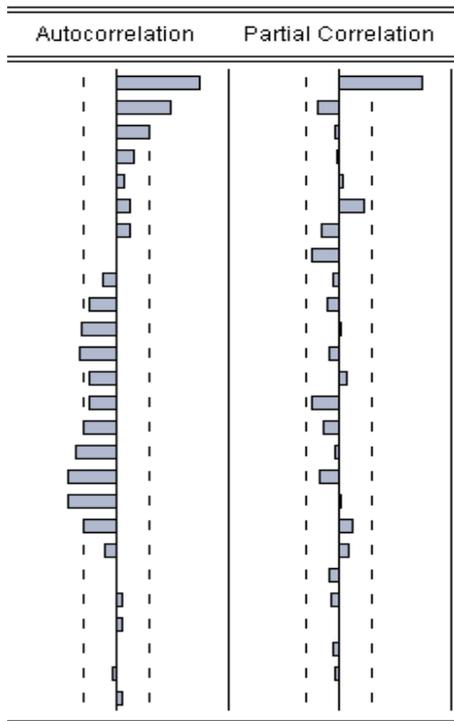
Supplementary 1: The COVID-19 Outbreak Prevalence in Turkey



Supplementary 2: ACF and PACF Plots for Prevalence (Level)



Supplementary 3: ACF and PACF Plots for Prevalence (1st order difference)



CHAPTER XVIII

UNDERSTANDING THE RELATIONSHIP BETWEEN ESPORTS, PHYSICAL ACTIVITY AND CONSUMER ATTITUDE

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1. Introduction

About two decades ago, it did not seem easy to predict situation that games played as a hobby will take the world by storm in the future or games that are considered ordinary will evolve into a digital sport and form an industry. Today, with over \$ 1 billion in revenue and 500 million followers, it is the name of the transformation of the hobby as an industry into a commercial activity, eSports (electronic sports).

Technological evolution, including the Internet, has enabled sports to reach a wider audience and led to the addition of new branches such as eSports. This evolution has made sports an indispensable part of the global entertainment concept by combining it in postmodernity. With the influence of mass media (especially TV), global interest in sports has been increased by creating fan masses around the world and a capitalist mentality has replaced the moral values known as ethics in sports (Markovits & Hellerman, 2001).

Digital games can be played in terms of single-player and multiplayer. It creates a strong bond between the player and the player character by increasing the player interaction that the user sees as a representative in the game. It would be appropriate to express that people enjoy an experience here. Because people

who play games and watch a game physically or online perform these activities in order to gain experience. Master players and streamers who share their own sports content with their fans are a proof of the production of experience. And one of the four elements of the experience economy is entertainment (Seo, 2013; Pine & Gilmore, 1998). This global industry consists of many elements such as audiences, professional players, teams, awards, leagues and sponsors. And the wheels of this system are spinning thanks to advertising, media, sponsorship, producer fees and commercial products (Simic, 2017).

This gigantic industry, which has managed to leave behind even multi-threaded sectors such as music and cinema by creating its own ecosystem with its current volume, is expressed in billions of dollars (Kisin, 2018). To put it more clearly, the total amount of the year 2020 consisting of media rights, advertising, sponsorship, purchase and sale of goods, tickets, game publisher fees for companies that are strategically positioning to create a global entertainment industry through digital marketing and media by providing interaction between stakeholders through games its income is around 1.1 billion dollars. The biggest share in this income belongs to sponsorship with 637 million dollars and the lowest share belongs to streaming with 18 million dollars. This rate corresponds to an increase of 15.7% compared to 2019. Because in 2019, global eSports revenues were 950.6 million. More than half of these revenues came from media rights and sponsorship. In fact, it is predicted that the revenues from media rights and sponsorship will increase to 76% in 2023. The number of viewers is 495 million and 223 million of this number is the fan base. The market with the largest revenue in 2020 belongs to China with \$ 385.1 million. It is followed by North America with \$ 252.8 million and Western Europe with \$ 201.2 million, respectively. Average revenue per eSports enthusiast has increased by 2.8% since 2019, reaching \$ 4.94. In 2018, ticket revenue of 56.3 million dollars was generated. In 2019, the total prize money increased by \$ 16.6 million to \$ 167.4 million. In addition, League of Legends World Championship has been the biggest tournament of 2019 on Twitch and YouTube. In terms of live watch hours, Over Watch League was the most watched league on Twitch and YouTube with 104.1 million hours of views. When looking at eSports games specifically, it was seen that the FIFA 19 game was watched at 7.7 million live sports hours on a global scale and the console was used as a game playing tool. In 2020, this number decreased to 3 million hours, but the preference to use console in this game has not changed. Finally, when the eSports industry's 2020

data is evaluated overall, 4 billion of the world population of approximately 7.8 billion are online. The eSports awareness is around 2 billion in the world and the number of eSports fans is approximately 223 million. eSports revenues were realized as 1.1 billion dollars in 2020. The average annual income per eSports enthusiast is \$ 4.94(Newzoo, 2020).

It is obvious that eSports, which succeeds in creating its own ecosystem with the rules and differences it has developed, has the potential to develop itself from now on. Namely, it will attract more viewers by betting opportunities and new games. On the other hand, it is known that today everyone plays online games with smart phones. People had more free time, especially as the COVID-19 increased unemployment. Therefore, the fact that people have more free time and the ambition to win is gaining momentum with each passing day (estnn.com, 2021). In addition, modern sports clubs and individual investors fuel this momentum by increasing interest in eSports. For this reason, with the high-reward eSports tournaments held on a global scale, the emotions of the masses to compete and win are more addressed (Warr, 2019).

The components of eSports show that it is a system. When various sources are examined, these components; It is possible to list them as consumers, teams, media, organizers, brands and players (Seo, 2013; Newzoo, 2020). Maintaining this success of eSports, which has gained significance with the combination of many components, depends on synchronization with all its stakeholders. Among these components, the place and importance of consumers are separate. Because, in a sense, it can be said that other components are pregnant for consumers, as consumers enable other stakeholders to be born. The more consumers are interested in the eSport, the more it will attract sponsors' attention and the more investment will be attracted. Therefore, this is the premise of relating work to the consumer. And from this starting point, eSports in the study was associated with both physical activity and consumer attitude.

People who earn income by playing eSports are called players (professionals). Players can participate in the competitions individually or representing their teams. The fact that eSports players are online streamers contributes to the establishment of an interactive interaction with the audience (Hamari & Sjöblom, 2017). The players who carry out this business professionally are earning significant amounts. For example, according to a study conducted by ESPN, the average salary in North America was 105 dollars and the average European salary was 80 dollars (ESPN, 2017). Leagues, activities and events in

eSports are organized by the organizers. These entities organize the areas where the competition will take place. Considering the number of viewers and their long viewing periods, organizers play a critical role. For example, the 2017 LOL (League of Legends) World Championship was on broadcast for 136 hours and took place in four important different cities of China. 106 million people watched this championship in which 24 teams participated. Online media platforms such as Twitch, YouTube, Azubu TV, and ESL deliver eSports competitions to their fans. The last essential component of eSports is brands. Brands try to reach the consumer by associating themselves with players, events and teams. Among the tools used, sponsorships and advertisements are the first to come to mind. Advertising, sponsorship and investments make up 85% of the eSports market. In addition, the revenue generated in this way in 2020 is a huge budget of 1.1 billion dollars. It is predicted that this figure will be much higher in the coming years (Superdata, 2017; Newzoo, 2020).

The main purpose of the study built on this idea is to provide an understanding of the relationship between eSports, physical activity and consumer attitude. Thus, in this section, where eSports is associated with physical activity and consumer attitude, firstly the introduction section is given. In the introduction part, eSports was introduced in general, its relationship with physical activity and consumer attitude was mentioned superficially and the general backbone of the study was formed. Subsequently, it was followed by the literature section. In the literature section, eSports has been covered comprehensively. Physical activity, consumer attitude and the relationship between them with consumer characteristics are mentioned. In the second part of the literature, information is given about the theoretical background, which is the basis of the hypotheses developed in the study. The methodology part is the third part of the section. In this section, the purpose, importance and method of the study are explained. Models were designed for this and the collected data were analyzed statistically. The relationship between eSports, physical activity and consumer attitude was examined, and if there was a relationship, whether this relationship was significant or not was analyzed with parametric tests. The limitations of the study were mentioned. Suggestions and recommendations were presented for future research, taking into account the limitations of the study. Findings revealed were interpreted in the conclusion part. In the conclusion part, the comments made were evaluated in comparison with the literature.

1.1. E-sports concept

Studies on eSports have increased considerably recently. While previous studies have taken into account the game aspect of eSports, it is not unnoticed that studies conducted in recent years approach the subject from a more multidisciplinary and wider perspective (Campbell, 2018). There are many studies that investigate the performance aspect of the issue, taking into account many factors such as players' balance, interaction, and movement (Algesheimer et al., 2011; Taylor, 2009; Witkowski, 2012). Studies investigating the reasons for the rapid growth of eSports in a short time and linking eSports with social sciences such as culture and education are also included in the literature (Amazan et al, 2018). Cheung and Huang (2011) discussed the sustainability of eSports and in this direction they concluded that watching eSports is more dominant. Some researchers have also found that audiences affect the performance of professional players in eSports as in traditional sports (Bowman et al., 2013). Since digital betting games are also very common in eSports, some researchers have addressed this issue as well. Apart from this, since there is no full consensus on whether eSports is still a sport or not, researches continue on this subject. In addition, the issue of ethics is also among the topics investigated in eSports literature (Hewitt, 2014; Edgar, 2019; Gainsbury et al., 2019). The literature review on eSports has attracted the attention of the international academic community of eSports and has succeeded in establishing an academic research field on this scale.

From the explanations made so far, it is understood that eSports has positive and negative effects. Regarding the positive effects, for example, it has been determined that players who play shooter games have higher perception of attention than normal individuals (Bavelier et al., 2012). At the same time, children who are interested in digital games have higher creativity ability (Jackson et al., 2012). Digital games are also used in the treatment of specific types of learning disorders (Franschini, 2013). Connecting players with more than one player contributes to social development (Gentile, 2009). According to the research conducted by Bediou (2018), a positive correlation was found between digital games and cognitive ability. In addition to supporting the development of the cognitive system (Murphy, 2009), it also contributes to determination, which is one of the most important factors in success (Granic, 2014). On the other hand, the researches conducted reveal that eSports has an educative role in health and education (Vitelli, 2014). For example, it positively affects foreign language

learning (Erkkilä 2017). In addition to these studies that claim to have positive effects, studies claiming to have negative effects are not absent. These effects can be discussed under two headings as psychological and physical effects. Mental symptoms such as distraction, depression, anxiety, aggressiveness, detachment from the outside world, and loneliness have been detected in players who play violent digital games (Greitemeyer & Mugge, 2014; Anderson & Carnagey, 2009). Social isolation and addiction are also shown among these effects (Jonasson & Thiborg, 2010). The consumption of drugs that increase play performance further triggers these negativities (Holden et al., 2017).

1.2. Relationship between e-sports, consumer attitude, personality traits and physical activity

Physical activity refers to all the energy consumed by movement. It is also defined as any body movement produced by skeletal muscles that results in energy expenditure above the resting level (Caspersen et al., 1985). It is understood that this definition approaches the subject from a broad perspective. Accordingly, house chores, professional work, shopping, cycling, exercises, the rush of daily life and conscious recreation and sports are included in this scope (Kruk, 2009). So, since eSports is a sub-branch of sports, the relationship between physical activity and eSports is obvious. According to (Guttman, 2004), eSports should be seen in the context of sports as it reflects the characteristics of today's modern sports. Maybe not as much as sports, but requires a limited level of physicality to establish a relationship. This relationship has been the subject for various studies. Witkowski's (2012) study to examine how players physically play games regarding with the main themes of movement, balance and interaction is one of them.

When the studies dealing with these relationships are examined, it can be said that eSports has positive and negative effects on physical activity. Increased actors' perception of attention (Bavelier et al., 2012), acquisition of skills such as anger and stress control (Gray, 2018), increased creativity (Jackson et al., 2012), ability to cope with external factors such as pressure and excitement (Gray, 2018) are some of its positive effects. With the incredible diversification of the digital game market, very complex games have started to be released. These games, which are especially popular with children and young people, cause negative physical, social and psychological damages on the same population (Gunter, 1998).

As in sports, the consumer in eSports can be categorized into two main groups: those who participate in sports activities and those who watch sports. There are many factors that affect these decisions of those who participate in sports. These factors can be grouped as internal factors, external factors and situational factors. Internal factors; It consists of personality, motivation, perception, learning and attitudes. External factors are socio-cultural factors and situational factors consist of physical and social environment, time, rationale and priority status. Topic of this section will be focused on consumer attitudes and personality traits, which are among the internal factors.

Consumers develop attitudes about products and advertisements and make purchasing decisions. In this respect, the attitude displays a subjective nature (Chaudhuri, 2006). Attitudes are the most critical point of the decision to participate in sports. Because it has an important role to guide the consumer who is in the decision-making phase. Factors such as belief, emotion and behavior underlie the shaping of attitude. The state of knowledge or opinion about a sport is explained by belief. People can have different emotions in various sports. Behavior is the factor related to whether the person participates in sports as a result (Shank & Lyberger, 2015). As eSports gamers are ultimately a consumer, a digital gaming scale has been developed to understand the relationship between digital gaming and attitude. Factors such as relationships with the social environment, challenge, curiosity, pursuit of entertainment, desire to reach pleasures that cannot be satisfied in real life in virtual environments, satisfaction and happiness gained by winning awards in games are the determinants of digital gaming attitude (Demir & Bozkurt, 2019).

On the other hand, personality is another important factor that shapes the attitude adopted towards new products (Banyte et al., 2007). In addition lifestyle, socio-economic conditions, personality traits and decisions are also highly influential. Because while these listed factors affect personality traits, personality traits also affect the decision-making mechanism (Kotler & Armstrong, 2012). With this understanding, personality with individual differences, consistency-permanence and changeable characteristics enabled the issue of consumerism in sports to be addressed (Funk, et al., 2016):

- Why do some people like to watch sports that involve physical contact (rugby, boxing), while others prefer to watch sports that do not involve physical contact (volleyball, swimming)?

- Why do some people like to watch sports that involve physical contact (rugby, boxing), while others prefer to watch sports that do not involve physical contact (volleyball, swimming)?
- Why do some people like to do sports indoors while others prefer outdoor sports?

Most personality studies in sports are related to sports participation (Allen & Laborde, 2014) and brand personality practice (Walsh, et al., 2013). The most widely used personality scale in the literature is the Five-Factor Model or Big-Five (Hughes, et al., 2012). According to this model, human personality is evaluated under five basic dimensions: neuroticism, extraversion, openness to experience, acceptability and conscientiousness (Digman, 2002). Mowen (2000) found that 62 percent of the variance in sports participation can be predicted by basic personality traits. In explaining the relationship between eSports and personality traits, Boxer et al. (2015) found that violent games cause a more aggressive personality structure. In addition, it has been suggested that people who display risky behaviors with game addiction are pushed into social isolation.

1.3. Basis of hypotheses

H1. Personality traits are effective on digital game playing attitude (Demir & Bozkurt, 2019; Hamari & Sjöblom, 2017; Mustafaoglu et al., 2018).

Personality traits are among the dimensions of digital game playing attitude...

H_{1a}. ... is effective on the cognitive dimension (Bediou, 2018; Campbell, 2018; Witkowski, 2012).

H_{1b}. ... affects the sensory dimension (Lee et al., 2014; Hamari & Sjöblom, 2016; Aleem et al., 2018).

H_{1c}. ... has an effect on the behavioral dimension (Bayram, 2018; Hsu & Lu, 2007; Wang & Wang, 2008; Hu et al., 2004; Sun et al., 2011).

H2. Digital game playing attitude is effective on cognitive behavioral physical activity (Schembre et al., 2015; Wagner, 2006; Bowman et al., 2013).

Dimensions from digital game playing attitude cognitive behavioral physical activity

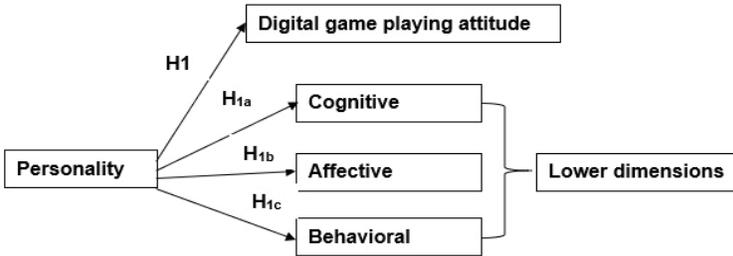
H_{2a}. ... is effective for the self-regulation dimension (Vitelli, 2014; Deci & Ryan, 2012; Liu & Peng, 2009).

- H_{2b}**. ... is effective on the outcome expectancy dimension (Gray, 2018).
- H_{2c}**. ... is effective for personal barriers dimension (Brown et al., 2006).
- H3**. Digital game playing attitude differs according to gender (Newzoo, 2017; Groen, 2016; Olson et al., 2007; Fromme (2003).
- H4**. Digital game playing attitude differs according to game playing addiction (Game addiction, 2020; Wargames, 2006; Fromme, 2003; Davis et al., 2013; Han et al., 2010; Ko et al., 2009).
- H5**. Digital game playing attitude differs according to the authenticity of the games. (Hamari & Sjöblom (2017).
- H6**. The attitude of playing digital games differs according to the payment of fees for games (Durdu et al., 2004; Ozbıcakcı, 2016; Digital Games Workshops, 2017).
- H7**. The attitude of playing digital games differs depending on whether the products are licensed (Durdu et al., 2004; Ozbıcakcı, 2016; Digital Games Workshops, 2017).

In this case, the developed hypotheses can be shown collectively as follows:

- H1**. Personality traits are effective on digital game playing attitude.
Personality traits are among the dimensions of digital game playing attitude...
- H_{1a}**. ... is effective on the cognitive dimension.
- H_{1b}**. ... is effective on the sensory dimension.
- H_{1c}**. ... is effective on the behavioral dimension.
- H2**. Digital game playing attitude is effective on cognitive behavioral physical activity.
Dimensions from digital game playing attitude cognitive behavioral physical activity
- H_{2a}**. ... is effective for the self-regulation dimension.
- H_{2b}**. ... is effective on the outcome expectancy dimension.
- H_{2c}**. ... is effective for personal barriers dimension.
- H3**. Digital game playing attitude differs according to gender.
- H4**. Digital game playing attitude differs according to game playing addiction.
- H5**. Digital game playing attitude differs according to the authenticity of the games.
- H6**. The attitude of playing digital games differs according to the payment of fees for games.
- H7**. The attitude of playing digital games differs depending on whether the products are licensed.

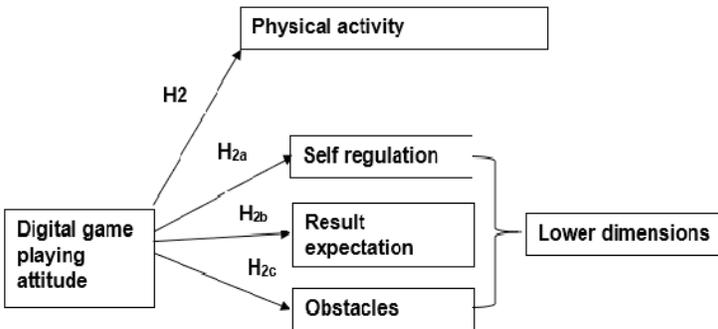
Model-1



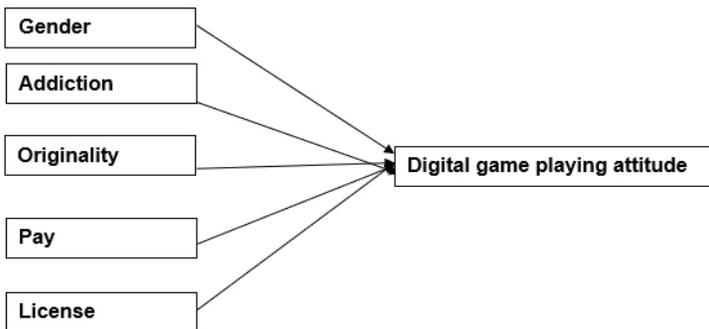
Effect of personality characteristics on digital gaming attitude

Model-2

The effect of digital gaming attitude on physical activity



Model-3



Digital game playing attitude differs according to demographic characteristics

2. Method

2.1. Methodology

In this section, information about the purpose of the research, information about the method and scope and the limitations of the research are given, respectively.

2.2. Purpose of the research

The main purpose of this study is to examine the effect of personality traits on digital game playing attitude and the effect of digital game playing attitude on physical activity. In the study, sub-goals were determined to differentiate digital game playing attitude according to gender, digital game addiction, paying attention to the authenticity of digital games, paying digital games and purchasing licensed products.

2.3. Method and Scope of the Research

As the data collection technique applied in the research, the e-questionnaire method prepared on the internet was used. Three scales were used in practice. The personality scale developed by Benet - Martinez and John (1998) and adapted into Turkish by Sümer and Sümer (2005) was used (Sümer & Sümer, 2005). Second, it is the scale applied for digital game playing attitude. This scale consists of three dimensions. These dimensions are cognitive, sensory and behavioral dimensions (Demir & Bozkurt, 2019). The third scale applied is for cognitive behavioral physical activity and this scale consists of three dimensions (Schembre, S. M., 2015). These dimensions are self-regulation, outcome expectancy and barriers.

In the study, questions were asked to participants about their demographic information. These demographic questions were asked about gender, digital game addiction, paying attention to the authenticity of digital games, paying for digital games and purchasing licensed products in order to identify differentiation.

The scope of the study was limited to university students. A total of 394 students from different departments participated in the research. The analysis of the data obtained from the research was carried out with the SPSS 22 package program. Reliability and normality analyzes required in the analyzes applied in the study were performed. Independent samples t-test and regression analysis, which are parametric due to the normal distribution, were applied.

3. Results

Table 1: Demographic Information Of Participants

	Variables	N	%
1. Gender	Male	151	38,3
	Female	243	61,7
2. Are you addicted to video games?	Yes	52	13,2
	No	342	86,8
3. Do you pay attention to games being original?	Yes	215	54,6
	No	179	45,4
4. Do you pay for the games?	Yes	74	18,8
	No	320	81,2
5. Do you buy licensed products of video games? (T Shirt-Figure-Mug-Keychain-Poster etc.)	Yes	51	12,9
	No	343	87,1
6. Where do you prefer to play the games?	Home	309	78,4
	Internet cafe-Game cafe etc.	30	7,6
	Other	55	14,0
7. With whom do you prefer to play the games?	Alone	142	36,0
	Friends	227	57,6
	Family	12	3,0
	Other	13	3,3
8. Which brand of game console do you use?	Sony Playstation	66	16,8
	Microsoft Xbox	12	3,0
	Nintendo	1	,3
	I do not use a console	315	79,9
9. How long have you been playing games?	30-60 min.	250	63,5
	61-120 min.	82	20,8
	121-180 min.	32	8,1
	Over 180 min.	30	7,6
10. How often do you play games?	Once a day	201	51,0
	Once a week	105	26,6
	Once a month	67	17,0
	Once a year	21	5,3

	Variables	N	%
11. How old did you start playing games?	7-10 years old	116	29,4
	11-15 years old	136	34,5
	16-20 years old	118	29,9
	20 years and older	24	6,1

Table 1 includes the demographic information of the participants who made the evaluation. Looking at the data in Table 1, the participants participating in the study are seen as 151 male (38.3%) and 230 female (61%). In addition, 11 questions were asked to reach the information of the participants in the study. The values of the 11 questions asked are given in Table 1. There are graphic images prepared for the questions asked below.

Table2: Regression Analysis Of The Effect Of Personality Traits On The Cognitive Dimension Of Digital Game Playing Attitude

Model B		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		Std. Error	Beta			
Constant	Cognitive Dimension	3,294	,343		9,602	,000
	Personality characteristics	,025	,104	,012	,236	,814

$R = ,012$ $R^2 = ,000$ $F = ,056$

When table 2 is examined, there is a high level of positive relationship between personality traits and the cognitive dimension of digital game playing attitude. However, this relationship is not statistically significant ($R = ,012$, $R^2 = ,000$, $p < 0.05$).

According to the T-test results regarding the significance of the regression coefficient, it is seen that personality traits do not have a significant effect ($T(104) = ,236$, $p < 0.05$).

Looking at the regression analysis table in Table 2, it is possible to say that personality traits have a “,025” effect on the cognitive dimension of the digital game playing attitude according to the data in the table. The regression equation to be created in line with these data;

Personality Traits = , 025 * Cognitive Dimension of Digital Game Playing Attitude +3,294

Table 3: Regression Analysis Regarding The Effect Of Personality Traits On The Sensory Dimension Of Digital Game Playing Attitude

Model		Unstandardized		Standardized	T	Sig.
		Coefficients				
Std. Error		Beta				
Constant	Sensory Dimension	2,750	,313		8,797	,000
	Personality characteristics	,118	,095	,063	1,246	,213

R = ,063 R² = ,004 F = 1,553

Looking at table 3, there is a low level positive relationship between personality traits and the sensory dimension of digital game playing attitude. However, this relationship is not statistically significant (R: ,063, R²: ,004, p < 0.05).

According to the T-test results regarding the significance of the regression coefficient, it is seen that personality traits do not have a significant effect (T (095): 1,246 , p < 0,05).

Looking at the regression analysis table in Table 3, it is possible to say that personality traits have a “, 118” effect on the sensory dimension of the digital game playing attitude according to the data in the table. The regression equation to be created in line with these data;

Personality Traits = , 118 * Sensory Dimension of Digital Game Playing Attitude +3,294

Table 4: Regression Analysis Regarding The Effect Of Personality Traits On The Behavioral Dimension Of Digital Game Playing Attitude

Model		Unstandardized		Standardized	T	Sig.
		Coefficients				
Std. Error		Beta				
Constant	Behavior Dimension	2,357	,534		4,416	,000
	Personality characteristics	,136	,162	,042	,842	,400

R = ,042 R² = ,002 F = ,709

When table 4 is examined, there is a low level positive relationship between personality traits and the behavioral dimension of digital game playing attitude. However, this relationship is not statistically significant ($R: ,042, R^2: ,002, p < 0.05$).

According to the T-test results regarding the significance of the regression coefficient, it is seen that personality traits do not have a significant effect ($T (162): ,842, p < 0.05$).

Looking at the regression analysis table in Table 4, it is possible to say that, according to the data in the table, personality traits have a “, 136” effect on the behavioral dimension of the digital game playing attitude. The regression equation to be created in line with these data;

$$\text{Personality Traits} = ,136 * \text{Behavioral Dimension of Digital Game Playing Attitude} + 2,357$$

Table 5: Regression Analysis On The Self-Regulation Dimension Of Cognitive Behavioral Physical Activity Of Digital Game Playing Attitude

Model B		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		Std. Error	Beta			
Constant	Self Order.	2,779	,367		7,575	,000
	D.O.O.T.	,107	,117	,046	,913	,362

$$R = ,046 \quad R^2 = ,002 \quad F = ,834$$

If we go to table 5, there is a moderate positive relationship between digital game playing attitude and the self-regulation dimension of cognitive behavioral physical activity. However, this relationship is not statistically significant ($R: ,046, R^2: ,002, p < 0.05$). According to the T-test results regarding the significance of the regression coefficient, it is seen that the digital gaming attitude does not have a significant effect ($T (162): ,842, p < 0.05$).

Looking at the regression analysis table in Table 5, it is possible to say that digital game playing attitude has a “, 107” effect on the self-regulation dimension of cognitive behavioral physical activity according to the data in the table. The regression equation to be created in line with these data;

$$\text{Digital Game Playing Attitude} = ,107 * \text{Cognitive Behavioral Outcome Expectation Dimension of Physical Activity} + 2,779$$

Table 6: Regression Analysis Of The Cognitive Behavioral Physical Activity Outcome Expectation Dimension Of Digital Game Playing Attitude

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
Constant	Self Order.	3,459	,424		8,162	,000
	D.O.O.T.	,150	,136	,056	1,103	,271

R = ,056 R² = ,003 F = 1,216

According to the data in table 6, there is a moderate positive relationship between digital game playing attitude and the outcome expectancy dimension of cognitive behavioral physical activity. However, this relationship is not statistically significant (R: ,056, R²: ,003, p < 0.05). According to the T-test results regarding the significance of the regression coefficient, it is seen that the digital gaming attitude does not have a significant effect (T (136): 1.103, p < 0.05).

Looking at the regression analysis table in Table 6, it is possible to say that digital game playing attitude has a “, 150” effect on the outcome expectancy dimension of cognitive behavioral physical activity according to the data in the table. The regression equation to be created in line with these data;

Digital Game Playing Attitude = ,150 * Cognitive Behavioral Outcome Expectation Dimension of Physical Activity + 3,459

Table 7: Regression Analysis Of Digital Game Play Attitude Regarding The Personal Barriers Dimension Of Cognitive Behavioral Physical Activity

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
Constant	Personal Barriers	2,898	,371		7,817	,000
	D.O.O.T.	,053	,119	,023	,443	,658

R = ,023 R² = ,001 F = ,196

When table 7 is examined, there is a moderate positive relationship between digital game playing attitude and the personal barriers dimension of cognitive behavioral physical activity. However, this relationship is not statistically significant ($R: .023, R^2: .001, p < 0.05$). According to the T-test results regarding the significance of the regression coefficient, it is seen that the digital gaming attitude does not have a significant effect ($T (119): .443, p < 0.05$).

Looking at the regression analysis table in Table 7, it is possible to say that digital game playing attitude has a “.053” effect on the personal barriers dimension of cognitive behavioral physical activity according to the data in the table. The regression equation to be created in line with these data;

$$\text{Digital Game Playing Attitude} = .053 * \text{Personal Barriers of Cognitive Behavioral Physical Activity} + 2,898$$

Table 8: Comparison Of Digital Game Playing Attitude According To Gender

Variable	Gender	N	X	SD	T	P
Gender	Male	151	3,099	,327	,317	,751
	Female	243	3,110	,366		

If we look at the data in table 8, there is no significant difference between men and women in digital game playing attitude according to gender ($T: .317, p < 0.05$). At the same time, according to the digital game playing attitude, it is seen that the answers given by male to the questions ($X: 3,099$), while the answers given by female ($X: 3,110$).

Table 9: Comparison Of Digital Game Playing Attitude According To Digital Game Addiction

Variable		N	X	SD	T	P
Are you addicted to digital games?	Yes	52	3,239	,385	2,972	,008
	No	342	3,085	,342		

When Table 9 is examined, there is a significant difference in digital game playing attitude between addicted and non-addicted according to digital game addiction ($T: 2.972, p < 0.05$). According to the same data, it is seen that the average of those who answered yes is ($X: 3.239$), and the average of those who answered yes is ($X: 3.085$) according to digital gaming addiction.

Table 10: Comparison Of The Digital Game Playing Attitude In Terms Of The Originality Of Games

Variable		N	X	SD	T	P
Do you pay attention to games being original?	Yes	215	3,132	,358	1,656	,099
	No	179	3,074	,341		

According to the results in Table 10, considering that digital games are original, there is no significant difference between original users and those who do not use digital games (T: 1,656 , $p < 0,05$). According to the determined data, it is seen that the average of those who answered yes to the fact that the games are original is (X: 3,132), and the average of those who answered yes (X: 3,074).

Table 11. Comparison Of The Digital Game Playing Attitude In Terms Of Pay To Play Games

Variable		N	X	SD	T	P
Do you pay for the games?	Yes	74	3,107	,327	,033	,973
	No	320	3,105	,357		

When table 11 is examined, there is no significant difference in the attitude of playing digital games between those who pay a fee and those who use it free (T: .033, $p < 0.05$). At the same time, it is seen that the average of those who answered yes to the question regarding the payment of fees for digital games (X: 3.107), and the average of those who answered yes (X: 3.105).

Table 12: Comparison Of The Digital Game Playing Attitude In Terms Of Pay To Play Games

Variable		N	X	SD	T	P
Do you buy licensed products of digital games?	Yes	51	3,177	,287	1,565	,119
	No	343	3,095	,359		

According to the data in table 12, there is no significant difference in the attitude of playing digital games according to the purchase of licensed products between

those who buy licensed products and those who do not ($T: 1.565, p < 0.05$). In the same context, it is seen that the average of those who answered yes to the question about the purchase of licensed products of digital games is ($X: 3,177$), and the average of those who answered yes is ($X: 3,095$).

According to the analysis results obtained in the study; When Table 2 is examined, there is a high level of positive relationship between personality traits and the cognitive dimension of digital game playing attitude. Looking at table 3, there is a low level positive relationship between personality traits and the sensory dimension of digital game playing attitude. When table 4 is examined, there is a low level positive relationship between personality traits and the behavioral dimension of the digital game playing attitude. However, not all of these relationships are statistically significant. In addition, according to the T-test results regarding the significance of the regression coefficient, it is seen that personality traits do not have a significant effect on digital game playing. If we go to table 5, there is a moderate positive relationship between digital game playing attitude and the self-regulation dimension of cognitive behavioral physical activity. According to the data in table 6, there is a moderate positive relationship between digital game playing attitude and the outcome expectancy dimension of cognitive behavioral physical activity. When table 7 is examined, there is a moderate positive relationship between digital game playing attitude and the personal barriers dimension of cognitive behavioral physical activity. However, not all of these relationships are statistically significant. In addition, according to the T-test results regarding the significance of the regression coefficient, it is seen that the digital game playing attitude does not have a significant effect on physical activity. If we look at the data in table 8, there is no significant difference between men and women in the attitude of playing digital games according to gender. When table 9 is examined, there is a significant difference between addicted and non-addicted in digital game playing attitude according to digital game addiction. According to the results in Table 10, considering that digital games have licensed, there is no significant difference between the licensed game users and those who do not use the digital game attitudes. When table 11 is examined, there is no significant difference in the attitude of playing digital games between those who pay to play and those who use it for free, according to the payment of a fee for digital games. According to the data in table 12, there is no significant difference in the attitude of playing digital games according to the purchase of licensed products between those who buy licensed products and those who do not.

Considering the results obtained from the research, some studies have been reached in the literature for the same purposes. The findings of the studies found are given in the table above. Based on the literature table, it was found out that video games cause negative effects on personality traits. (Johnson & Gardner, 2010) In another study, it was found that there is a relationship between personality traits and video games. (Worth & Book, 2015) In addition, while there is a relationship between personality and brand relationship for video games, it has been found that personality has an effect on the brand. (Lin, 2010) In a study that reached similar results with the results found in the study, it was concluded that games do not have an effect on physical activity. (Liang & Lau, 2014) On the other hand, in some studies, it has been observed that motion-based video games have a positive effect on physical activity, oxygen capacity and heart rate, and also contribute to the continuation of the physical activity. (Bock et al., 2019; Bock et al., 2015; LeBlanc et al., 2013; Maddison et al., 2007; Mark et al., 2008; Williams & Ayres, 2020) Some studies have found that e-sports players meet the sub-standards required for physical activity, but their physical activity levels are low, and it has been suggested that these athletes should steer for physical activity. (Bock et al., 2019; Lam et al., 2020; Mustafaoğlu, 2018). Similarly, regarding the difference in video game addiction obtained in our study, it was found that computer use among adolescents gradually increased, but there was a tendency to decrease in video game addiction, although necessary studies should be done for the prevention and treatment of video game addiction (Griffiths & Meredith, 2009; Witt et al., 2011).

4. Limitations and future research suggestions

Lack of movement of eSports enthusiasts in the face of digital tools and excessive effort in terms of health cause serious health problems. For this reason, it is necessary to raise awareness of eSports players. This can happen with healthcare professionals or with public service announcements. It can be predicted that this will encourage eSports players to engage in more physical activity. In this respect, suggestions for e-athletes can be collected under ergonomic and exercise titles (*Di Francisco-Donoghue & Balentine, 2018; Schaeperkoetter et al., 2017*).

As in every study in the field of social sciences, there are some limitations of this study. Participants being in a certain age range and being in a specific segment of the society such as a university can be shown among these limitations.

For future studies on this subject, wider the age range can provide different results. In addition, including other segments of the society in the study will pave the way to reach different findings. Finally, the subject of eSports, which is associated with the marketing and sports sciences of social sciences such as physical activity and consumer attitude, can also be associated with the sub-disciplines of social sciences, anthropology, sociology, and psychology in future studies. Moreover, as an interdisciplinary study, as a result of the relationship to be established with the fields of science and health sciences, an extraordinary research will be carried out with different findings to be reached.

5. Conclusion

In line with the findings of the research, it is seen that the participants' attitudes towards digital games shape this addiction in terms of being addicted to digital games. In this context, it is essential for businesses to consider parameters such as personality traits and digital game addiction in their strategies to be determined in the eSports market. However, this situation is not the same for physical activity. It has been determined that the attitude of individuals to play digital games does not have a significant positive effect on their physical activities. For a healthy life, individuals and then businesses should pay attention to this issue.

The explanations made so far show that eSports will develop further with the development of technology. Thus, the eSports market will turn into an even bigger economy with each passing day. On the other hand, Generation Z keeps pace with this technological development and it is understood that the Z generation is more interested in eSports.

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6.2. Key terms and definitions

eSports: It is a competitive game in an organized format and at a professional level, with a specific goal and clear separation in digital environment between competing players and teams.

eSports Enthusiasts: People who watch professional eSports content more than once a month.

eSports Awareness: People who are not participants and viewers but have heard about eSports and are aware of eSports.

eSports Event: It is a competitive gaming tournament or league in which teams or players compete against each other with the goal of winning.

Players or Gamers: People playing games on a PC, console or mobile device.

Gaming Peripherals: Gaming hardware products such as mouse, keyboards, headsets, controllers or monitors.

eSports Density: The ratio of eSports followers in the online population.

Consumer: A person who purchases and uses economic goods and services for a certain price.

Consumer Attitude: It is the inner mood that expresses the main emotions of consumers, such as liking or disliking, before purchasing behavior about a product.

Physical Activity: It refers to all the energy consumed by movement.

CHAPTER XIX

APPLICATION OF LINEAR REGRESSION MODEL TO FORECAST RE-APPOINTMENT TIME OF PATIENTS IN THE ONCOLOGY DEPARTMENT

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1. Introduction

Cancer is a type of disease that negatively affects people's lives and even threatens human life (Zhao et al., 2018). Although many methods such as gene therapy (Cross & Burmester, 2006), immunomodulation, CARs, combination immunotherapy (Khalil et al., 2016), hormonal therapy, adjuvant therapy, radiation therapy (Sudhakar, 2009) etc., are used in the treatment of cancer, the most widely used method is chemotherapy treatment (Jardim et al., 2017). Chemotherapy treatment is usually carried out in clinics, the outpatient chemotherapy department, or hospitals called oncology. Patients undergoing chemotherapy treatment are called outpatients because they only stay in the hospital during the treatment (Kubota, 2004).

Chemotherapy treatment directly affects both the patient and the patient's relatives and usually requires a long time (Dos Santos et al., 2019; Wong et al., 2021). Generally, the first aim of hospitals is to detect cancer in patients who apply to the hospital, prevent the progression of the disease, and apply the most appropriate treatment (Chang et al., 2017). The hospital, whose data are used for this study, has a specialist team, and a new generation cancer treatment

process is applied. The fact that patients have different diseases that require chemotherapy treatment differs in the duration and shape of the treatment. In this hospital, approximately 21 different types of treatment, such as Chemo-1, Chemo-2, Subq, Remicade, etc., are applied to cancer patients. Each treatment has a different duration. Appointments are made for the patients to be treated in the oncology department according to the duration of treatment the patient will receive. However, the chaining effect caused by the mishaps in the appointments causes the patients to wait for a long time (Thøgersen et al., 2020). Hospital administrations have to resort to different methods to overcome this problem and increase patient satisfaction. The present study aims to determine a new appointment time by predicting to minimize the time that patients wait to receive cancer treatment with this study.

The most important feature of this study that distinguishes it from other studies is that while further studies want to reduce patients' waiting time (Atalan & Donmez, 2019; Krengli et al., 2020; Thomsen & Nørrevang, 2009), The author predict how long a patient will wait and determine a new appointment time. Except for the emergency service units of the patients, the other departments generally work on the principle of appointment. Appointment times are created with a specific time interval according to the number of clinical resources and their status (Hesaraki et al., 2019). Since most of the patients are outpatients in the chemotherapy or oncology departments of hospitals, procedures are performed by appointment. Appointments to cancer patients in the hospital chosen for this study are provided in 15-minute intervals. Thirty-six patients are treated in this clinic per day, depending on the type of treatment, duration, staff, and the number of beds. Using the data of 449 patients for this study, the average waiting time of these patients was calculated as 7.78 minutes. However, the patient waiting time increases to 122.0 minutes. For example, there are many reasons, for example, treatment type, no-show up, not complying with the patient's appointment time, etc., why a patient may wait this long. This study used historical patient data to estimate patient waiting times. In this study, the linear regression technique, one of the current methods used to obtain prediction data. Linear regression model provide models to make predictions by scanning the parameters in a data set comprehensively (Mehraein & Riahi, 2017). Linear regression model learn the complex structure between the parameters in the data sets and increase the accuracy of the prediction data (Le et al., 2018). This is the first study that uses

linear regression forecasting model for estimating the waiting time of patients in oncology departments to the best of our knowledge.

Linear regression is simply a method of predicting data. Linear regression model is a comprehensive and explicit technique of predicting a data set by the computer by examining the data (Meng et al., 2020). In addition, this technique is defined as a subcomponent of generalized linear regression model (GLRM) that produces solutions to real problems in areas that require computers (Ray, 2019). Linear regression model was first introduced by Pearson with a mathematical model (Stanton, 2001). Linear regression technique has been widely used in many fields, namely, healthcare (especially medical diagnosis), computer games, informatics, communication, traffic congestion, logistics and transportation, marketing, finance, and security (Ray, 2019). This part of the study includes literature research on the use of linear regression model in the field of healthcare. Linear regression approach is often used to predict the patients' illnesses (diagnosis) by using past medical data to create computer learning patterns (Shailaja et al., 2018). Akcay et al. analyzed the data of gastric cancer cases and formed and predicted overall survival (OS) and recurrence models using Logistic regression model, multilayer perceptron, XGBoost, support vector classification (SVC), RF, and Gaussian Naive Bayes (GNB) algorithms (Akcay et al., 2020). The generalized linear regression method was used by Arnold et al. to reveal the difference between diagnosis and treatment in health applications (Arnold et al., 2021) this difference can be understood in terms of the difference between prognosis (prediction. Health care costs were estimated by linear regression analysis of the data of 81,106 patients with medical and pharmacy insurance (Kan et al., 2019).

As a result, linear regression approaches are widely used in the field of healthcare (Karmani et al., 2019; Miotto et al., 2018; Ribelles et al., 2021). In particular, specialists use linear regression method for pre-treatment cancer diagnosis prediction of cancer patients. The author can emphasize that the accuracy of the results obtained in previous studies is very high. The purpose of using linear regression technique in this study is not clinically based but directly related to hospital management. The present study aimed to increase patient satisfaction by ensuring that patients undergoing chemotherapy treatment wait for less for their treatment, especially by paying high fees and receiving immediate service.

Since the basis of the linear regression technique is the computer science and statistics approach (Ahmad et al., 2018) supervised based machine learning approaches are immeasurable alternative to circumvent the inconvenience correlated to various engineering and data mining approaches when measured/observed data are accessible. This research depicts an analysis of electricity requirement forecasting by supervised based machine learning models with the limited data information. The power usage or energy consumption data is collected from power transmission and distribution networked organization independent system operator New England for one-year ahead energy forecasting. Moreover, energy consumption data is categorized into monthly, seasonally and yearly basis to foresee the performance for short-term, medium-term and long-term as well. Four-supervised based machine learning models employed for energy forecasting which are: i, this study has been discussed in two stages. In the first stage, descriptive statistical analysis of the data set was used, and in the second stage, linear regression method was employed to reach the prediction data. The plan of this study consists of four sections. The current literature related to the study and information about the studies on the applications of linear regression model in the field of health were examined in the first section of the study. The third part of the study includes a literature search for the use of linear regression model in the field of healthcare. The methodology covers the research data, and the linear regression model used for the present research were explained in the second part. The statistical and forecasting results were discussed in the third section. The conclusion of the study was clarified in the last part of the book chapter.

2. Material and Methodology

2.1. Healthcare Resources and Patient Flow

Twenty nurses, three technicians, two clerks, and thirty-six beds are employed for chemotherapy treatment in the clinic. Nurses are at the top of the staff working overtime, and they with different shifts work in the oncology department. The physician does not establish contact with the patient during treatment, except for an emergency. Physicians provide counseling services to patients according to the reports provided by the patients that nurses whose treatment is completed. Physicians give an appointment to the patient at a suitable time for the subsequent treatment, if deemed necessary. The clinic operates between 08:00 AM and 5:00

PM and makes appointments for thirty-six patients with 15-minute intervals per day in the selected hospital for this study.

The patient flow chart for the pilot clinic selected for the present study is given in **Figure 1**. The pharmacy carries out the medicine required for chemotherapy treatment in the clinic. After the patients enter the clinic (check-in), medicine is produced by the pharmacy according to the chemotherapy treatment type of the patients. Patients who are ready for medication begin the treatment process under the consultancy of nurses. Duration of treatment varies according to the kind of treatment that patients will receive. Patients whose treatment is finished contact their doctors. According to the patient flow diagram, a patient can leave the clinic in three situations.

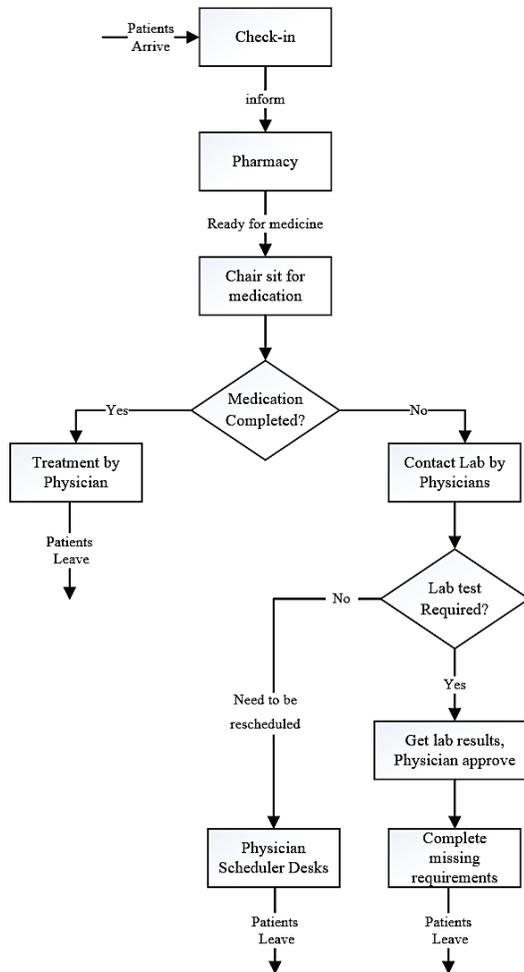


Figure 1: The patient flow in the oncology department

- In the first case, if the physician deems appropriate, the treatment is terminated, and the patient exits.
- In the second case, the physician decides to continue treating the patient, and a new appointment is made for the subsequent treatment if lab tests are not required.
- In the third case, the physician requests some laboratory tests for the patient and approves the medication therapy for the subsequent treatment after completing the testing requirements.

2.2. Study Variables

Many parameters affect the quality of healthcare services in the healthcare sector. Four hundred forty-nine patients were observed, and four different input variables, namely, age, gender, early and late check-in, treatment time belonging to these patients, were examined for this study. The effect of four input factors on only one output factor, namely waiting time, is discussed in this study. Detailed information about the variables is provided in the sections below.

2.2.1. Waiting Time

In this study, patient waiting time (the abbreviation *WT* was used for patient waiting time) was considered the output variable. Since chemotherapy treatment takes a long time both at the time of treatment and in terms of the process, the hospital management organizes a treatment plan. In this plan, a calendar is created by making appointments at different times for the patient. However, patients do not pay enough attention to the appointment time (delay of the patient, not coming, etc.). The patient waiting periods for a long time occur in this department of the hospital.

The reason for patient waiting periods is that drug treatment is taking longer due to an unexpected situation or is inadequate in terms of hospital personnel such as physicians, nurses, technicians, etc. Another reason is the drug preparation process included in the patient flow chart. In this study, chemotherapy drugs are produced in the hospital. Since chemotherapy drugs are expensive and patient-specific, hospital management passes to the drug production stage when the patient enters the hospital. Patients can wait for a long time due to the delay due to the drug production time. Other reasons that

cause the patient to wait for a long time can be mentioned, such as patient expired, inpatients, added on or canceled the same day, hospice, weather, treatment change, no reason given, etc.

2.2.2. Age of the patients

The patient age (PtAge) factor, which is one of the input parameters, ranges from 17 to 91 for the 449 data collected for the present study. The highest number of patients cluster between the ages of 63-73. The average age of 221 male patients was 61.29, while the average age of 228 female patients was 60.285. The average age of 449 patients was calculated as 60.78. The highest number of patients with 136 patients ranges from 63.25 to 72.5 years of age. The lowest number of patients with 10 patients ranges from 17 to 26.25 years of age. The histogram graph of the patient ages is shown in **Figure 2**.

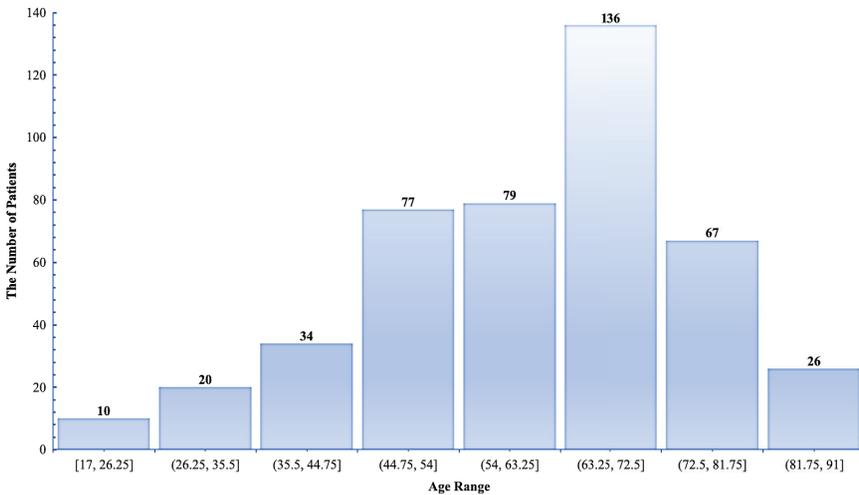


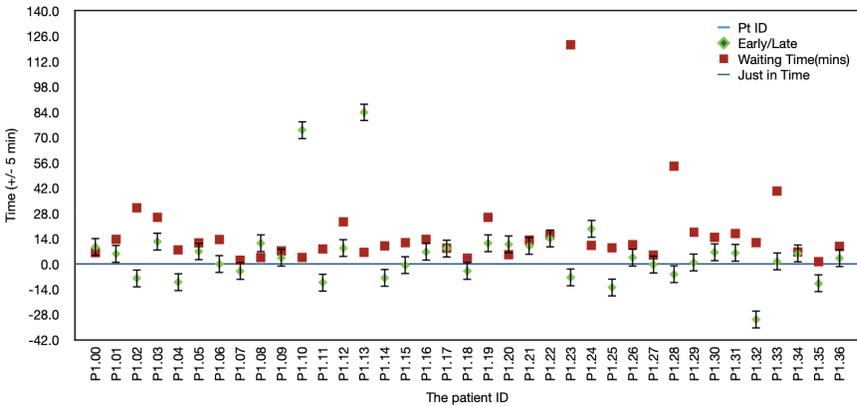
Figure 2. The histogram for the number of patients by age range

2.2.3. Gender

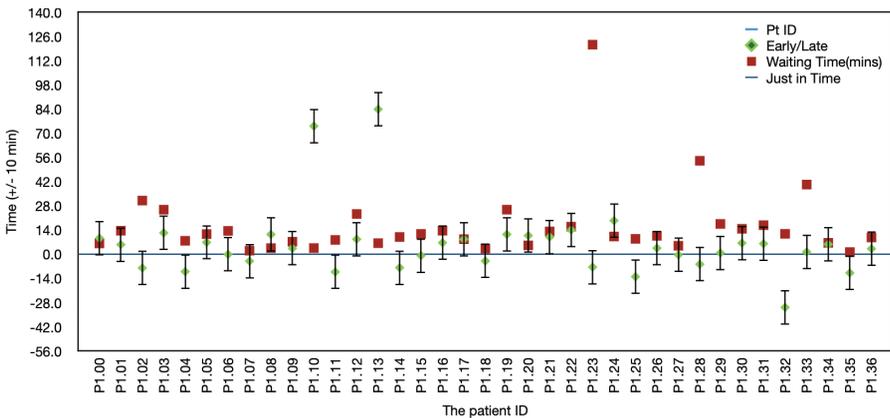
The gender (The notations of PtF and PtM are used for female, male, respectively. $PtGender$ notation is used for both genders) distributions of the patients whose data were collected were considered in this study, as they affected the waiting time. 228 patients were female, with a rate of 50.78%, while 221 male patients had a ratio of 49.22% of the 449 patients.

2.2.4. Early/Late Arrival

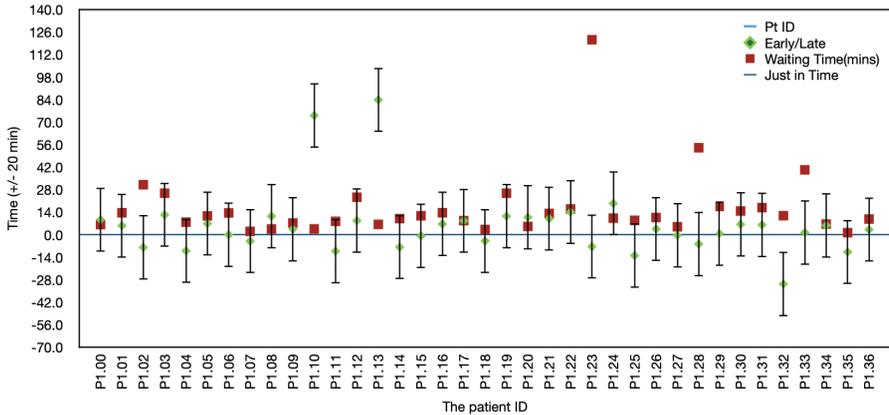
Except for the emergency service units of the hospitals, almost all of the other polyclinics work with an appointment system. Oncology departments also work as an appointment system. Generally, the majority of the patients obey the appointment time, while the rest do not. According to the data collected for this study, approximately 5% of 449 patients entered the hospital close to the appointment time. In **Figure 3**, the arrival times of 36 patients (the number of patients with an appointment in a day) who came to this outpatient clinic were analyzed. According to **Figure 3 (a)**, it is observed that patients enter according to the first ± 5 minutes (just in time or ± 5 min) of their appointment hours. Only 10 of the 36 patients arrived at the hospital 5 minutes early or late at the appointment time.



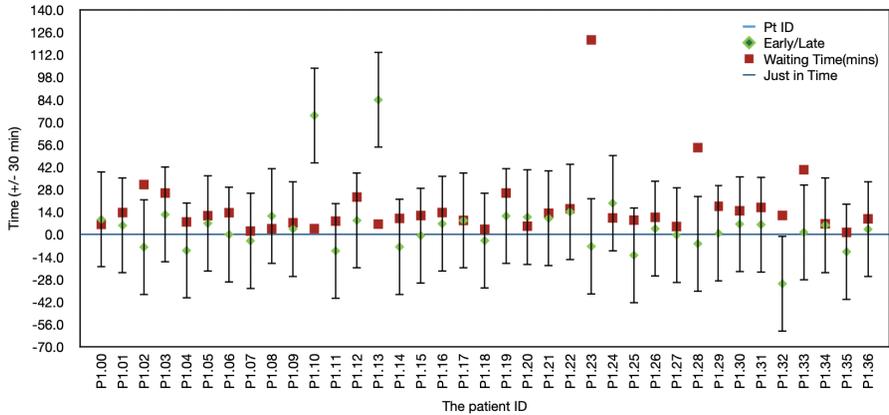
(a)



(b)



(c)



(d)

Figure 3. The arrival times of patients

(a) arrivals within ± 5 minutes **(b)** arrivals within 5-10 minutes **(c)** arrivals within 10-15 minutes **(d)** arrivals within 15-20 minutes

14 out of 36 patients came to the hospital 5-10 minutes early or late before the appointment time based on **Figure 3 (b)**. 9 out of 36 patients checked in to the hospital 10-15 minutes early or late before the appointment time, according to **Figure 3 (c)**. Only one patient was admitted to the hospital 15-20 minutes before or late at the appointment time based on **Figure 3 (d)**. Two of the patients came to the hospital 20 minutes later than their appointment time. 14 of the patients arrived at the hospital before their appointment time. In other words,

approximately 38.9 of the patients were calculated for this study in which they obey their appointment hours. The *E/L* character was used for the early/late arrival in the present study.

2.2.5. Treatment Time

Chemotherapy treatment varies according to the type of treatment the patient will receive. Approximately 21 different types of treatment (Chemo-1, Chemo-2, Subq, Remicade, etc.) are applied in this clinic. In this study, chemotherapy treatment duration was defined as the input factor. For example, Chemo-1 treatment takes 1.5 hours, while Chemo-2 treatment takes 2 hours. The duration of the patient's treatment who receives one of these treatments lasts at least 19 minutes, while the maximum duration of 6.5 hours. The appointment time is determined by taking the treatment time into account when the appointment is given to the patients by the clinic. Sometimes, unexpectedly delayed or shorter treatment times of patients cause waiting time for patients. According to sixty days of patient data (approximately 2077 patients), the treatment method affects 25.6% of the waiting period in the clinic selected for this study. Treatment time is represented by *TT* notation in this study.

2.3. Linear Regression Model

Regression models statistically measure the effect of independent variables on dependent variables in a data set. In addition, a mathematical equation is formed as a result of the interaction of the independent variables with the dependent variables, and it is used in the estimation of the dependent variable data with this technique. Since there is more than one independent variable in this study, the following mathematical formula was used:

$$y_i = \varphi_i + \Phi_1 x_1 + \Phi_2 x_2 + \Phi_3 x_3 + \dots + \Phi_n x_n + u, i = 1, \dots, n$$

where, y_i represents the dependent variable. The independent variable was considered as the time that patients waited for chemotherapy treatment in this study. φ_i is taken as the constant number of the regression equation. x_1, x_2, \dots, x_n signify the independent variables. $\Phi_1, \Phi_2, \dots, \Phi_n$ are the coefficient values of the independent variables. The margin of error of the regression model is expressed with u . The more consistent the estimated value will be with the smaller this value. As a result of the interaction of the independent variables with themselves, nonlinear regression models

occur. However, in this study, the nonlinear regression equation was not considered because the interaction of the independent variables was ignored.

3. Results and Discussion

The results of this study, which allows a patient to estimate the time to wait in the oncology department and to rearrange patient appointments, are discussed in this section with the historical data collected. First of all, descriptive and variance, statistical information of the data was calculated, and the effect of input factors on output factor was analyzed. The prediction data obtained according to linear regression technique were shared in the second part of the present study results.

3.1. *The descriptive statistics and the analysis of variance*

The data of the input and output parameters of 449 patients who received chemotherapy treatment were statistically analyzed for this study. Descriptive statistical information of the data is shown in Table 1. Descriptive statistical data of three input variables and one output variable were categorized according to the gender type of the patients, and statistical analysis was performed. The number of data (N), standard deviation (StDev), variance, Sum of Squares (SS), minimum, minimum, skewness, and kurtosis results of 228 female patients and 221 male patients were obtained for each variable.

Table 1. Descriptive statistics values of input and output variables

Variable	PtAge		E/L		TT		WT	
	Input		Input		Input		Output	
PtGender	PtF	PtM	PtF	PtM	PtF	PtM	PtF	PtM
Sample size	228	221	228	221	228	221	228	221
Mean	60.29	61.29	0.09	0.36	112.3	140.6	8.161	7.402
Standard Deviation	13.84	15.33	15.85	14.97	87.13	103.95	0.847	0.892
Standard Error Mean	0.914	1.03	1.18	1.12	5.87	6.99	0.133	0.131

Variable	PtAge		E/L		TT		WT	
Variance	191.49	234.9	251.09	223.98	7591.9	108065	0.7163	0.7953
Variance Coefficient	22.94	25	-82164.19	2897.25	78.1	73.95	24.36	25.38
Sum of Squares	872087	881968	57000	49305.6	4599102	6743410	15345.92	12282.18
Minimum Value	18.0	17.0	-45.0	-45.0	0.00	5.00	0.00	0.00
Mode	64.00	64.00	0.00	0.00	10.00	10.00	5.00	5.00
Maximum Value	91.0	91.0	47.0	45.0	415.0	450.0	122.72	95.61
Skewness	-0.39	-0.6	0.19	0.13	0.89	0.76	0.35	0.34
Kurtosis	-0.03	0.07	0.71	0.48	0.41	-0.14	-0.14	0.43

The oldest was 91 years old for both male and female patients. The age of the patient, the youngest female, was calculated as 17. The group of patients who do not obey the appointment time is male patients. The average E/L of male patients is higher than female patients. The most prolonged duration of chemotherapy treatment times is approximately 7.5 hours. The shortest period of treatment is the value of a patient due to only entering the hospital and leaving without receiving treatment. WT of the patients ranges from a minimum of 0.00 minutes to a maximum of 122.0 minutes.

Table 2 provides the results of the analysis of variance calculations to measure the effect of input factors on output factor. Sum of square (SS), mean of square (MS), coefficient of the regression model (Coeff), the standard error of the coefficient (SE Coeff), t, f, and p values of input factors were calculated. The statistical effect of a factor on an output can be calculated with the p-value value. All input factors discussed in this study show that the output factor has an impact (p-values of the input variables are less than 0.005). It was statistically confirmed that all four input factors were addressed to estimate how long a patient undergoing chemotherapy treatment should wait in the oncology department.

Table 2. The results of the analysis of variance

Statistics	Model	PtAge	E/L	TT	PtGender
Sum of Square	336.954	212.556	4.479	69.093	74.8540
Mean of Square	84.2380	212.556	4.479	69.093	74.8540
Coefficient	10.5522 (PtM) 9.7262 (PtF)	-0.0473	-0.0065	0.004128	(-0.8259 (PtM) 0.8259 (PtF)
Standard error Coefficient	0.08120	0.00125	0.00118	0.00019	0.03660
t-Value	129.89	-38.03	-5.52	21.68	-22.570
f-Value	573.270	1446.52	30.48	470.2	509.410
p-Value	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

3.2. Calculation of re-appointment time based on estimated waiting time

By discussing the results obtained from the methods used in the methodology part of the study, the patient appointment times were readjusted for the results obtained in this section. According to the independent variables, a total of eight scenarios were obtained by taking into account the mean age for male and female patients, the time of early or late arrival at the hospital, and the average duration of treatment. However, since comparable data between scenarios are obtained, it is necessary to reconstruct and compare patient appointment times for the linear regression model used in this study. **Tables 3** shows the new appointment times according to the estimated WT values of the patients based on the forecasting model. This table includes the dataset, gender, age, actual appointment times (ActAT), the real waiting time of patients (ActWT), predicted waiting for the time of patients (PreWT), a new appointment, or re-appointment time (Re-AT) values.

All of the 449 data used in this study were used in the forecasting phase. The linear regression model was randomly calculated to estimate WT data from the data of 446 patients based on the selected values of the input factors. This model provides the best estimation results of WT based on the results obtained from the forecasting analyses. Information on the data of derived scenarios was shared in this section of the study. Thus, the accuracy of the data obtained in

the model resulting from comparing the results obtained has been revealed. By estimating the waiting times of the patients, the appointment time to be determined for the patients has been adjusted again.

Table 3. The Actual waiting, predicting waiting, and re-appointment time

PtID	PtGender	PtAge	E/L Range	ActWT	PreWT	ActAT	Re-AT
Pt9.00	PtM	61.3	0.0-5.0 min	08.77	07.36	10:00:00	10:07:36
Pt2.00	PtF	60.3	0.0-5.0 min	18.95	08.13	08:15:00	08:23:13
Pt19.00	PtM	61.3	5.0-10.0 min	06.84	07.34	12:30:00	12:37:34
Pt22.00	PtF	60.3	5.0-10.0 min	07.80	08.09	13:15:00	13:23:09
Pt85.00	PtM	61.3	10.0-15.0 min	08.00	07.30	11:00:00	11:07:30
Pt229.00	PtF	60.3	10.0-15.0 min	28.66	08.06	11:00:00	11:08:06
Pt328.00	PtM	61.3	15.0-20.0 min	07.00	07.27	08:45:00	08:52:27
Pt407.00	PtF	60.3	15.0-20.0 min	08.00	08.02	10:30:00	10:38:02

This study aims to determine the factors that affect the patient waiting times and to estimate the waiting times of the patients by applying a linear regression model and determining the patient appointment times. By comparing the results obtained for this purpose with the actual results, it is understood that results with a very low margin of errors were obtained. Thus, it is revealed with this study that the appointment hours given to patients in the oncology department of a hospital should be given according to the correct estimation results, not according to a specific time period. The establishment of such an appointment system depends on the estimation methods used. However, in this study, the linear regression technique, the most important prediction method of today, was used. The results were obtained as a result of choosing the most appropriate variable for the linear regression model.

4. Conclusion

Many studies are carried out using parameters in the field of healthcare. The healthcare providers provide better quality service to patients in the health sector by using many factors such as patient waiting time, patient treatment time, examination fee in healthcare management. In this study, four factors, namely, gender, age, early or late check-in time, and treatment time, were

considered input variables. One factor, namely waiting time, was defined as a prediction variable. It was predicted that a patient who received chemotherapy would wait for how long a patient would wait and rearrange the appointment time using linear regression model. The performances of the estimation method for the results provided for the patient waiting time were re-calculated. This study contributes significantly to eliminating deficiencies such as cost loss and low patient satisfaction rates, primarily caused by patient waiting time.

This book section addressed the problems caused by the long waiting times of patients in oncology departments of hospitals. Patients who do not comply with the appointment time and long-term chemotherapy medicine treatments have to wait for a long time. This study aimed to apply linear regression model to forecast the reassignment times of patients in the oncology department of a hospital. Age, gender, and treatment time of 449 patients were used as input variables, and the waiting time of patients was used as an output variable for the estimation dataset. The linear regression model has provided the best result with a R^2 value of 83.78% and the highest significant rate of the input parameters (0.001 for all variables) to predict the waiting time in the oncology department. In conclusion, the linear regression model should be applied to predict the patient waiting time and to determine the next patient's appointment time, rather than a specific time interval in outpatient clinics with the appointment system.

The predictive modeling methodologies based on linear regression models show promise for the accuracy of outpatient clinics working with the appointment system, not with a certain time interval, but with estimating the patient waiting time and giving the next patient the appointment time. This technique, one of today's most critical issues, needs to be given more attention by researchers in healthcare systems. The author believes that using artificial neural networks based on the linear regression model, generalized linear regression model, support vector regression, and multiple linear regression, which are other linear regression techniques, could be a good subject for future studies in the healthcare.

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CHAPTER XX

VIRTUAL REALITY IN GASTRONOMY: EVALUATION OF REALITY THEORIES

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Introduction

The phenomenon of eating and drinking, which started with the creation of man, continues its existence with new products, methods and discoveries. It is known that from the first man to the twenty-first century, nutrition and therefore activities related to gastronomy are closely related to the basic needs of human beings. In order to meet these needs, it is known that the process that started with gathering and hunting in the early days continued with the domestication of animals and agricultural activities. It is understood that the activities of obtaining, preparing, cooking, eating and drinking the nutrients necessary for the nutritional need of human beings and post-feeding activities constantly change. The invention of fire is thought to be an important turning point in this change (Görkem and Sevim, 2016). It is possible to say that with the use of fire, raw foods were cooked and thus cooking activities started with the invention of fire. Although archaeological evidence shows that people cook for the first time two million years ago, it is not possible to reach certain information

(Civitello, 2008: 13). It is seen that the invention of fire, together with hunting, gathering and agriculture activities, was at the basis of the gradually developing gastronomic activities. It is known that numerous gastronomic innovations have been added to these foundations with the help of technological developments. Although today's gastronomic activities are very similar in essence to the past, it is possible to talk about quantitative and qualitative development when looking at the details. Meals that could only be cooked with wood fire in the past can now be cooked with cooking tools serving hundreds of different methods and techniques. These cooking tools evoke the image of a spacecraft in the human mind with their features and appearance. For example, features such as coatings that can keep the temperature at the desired level in a combi oven, the ability to cook different dishes at different degrees at the same time, the ability to save recipes in memory with the help of the touch screen and USB input, the steam injection system to prevent drying in food, the option to use in different languages, and the ability to wash itself bring simple cooking to a very high level. (www.oztiryakiler.com.tr).

It is possible to mention that the cooking methods used in the ancient times, the kitchen equipment used, the variety of food and beverage, rituals and many other gastronomic factors have changed and developed in accordance with the conditions of the time. The phenomena within the scope of gastronomy undergo change by being influenced by economic paradigms, time, consumer perceptions, information evolution and the dynamics within the food and beverage industry itself (Kurgun, 2016: 88). Paradigm shift is a situation where paradigms, which are all established, written and unwritten rules and practices in any field, undergo a radical change with the insights, perspectives and understandings that are appropriate for the age. After this radical change, a different paradigm, a new way of understanding, emerges. Thomas Kuhn, in his work "The Structure of Scientific Revolutions", states that the paradigm shift arises from scientific crises that he calls "depression". According to Kuhn (1982: 79), the accumulation of anomalies encountered during the purification, sharpening and development of the given paradigm inevitably leads the scientists community to the extraordinary science phase, that is, to depression. If this debate, conducted in the extraordinary phase of science, reveals a new paradigm accepted by the scientific community, a scientific revolution will have taken place, as this new paradigm would lead to a new era of ordinary science. These scientific revolutions also require paradigm shift. When we look at the

essence of the paradigm shift in the field of marketing, which is closely related to gastronomy in recent years, an understanding towards innovation can be seen. It is known that human beings develop and invent new products and ideas for reasons such as meeting their needs, solving the problems around them, and satisfying their curiosity. It is seen that the concept of innovation has been added to the concept of invention in the historical process as an alternative concept. As a concept, innovation has been defined in different ways over time. It is possible to say that the first definition found in the literature was made by Schumpeter. Although there are many definitions compatible with each other in the literature, it is not possible to talk about an agreed definition of innovation. In Schumpeter's (2012: 67) creative destruction theory, it is mentioned about innovation that new production methods, transportation routes, markets, and types of organization keep the capitalist system in a state of revolution and all these elements destroy old factors and create new ones. Based on the concepts of "creation" and "destruction" by Schumpeter, it is possible to define innovation as revealing the new by eliminating the old. In the Oslo Guide (2005: 50-55), innovation is mentioned as the realization of a new or significantly improved product (good or service) or process, a new marketing method or a new organizational method in internal practices, workplace organization or external relations. Among these types of innovation, it is thought that especially marketing innovation is compatible with today's production understanding. Marketing innovation has an understanding of presenting a product or service to customers with different design, packaging or marketing methods rather than its content. Innovation can be defined as innovating on a product, process or marketing method. One should not confuse innovation with invention. Telephone, automobile or computer are all inventions; mobile phone, hybrid car, laptop computer is known as innovation. The presence of a good invention is preferable to the success of innovation. However, it is not possible to say that starting with a good invention guarantees innovation. In order for innovation to take place, it is necessary to put the idea into practice, to change or renew processes within the organization, and to change the product or service offered to the market (Günay & Çalık, 2019).

Nowadays, it is thought that the perception of need has changed with the importance of the factors related to the presentation of the products to the people rather than the content. Nutrition activities are included in the lowest and broader part of the hierarchy of needs pyramid put forward by Maslow as one of the basic needs. Gastronomic activities concern all people more or less (Maslow,

1943). When a person has to choose between being loved by others and food, the path to follow according to the pyramid seems simple. Christopher Freeman, author of “The Economics of Industrial Innovations”, argues that the latest paradigm shift in technology and innovation began in the 1980s. In this paradigm shift, he talks about information, communication, software, flexible production systems, digital communication networks, satellite technology, biotechnology and capitalism moving towards a single market (www.moment-expo.com.tr). The process of “Entrepreneurial Marketing” understanding that started with the first marketing and entrepreneurship research conference in 1982 is known as another paradigm shift. In this marketing approach, there are situations such as responding to the hidden demands of customers that have not yet emerged and that will occur in the future, focusing on the development of ideas by perceiving market needs intuitively, and taking risks to create customer loyalty (Marangoz & Erboy, 2013).

With the paradigm shift in recent years, it is understood that gastronomic items have become a marketing element besides meeting the physical needs. This marketing approach appears with its positive features in terms of the progressive development of ideas and products. It is also seen that gastronomic items that appear as marketing elements have become a part of the consumption culture. Sociological, psychological and cultural analyzes on consumption emphasize that our consumption habits are constantly changing and today’s consumers are different from yesterday. In the 21st century, when the postmodern era began, the existence of postmodern consumers in pursuit of pleasure is mentioned. It is stated that the postmodern consumer consumes the image, not the product, and cares more about the value of the product than its price (Kırdar, 2012: 41). Today, consumption is seen as an indicator that determines the position of people in the society rather than meeting basic needs (Celik, 2013), and it is understood that consumers also tend to focus on some intangible pleasure-oriented needs. Consumers’ attitude towards pleasure brings forth the concept of hedonic consumption. Hedonic consumption can be expressed as consumers’ use of products with effects such as multisense imagery, fantasies and emotional arousal (Hirschman and Holbrook, 1982). It is thought that it is not correct to ignore the functionality of consumption by defining today’s consumption concepts as totally hedonic. Before realizing the consumption behavior, it is possible to benefit from the functionality of the products and services by acting rationally, contrary to the hedonistic consumption understanding. According to

the “Planned Behavior Theory” developed by Ajzen (1991) regarding rational consumption, individuals analyze the contents of their actions before performing a behavior and act rationally by systematically passing the information through logic filters. From this point of view, it is thought that consumption has both logical as well as emotional aspects, and the benefits of a food item to humans, for example, should not be forgotten.

Today, gastronomy items using virtual reality technologies are closely related to marketing factors in terms of meeting physical needs as well as hedonic needs. It is known that since the 70’s, marketing is not only an economic change between the business and the consumer, but has evolved into a theoretical dimension with many social and cultural dimensions (Paylan & Torlak, 2009). If we look at this situation with an example, it is known that after the opening of the first restaurant in the modern sense in Paris by Boulanger in 1765, more than 3000 restaurants started to operate in Paris only before a century passed (Ferguson, 1998). Until today, many restaurants with different concepts have been operating in different parts of the world. The last examples emerge as restaurants where virtual reality technologies are used. The food service offered in these restaurants is based on the understanding of providing different experiences to customers beyond meeting their physical needs. For this purpose, simulations that are similar to reality are used. Virtual reality glasses are used to perceive simulations prepared in computer environment, for example, as if eating a meal by the sea. Looking at the use of virtual reality in terms of products, the situation goes beyond virtual reality glasses, that is, the use of technology that can simulate senses other than vision. In addition to seeing and hearing, there are projects where the senses of touch, smell and taste can be simulated, that is, they can be presented instead of the reality. The concept of reality is one of the issues that people are most interested in in all virtual reality uses. For centuries, many scientists and thinkers have pondered what the reality is. Questions asked about reality are closely related to virtual reality technologies. Although it is known to what extent the services and products offered to people with virtual reality are perceived as real or not real, issues such as how human behavior is affected by the use of virtual reality technologies attract the attention of scientists and thinkers as well as marketers. Although the history of virtual reality technologies is old, the development of usage possibilities seems to be a new situation. Examples of the use of virtual reality technologies, which were used for military and entertainment purposes in the early days, in the field of

gastronomy are even more recent. It is possible to come across virtual reality technologies as an educational tool in the field of gastronomy, a strategy for marketing products, a method that aims to make people happy while eating, and a method for eliminating some health problems associated with eating. When the literature is examined, it is understood that the studies on the use of virtual reality technologies in the field of gastronomy are mostly carried out to determine situations. It is thought that this study will be a source for future studies, since the researches aimed at determining the situation are also new.

Method

In this descriptive study, in which it is aimed to evaluate the virtual reality technologies used in the field of gastronomy within the scope of reality, the existing literature was scanned. In this context, firstly, the reality phenomenon and the ideas put forward about the reality fact were analyzed. In the continuation of the study, the history of virtual reality technologies and examples and scientific studies about the current use of virtual reality in the field of gastronomy in the world are examined. In the last part of the study, based on the ideas put forward about reality, it was tried to clarify the issues such as what virtual reality technologies used in the field of gastronomy promise to people, its place in society and the level of sensory perception.

Thoughts on Reality

It is known that many thinkers and movements have put forward ideas about reality throughout history. In this sense, the “Allegory of the Cave” in the work “State” of the Greek philosopher Plato (2010: 231-234) is considered important. Regarding the analogy, Socrates asks Glaukon to think that the prisoners in an underground cave are bound in such a way that they can only watch the shadows caused by the fire burning behind them. These prisoners cannot even move their heads while watching the shadows falling on the wall at the end of the cave. Behind a low wall between the burning fire and the backward-facing prisoners, people project shadows of shapes made of various materials, resembling humans, animals, and other things, onto the cave wall. Prisoners believed that the names they gave to these shadows throughout their lives actually mean real objects. The captives also believe that the echoes in the cave belong to these shadows. The prisoners’ activity of naming these shadows and

matching echoing sounds with shadows can be explained as their effort to make the world more understandable by positioning objects. This situation can be considered as an effort to determine the reality. Since the prisoners in the cave look at the shadows of the objects that actually exist, it is not possible for them to reach the actual reality, no matter how accurately they try to classify them. When one of the captives in the cave is released, the situation seems rather complicated for someone who thinks that the world consists of that cave. It will take time for the prisoner to realize that the images reflected on the cave wall are shadows throughout his life. He would be surprised if he was told that what he had just seen was empty shadows, he was now closer to the truth, turned towards real objects, and everything that passed in front of him was shown one by one. At first, the shadows he saw in the cave would seem more real to him than the objects he saw in daylight. It will even be necessary to force him out and drag him out into the sunlight. The captive, dazzled by daylight, will be unable to see any of the objects that we now call real, and the first things that he can easily see outside his cave will be the shadows. Then he will see the reflections of people and objects in the water, then themselves, and raise his eyes up and see more. Finally, the sun; but no longer with its reflections in the waters or other things, but where it is, as it is... Then when he remembers where he first lived, what he knew there, and the other prisoners in the cave, he will thank his situation and feel sorry for those who stay there. If this prisoner returns to his old place and tells the facts about what he saw outside, the other prisoners will laugh at him, tell him that he went out in vain and spoiled his eyes, and even want to kill him. Based on Plato's analogy of the cave, it is possible to conclude that the information obtained through sensations and what appears are actually not real, and the truth can only be reached by reason. With these views, Plato points out that, contrary to relativist understandings, there is absolute reality and that it will not change according to people.

Descartes (1996: 18-20), known as the founder of modern philosophy centuries after Plato, stated in his work "Meditations" that everything he regarded as the highest level of truth until today was acquired either from the senses or through the senses, but these are sometimes misleading and that prudence should never trust anything that has deceived people once. Descartes says he clearly admits that there is no definite symptom that can distinguish wakefulness from sleep, and that he is dreaming almost now, based on the illusions he experienced in his dreams that also misled himself in real life, similar

to sleep. Descartes, however, thinks that although they are known through the senses - for example, being there, sitting by the fire, wearing a coat - it is not possible to doubt some things. It is understood that Descartes put forward the first simulation theory in his work "Meditations" by expressing the assumption that the whole universe could be directed by an evil demon. Inspired by this thought experiment of Descartes, in 1981, Hilary Putnam created the "brain in a vat" thought experiment. According to this thought experiment, in the real world, an answer is sought for the question of whether a mechanism could be established that will enable us to think that the world we live in is real by sending some messages to our neurons through various cables with our brain in a jar. Benjamin Olshin argued that a brain-like scenario in the jar could be real, assuming that people can perceive what they perceive as wearing VR helmets as having material reality. Olshin here emphasizes the term "perceived reality" (Olshin, 2006). Although the goal of such thought experiments about the human brain being manipulated by others and the perception management is to try to understand reality, today it is a source of inspiration for inventions that can be used especially in gastronomy. By using virtual reality equipment, technologies that allow consumers to perceive foods that are not actually there as if they are real can be used, especially in food-related treatments, as well as giving consumers the opportunity to experience different experiences.

Heraclitus, which separates the realm of appearances from the realm of reality, calls the realm that we perceive with our senses "the realm of appearances". While the realm of appearances gives the impression that it is composed of continuous and unchanging phenomena, the realm that is perceived by the mind appears in a continuous occurrence and flow. However, according to Parmenides, the real realm can be considered as an unchanging realm that always remains the same. While the realm of appearances is a realm of constant change and flow, the real world is considered to be an introverted, united realm (Russell, 1983: 59). While Parmenides pushes the realm, which Heraclitus accepts as the real realm and is in a state of continuous flow and being, to the second place as the realm of appearances, he places the realm of realities that he grasps through reason in the first place. According to Protagoras, one of the most famous Sophists who do not accept the existence of a general truth that can be valid for everyone, the measure of all things is human, everything is as it looks to him, the wind is cold for the one who feels cold, not cold for the one who does not. Based on the thought of Protagoras, sensory differences eliminate

an objective understanding of knowledge and indicate that reality can vary from person to person. Gorgias of Leontini, one of the first sophists and also a philosopher, states that “nothing exists, nothing can be known even if it exists, even if anything is known, this knowledge cannot be passed on to someone else” (Krantz, 1994: 194-197). Man uses his senses in his direct relationship with the outside world. He transfers the data obtained as a result of this direct experience to his mind through sensations. Basically, it is an experience. There is always a curtain of perception between reality and information. It does not seem possible for a person to directly reach reality by pulling the curtain of perception away. Holding one hand in hot water and the other in cold water for a certain time, when a person touches an object with both hands, he will get the perception that the object is cold from the hand he holds in hot water, and that the object is hot from the hand he holds in cold water. The question of whether the same object touched is hot or cold, regardless of the hands touching it, points to the importance of the senses related to the perception of reality. According to this system of thought, the senses give the truth about the appearance, not the truth about the reality.

Empiricists such as Jonh Locke, George Berkeley, and David Hume draw attention to the experiment, i.e. impressions or sensations about the outside world, in the final analysis. However, according to rationalists such as Socrates, Descartes and Plato, knowledge can be obtained independently before the experiment. It is believed that in no number, observation can convince the one that $2 + 2$ is equal to 5. The famous German philosopher Immanuel Kant, on the other hand, tries to unite both rationalism and emprism and divides the world into “real” and “visible”. While Kant argues that knowledge cannot go beyond the world of experimentation, he also states that reality cannot be known forever. Because the aim is seen as reaching belief as well as knowledge (Öktem, 2004). Friedrich Nietzsche (1889: 27) mentions in his work “Twilight of the Idols” that the foundations on which this world is visibly established constitute its own reality. According to him, it is possible to conclude that making definitions about being is an optical illusion in moral sense and the world can be regarded as relative from the human point of view.

Guy Debord and Jean Baudrillard are known as two important names of the 20th century in terms of their thinking systems and theories on reality. Debord (2006; 37) seeks the truth in the “spectacle” because spectacle is such a magical concept that it can establish itself by presenting itself as real. Baudrillard, on the

other hand, based on the concept of “reality”, even if the concept of “spectacle” is not the basis of his thought like Debord, states that the existence of a reality invented outside of reality as a truth has an inevitable imprisonment and does not allow the thought of a reality outside of it (Karapınar, 2017). Baudrillard (2011: 1) calls the derivation of a reality devoid of reality by means of models in the theory of simulation, which he put forward in his book “Simulacra and Simulation”, “hyperreal”, that is, “simulation”. According to Baudrillard, an age of simulation has begun. In this age, he thinks that there is no need for a rational reality anymore since it is a reality that produces itself in a synthetic way. Baudrillard mentions here that today reality is replaced by “simulacra” and explains the situation of trying to make something unreal as if it is real, as “simulating”. In theory, the disappearance of the line between reality and fiction is referred to as “hyper-reality”. According to Baudrillard, simulation is not a copy. The copies replace the originals, which have natural reality, and cause the original ones to lose their naturalness. It is possible to clarify this situation by taking the example of the “Lascaux Cave “ in his book. The cave in France was banned from visiting because of its archaeological value, and then another cave, which is a copy of it, was built near the cave. According to Baudrillard, this one-to-one copy situation makes both caves artificial. A similar situation may arise in the innovations made in the field of gastronomy. However, the fact that the original is developed and appears as a new product or service does not mean that it has lost its value. The copies that come out turn into reality and can be perceived as valuable in society, just like their real ones.

Surprising data has been obtained in a study on the perception of colors about how accurate our sensations can be in reaching information we call real. It is known that most people have “trichomes”, that is, three types of cone cells to see colors. Most of the people known as color blind, i.e. “dichromate”, have two working cone cells. While trichomes, which cover the majority of humans, can distinguish about 1 million different colors, dichromates can distinguish 10,000 different shades. After a long period of research, neuroscientists in England reported that they encountered a woman with an extra cone cell. According to estimates, this extra receptor the woman has enables her to see 99 million more colors. The origins of research on humans with “tetrachromate”, or four cone cells, are based on the studies of the Dutch scientist HL de Vries (1946) on colorblind people. Vries found that the mother and daughter of a color-blind individual have one mutant cone cell and three normal cone cells. So he says

that some people actually have four cone cells, even though only three of them work. Later in the 1980s, John Mollon of Cambridge University suggested that 12 percent of the female population could be tetrachromate, assuming that colorblind males passed this fourth cone cell to their daughters (Jordan & Mollon, 1993). However, Mollon's tests showed that these women perceived the same colors as trichomes. Newcastle University neuroscientist Gabriele Jordan, who worked for Mallon, developed a slightly different test in 2007 and set out to look for people with super vision. Jordan took 25 women with the fourth cone cell and put them in a dark room. Three colored lights flash in front of these women. The lights all look the same for a trichome. Incredibly, Jordan concluded that one of the women tested was able to distinguish three different colors of light with each test (www.futurism.com). A group of researchers from the University of Washington thinks that it is possible to unleash the power of tetrachromates with the help of specially designed tones, and that the adaptation of the world to trichomes may prevent tetrachromates from using the fourth cone cell (Neitz et al., 2001). Based on this information, it is possible to conclude that individuals who are able to operate the fourth cone in perceiving colors around them reach more real information than the majority in the world. However, since this feature of tetracomats changes some previously known phenomena, it means that their perceptions also have a temporary reality, which means that the reality can change continuously. From this point of view in terms of gastronomy, it is understood that, for example, the taste of a meal can be perceived at different levels by everyone. In order to obtain the desired sensations about that food in humans, the importance of preparing the stimuli in such a way that they can activate the senses in the people becomes evident.

It is known that almost all the subjects of modern physics, which make important determinations about reality, are based on two major theories developed in the early twentieth century. The first of these is Albert Einstein's "Theory of General Relativity"; the other is the "Quantum Field Theory" developed by physicists such as Bohr, Heisenberg, Schrödinger, Pauli and Dirac (Kocabaş, 2000). Einstein replaces the conception of precision in classical physics, founded by Isaac Newton, with the theory that the observer will transform and differ according to the state of watching. Similarly, Werner Heisenberg defends the view that the idea of a certain, unchangeable and externally looking observer cannot be applied to the inside of the atom (Lindley, 2008: 132). According to Heisenberg, the belief that the universe has a basic

and unchangeable order and a strict certainty seems to be a highly doubtful situation. According to the “Uncertainty Principle” that Heisenberg put forward and conceptualized, observer performing the act of observation changes the observation. Bolles (1999: 416) explains this by stating that the only presence of an anthropologist in a small town isolated from contemporary life will change the life of the town, and knowing that people are being observed can affect their behavior. It is known that surprising results were obtained when the “Double Slits Experiment” experiment performed by Thomas Young in 1803 to understand the propagation pattern of light was re-performed by Clauss Jönsson in 1961 with electrons that conform to the particle definition. Sensors are placed at the mouth of the slits in order to detect which slit the electron particles sent to two equal slits with a certain distance between them are trying to pass through the patterns they create. Although electrons form a pattern by acting as waves in the experiment without a sensor, when the sensor is placed, that is, when it is attempted to be observed, they act like a particle and form a different pattern (www.rasyonalist.org). According to the data obtained from the experiment, the fact that electron particles can exhibit both wave and particle properties at the same time indicates that, contrary to classical physics understanding, there will be no objective reality and that reality may be variable.

It is known that there are many ideas and scientific studies about reality and they continue to be. It is thought that all studies aimed at knowing what reality is and how it can affect people’s lives can create utilitarian or hedonic use opportunities in gastronomy. In this sense, the importance of using virtual reality technologies on the basis of reality emerges.

What is Virtual Reality?

Coates (2005) defines the concept of virtual reality as the interaction of the three-dimensional virtual world that exists in the computer environment with the help of various hardware. Oppenheim (1993), on the other hand, defines it as the perception of the interaction between machine and human with the help of some visual and audio technologies. According to Oppenheim, the title of creator of the virtual reality concept belongs to the famous dystopian and science fiction writer Ray Bradbury. It is thought that Bradbury took the intellectual steps of virtual reality in his story called “The Veldt” in his book “The Illustrated Man” published in 1951. In the story, a wealthy family buys a

“Happy-Life Home” with high-end technological possibilities. There is a virtual room that can appeal to all senses in this house they bought. In this room, the two children of the house can experience the African steppes and lions in the steppe with all their savagery as if they were in the steppe, and the passion of the children is increasing day by day. This concern drags parents into conflicts with them as a result of their decision to abolish the virtual world in question (Bradbury, 2019). It is understood that the room where the children in this story watched the steppe reflects today’s virtual reality technologies that can appeal to all our sensory organs from years ago.

Computer technology, which started in the 1980s and increased its speed after the 1990s, has now entered every aspect of our lives. One of the concepts that emerged as a result of these developments in science and technology is known as virtual reality. It is possible to define the concept of virtual reality as the reconstruction of reality (Kayabaşı, 2005). Virtual worlds offer users the opportunity to experience in a technological environment by giving them a strong sense of being there (Warburton, 2009). Virtual worlds are defined as electronic environments where individuals visually imitate complex physical spaces (Bainbride, 2007).

It is possible to create virtual reality environments using different hardware, software and techniques, contrary to the common belief that accepts the environment created with only the stereoscopic head mounted image provider as a virtual reality environment. All of the digital and physical elements that make our five sense organs feel as if we really exist in a virtual world are called virtual reality. Today, the most widely used tools of virtual reality technology are known as virtual reality glasses. With virtual reality glasses, it is possible to look and walk around in a three-dimensionally designed environment. Virtual reality glasses appeal only to the sense of sight and hearing. There are technological products that can simulate many odors thanks to a scent mask that can be used with virtual reality glasses, which are developed for the use of other sensory organs. Thanks to these products, it is known that it is possible to feel the temperature in the environment or even the blowing wind as well as smells. Virtual reality gloves, which aim to simulate the sense of touch, provide a realistic feeling by giving a certain force feedback to the hand when an object is handled or touched in the virtual reality world (İmren, 2019).

In the virtual reality environment, the observer is mentally detached from the real universe and enters the virtual environment. In this environment, the

observer perceives the spatial idea by feeling his own presence. In addition, the virtual reality environment allows the observer to act and move in the environment. As a result, emotional return becomes stronger than other environments (Kayapa & Tong, 2010). The virtual reality environment is known as the environment in which the observer perceives a real-world situation or an imaginary situation by feeling and interacting with the help of special tools in a three-dimensional simulation. Sherman and Craig (2003) state that virtual reality has “emotional return” features in addition to “three-dimensional graphical world”, “being immersed” and “interaction”. The three-dimensional graphic world refers to the main information source of the virtual environment, the spatial ideas that are in the mind of the designer and shared with others. Getting into it means getting away from the real and entering the virtual world. Interaction can be expressed as the formation of perceptual responses in the observer as a result of the reflection of the movements in the real environment to the virtual reality environment. Emotional return can be expressed as the observer feeling his / her own presence and being emotionally affected by this place or actions. Although it is known that the environment in virtual reality technologies is virtual, the Santa Claus example of Slavoj Zizek (2004), one of today’s thinkers, about the continuation of the experience is remarkable. According to Zizek, for the happiness of their children, parents who know that Santa Claus is not real behave as if, and children pretend not to disappoint their parents and to guarantee their gifts. Here, it is understood that parents have an understanding of providing benefits to meet the need to love and be loved, and children to gain financial gain as well as the need to love and be loved. While maintaining this understanding of utility, they accept virtuality as real by pretending to be as Zizek said. In the virtual reality technologies used in gastronomy, it is understood that the users will put the thought of whether a virtuality they like to experience or benefit from is real or not to the second place.

As a result of the continuous development of technology and the tools used by human beings, their view of the reality changes. It is thought to occur in a period when it becomes difficult to distinguish between reality and virtual. Virtuality is very much felt in daily life now. To understand virtual reality, it is necessary to know some concepts. One of these concepts is simulation. Baudrillard describes the simulation as a fake where the real values have been captured and the reality is replaced. According to him, simulation is not

exactly like the reality, it eliminates the difference between reality and fake. Therefore, it becomes difficult to guess which one is exactly real or fake. According to Baudrillard, it is possible to see things that we cannot see in real life in simulations. Based on Jean Baudrillard's simulation theory, simulation can be expressed as artificially re-designing the reality by means of a vehicle or computer. Simulating can be defined as trying to make something unreal seem real (Küçükvardar, 2015: 68). Today's virtual reality applications frequently use the logic of simulating the reality. In the use of virtual reality in gastronomy, there is an effort to perceive the virtual as real. If a virtual reality product is successful in this regard, a new reality emerges by eliminating the difference between virtual and real. As long as a dessert prepared for diabetics does not harm health and meets the reality, there does not appear to be a problem.

Development Process of Virtual Reality

It is thought that steps towards virtual reality systems were taken before the discovery of modern computers. A device invented by Albert Pratt in 1916 is known as the first "head-mounted display". In 1929, Edward Link invented the Penguin, the cabin simulator (Küçükvardar, 2015: 69). The first applications of the idea of virtual reality go back to Wiew-Master, a vision simulator produced in 1939, where the films placed inside can be watched as if in that environment with the help of light. (Sell & Sell, 1994). The flight simulator developed by Thomas A. Furness for the air force of his country in 1966 was another step of virtual reality technology (Aslan & Erdoğan, 2017). It is known that one of the milestones of virtual reality is a product called Sensoroma developed by Morton Heilig in 1962. In this product, a 3D stereoscopic image, stereo sound system, a body-shaking device and a mechanism that gives off scent have been designed in order to make the audience feel inside the events in the cinema or theater scene. A virtual environment has been created over the senses of sight, hearing, touch and smell, and the film can be watched on this machine (Robinett, 1994; Mazuryk & Gervautz, 1999). Morton Heilig, who saw theater as an activity that encompasses and activates all our senses, dreamed of the audience being able to feel the events happening on the screen or on the stage. Sensorama, which had features such as wide-angle 3D stereoscopic image, body wrapping mechanism, stereo sound output and aromatic scent oscillation, was shelved as of the year of its development, although it had all the equipment to include the audience in

the film, due to the lack of financial support (Atakul , 2019). The first example of helmeted screens used in the field of virtual reality was developed in 1968 by the American computer engineer Ivan Sutherland and his student Bob Sproull. Due to its heavy and frightening appearance, this helmet is known as the “Sword of the Damocles” and it is known that it is a source of inspiration for today’s modern virtual reality glasses (Bimber and Raskar, 2005). Regarding virtual reality, MIT University is known to provide the opportunity to virtually navigate the city of Aspen in Colorado in three different modes with a program developed in 1978 (Aslan & Erdoğan, 2017). “Virtual Boy”, released by Nintendo and Sega in 1995, is known as the first portable game console capable of providing three-dimensional images. This console creates a sense of depth through the effect known as parallax, ie distance angle (www.nintendo.com). Oculus Rift project, one of the virtual reality projects in our recent history, started in 2012 and it is known that it was acquired by Facebook in 2012. After being acquired by Facebook, Mark Zuckerberg stated in the press release that Oculus has the potential to create a great social platform and can radically change working life and communication. (www.oculus.com). Playstation VR introduced by Sony in 2014, HTC’s trump card in the virtual reality area HTC Vive, Samsung Gear VR enabling to be included in the virtual reality environment with the help of a mobile phone, LG 360 VR developed by LG, VIRTUIX OMNI allowing you to move freely in the game, resemble a treadmill and move, SpaceWalker VR, Control VR, which is a virtual reality glove that works in harmony with many platforms, are some of the glasses, game consoles and other virtual reality equipment developed especially for entertainment purposes in recent years (Atakul, 2019). It is known that in recent years, versions of virtual reality glasses that can appeal to the senses of vision and hearing have emerged, which can also appeal to other senses. In addition to products produced for commercial purposes, as a result of some scientific studies, products that are integrated with virtual reality technology such as glasses, caps, glasses, rings that aim to appeal to all sensory organs are produced. It is known that these virtual reality technologies are used in many areas in gastronomy, especially in restaurants.

Scientific Researches on Virtual Reality in Gastronomy

Since the concept of virtual reality is a current issue, it is known that researches on the use of virtual reality in gastronomy are new and have started to increase

more and more recently. It is seen that these researches focus on topics such as how to create a taste perception virtually and how virtual reality environments can change taste perception. Separate teams from the National University of Singapore and the University of Tokyo are known to have taken bold steps on virtual flavors lately. Nimesha Ranasinghe, of the National University of Singapore is a scientist working on virtual taste. It is known that Ranasinghe and his team managed to produce a taste simulator that simulates salty, sweet, bitter and sour flavors electrically and thermally. This taste simulator, developed by Ranasinghe et al. (2017), appears in the following years with the device called “Vocktail”. Vocktail is offered as an electronic cocktail maker device designed to simulate the senses. Produced by Nimesha Ranasinghe and his team from the National University of Singapore and designed to change flavors and increase intensity with the help of a phone application, the full name of this device is known as Virtual Coctail. When a liquid is placed in a Vocktail glass, the drinker can change three factors that affect its taste. First of all, an LED in the glass can simulate the color of the drink, and then, by using tongue stimulating electrodes placed on the part of the glass that touches the mouth, the beverage can be felt sweet, salty and bitter. Finally, a tube on the rim of the glass emits gases with different odors that can change the perceived taste. In addition to producing many flavor combinations, virtual drinks provide the opportunity to be satisfied without taking any calories by perceiving it as sugar water even when drinking only a sip of water (Revell, 2017). In addition to meeting the hedonic needs of projects that help simulate the senses such as Vocktail, it is possible to help especially healthy nutrition and use in some diets.

Regarding the system they called “Electric Food Texture System” in the project carried out by Arinobu Nijima et al. (2016) from Tokyo University, Ranasinghe told *New Scientist* that even though there is no food in the mouth, users felt as if they were chewing certain foods thanks to electrical muscle stimulation (Danigelis, 2016). These virtual reality apps are seen by researchers as important to help people struggling with dietary restrictions or who have lost the ability to taste flavors.

In a similar study, Karunanayaka et al. (2018) revealed that certain virtual tastes can be created in people with the help of electrical signals with the device called “Thermal Taste Machine”. At the end of the study, the team states that in the future, people will be able to share with each other remotely using thermal flavors, and this technology will simulate the reality of all five senses, creating

opportunities in subjects such as computerized interaction, games, medicine, education and online shopping.

A group of food scientists from Cornell University conducted research using virtual reality to show how people's perception of food can be changed by their environment. In the research, about 50 panelists who used virtual reality headsets as they ate were given three identical samples of blue cheese. The study participants were virtually placed in a standard sensory booth, a pleasant park bench and the Cornell cow barn to see custom-recorded 360-degree video, where they could taste the cheese in virtual environments. The participants are unaware that the cheese samples are the same. As a result of the tasting, it was rated that the cheese in the virtual reality environment of the cow barn has a significantly sharper taste than the cheese in the other two environments. Robin Dando, one of the researchers, explains the situation that emerged as a result of the research as "when we eat, we perceive not only just the taste and aroma of foods, we get sensory input from our surroundings—our eyes, ears, even our memories about surroundings" (Stelick et al., 2018). As Dando stated, it is thought that environmental stimuli can change the taste perception and this situation can turn into many useful products and services as a result of the appropriate use in virtual reality technologies.

Torrico et al. (2020) worked with 53 participants in a study investigating the effects of virtual reality environments used during wine tasting on consumers. Participants tasted in three different real restaurant settings, including "brightly lit VR restaurant environment" and "dark VR restaurant environment with dim candles". At the end of the study, the emotional reactions of the consumers in the brightly lit virtual VR restaurant environment were associated as "emotional", "satisfied" and "enthusiastic". The reactions in the dark VR restaurant environment with dim candles have been associated with "nostalgic" and "daring". Based on these results, the researchers stated that the use of VR technologies in gastronomy can be used to understand the effect on consumer perceptions.

Pennanen et al. (2020) from the VTT Technical Research Center examined whether a variable virtual eating environment changes the emotional responses (positive, negative, neutral) of individuals towards the desire, liking and hedonic evaluation of healthy and unhealthy snacks. In the study, it was observed that the participants had picnic experiences in an empty control environment and in two different virtual reality environments (sunny and rainy). It was observed

that the participants felt more cheerful and peaceful in the sunny environment, and lonely and anxious in the rainy environment, and were less sure about the attractiveness of the healthy foods while finding chocolate attractive on a rainy day. As a result of the research, the researchers stated that virtual reality technologies have the potential to improve the evaluation of food products, increasing the eating experiences of consumers and supporting healthy food choices. The result of this research reveals that virtual reality technologies such as Vocktail can be an important alternative for healthy eating as well as meeting hedonic needs.

Virtual Restaurants

Restaurants innovate in their services by using science and technology in order to make the eating and drinking experience extraordinary. Some of these innovations are that restaurants create a multi-atmosphere by using technology, offer services by combining virtual images with real images, try to appeal to all senses while serving, thematic dishes that make you feel they are in the same environment by being in different places, as well as e-menu and edible menus (Aksoy & Akbulut, 2017). There are half a dozen restaurants in the world that aim to activate customers' sensations with the help of a theatrical setting by using technological facilities, including virtual reality technologies, and most of them are located in the Asian continent, especially in Japan and China. Moonflower Sagaya Ginza in Japan, Ultraviolet led by Paul Pairet in Shanghai and Liangshe Night Banquet opened in 2018, Sublimotion led by Paco Roncero in Ibiza and The Gastrophysics Chef's Table in London are some of the restaurants aiming to appeal to all senses. The understanding of "experiential eating", which has an important place in today's gastronomy industry and contemporary entertainment understanding, emerges with the use of multisense technologies by the mentioned restaurants (Yemsi-Paillisse, 2020). Virtual reality enables restaurants to offer another world and an unforgettable dining experience. These restaurants combine virtual and physical reality to provide fun dining and story-driven experiences. When you wear a VR helmet, it is possible to see fashionably dressed animals roaming around you or the seasons changing as you eat. In some of the restaurants where virtual reality applications are used, there are different applications such as serving only for dinner, serving the main meal on the first floor and dessert on the second floor, having only one dining

table, and individual waiters. Using virtual reality technologies successfully, restaurants serve with the logic of instantly changing the environment so that people can have a good time while eating. Changing the environment can be done economically because it is faster and not permanent with virtual reality technologies. At the same time, thanks to this technology, environments that are impossible or very difficult to encounter in daily life can be created. It is thought that all these situations will increase the level of satisfaction in people and bring the eating experience to better levels.

It is known that Italian artist Mattia Casalegno created a virtual reality dining experience project named Aerobanquets in 2018, inspired by the Italian “Futurist Cookbook” published in 1932. With the collaboration of James Beard Foundation and Rahi and Adda’s chief partners, Chintan Pandya and Roni Mazumdar, the project provides an eating experience in a virtual world, which the participants find very impressive, with the help of personalized waiters. During this experience, virtual reality helmets are worn and the images of the food and the environment and sounds are simulated (Yan & Corino, 2019), (www.aerobanquets.com). The Aerobanquets RMX experience is seen as an alternative, especially for those who want to experience different gastronomic experiences. After deciding to experience the Aerobanquet experience together with Rene Brinkley of CNBC, gourmet and video game enthusiast Hannah Kulczak, who decided to celebrate a birthday with a culinary experience she had never seen in reality, stated that she will never be able to look at food in the same way again, and that Aerobanquets is one of the best food and flavor experiences she has ever had (www.cnbc.com).

It emerges as an important factor in creating a physical environment with distinctive features from its competitors in providing competitive advantage for businesses in the service sector. Physical environmental factors are known to be an effective factor in attracting the consumer and increasing customer satisfaction, loyalty and therefore operating income (Ryu & Han, 2011). According to the Gestalt Approach, when a customer enters the restaurant, he perceives, interprets and evaluates the restaurant as a whole, not by separating it according to components such as tables, chairs, covers, decorative products, personnel, sound, light and smell (Mil, 2012). For this reason, the physical environment elements must be in harmony together. Kotler (1973) defines the concept of physical environment as the conscious design of the physical space in order to create special emotions in consumers and increase their purchasing possibilities.

In addition to solving problems, eating is considered as entertainment, fantasy or seeking pleasure for some customers (Hirschman & Holbrook, 1982). The pleasurable benefit of eating experience is considered as a complement to functional benefit (Mort & Rose, 2004). Today, physical environment elements are seen as an important factor as well as the taste and presentation of food in a restaurant. Restaurant businesses need to take into account physical environment aspects in providing customers with a memorable experience. In the study of Ayazlar and Gün (2017) in which they evaluate the physical environment elements in restaurants, DINESCAPE (physical environment and space created by individuals in restaurants) scale developed by Ryu and Jang in 2005 was used. This scale is known as a scale that is handled in six dimensions: facility aesthetics, lighting, ambiance, layout, table layout and service personnel (Ryu & Jang, 2005). Researchers have determined that there is a significant relationship between the cost of spending and satisfaction of luxury restaurant customers and the physical environment elements and that the most perceived physical environment element by the customers is the ambiance. As can be understood from the results of this research, changing the ambiance thanks to virtual reality technologies will contribute to the increase of satisfaction level and customer retention. Charles Spence, an experimental psychologist at Oxford University and in charge of the Crossmodal Research Laboratory, states that food-related companies cannot only compete with taste but should also focus on experience (www.cnbc.com).

Gastronomy Related Virtual Reality Projects

There are projects and systems produced for different purposes other than virtual reality technologies, which are mostly used in order to meet the hedonic needs of the customers and to make profit themselves. It is known that there are virtual reality projects that claim to provide solutions to health problems related to eating and drinking at the same time that businesses can make a profit. In addition, there are many companies that take them to virtual worlds in order to provide information to their customers about their production processes and to increase the reliability of the company. For example, some fast food companies cooperate with companies that produce VR equipment in order to provide consumers with a first-class farm experience in their farms in the UK and Ireland. In projects created as a result of this cooperation, consumers are included in the

environment with 360-degree videos, from the source of the work to production, preparation and cooking. Thus, it is aimed that consumers can see the stages and unknowns of food production with the help of virtual reality (Brazier, 2016). It is considered very valuable for companies that use virtual reality technologies within the framework of transparency to inform their customers about their production processes in a fun way. In this way, it is thought that a bond of trust and continuity between companies and consumers will be provided. Some companies, on the other hand, offer their customers virtual production experience with the applications they prepare for their production processes. An example of this is the virtual reality training video of a fast food company providing chicken products that teaches consumers how to fry chicken (www.cnbc.com). Some companies even use it as a training tool for new and potential workers. In addition to its potential to be used as an educational tool, there are also digital games that are played for entertainment purposes, using virtual reality equipment. In these games, the user can experience the exact measurements of the tools and environment in the real working environment with virtual reality glasses. As soon as the user enters the environment, he tries to complete the applications related to work flow and procedures. This can be compared to a game in which the tasks are tried to be completed (www.wackystudio.com). Again, in some of these types of games, the person has the opportunity to freely cook in a kitchen environment using virtual reality glasses and gloves (www.jobssimulatorgame.com). It is known that some technology companies produce gloves that can detect the size of objects and can be used in harmony with virtual reality. It is thought that the possibility of detecting the dimensions of objects through virtual objects can be used especially for educational purposes in gastronomy. In the field of gastronomy, the use of virtual reality applications for training purposes comes with benefits such as gaining, increasing and making fun of skills. In the study of Aran et al. (2018) examining the effect of virtual reality applications on gross motor skills in children with cerebral palsy, virtual reality games were applied to children to improve their motor skills. It was stated that the 30-minute application once a week helped positive change in the gross motor behavior of children in the 4th week, and the development continued as a result of the application of this change for 8 weeks. Again, in a study conducted by Altun and Kahveci (2019) on students with learning difficulties, it was determined that the use of virtual reality was effective in drawing attention and increasing the level

of learning. Research results support that virtual reality technologies can have positive effects on gastronomy education.

According to Edgar Dale, an American educator who developed a theory known as “The Cone of Learning”, the more an activity appeals to the sensory organs, the better the feeling left by the activity due to learning (Seferoğlu, 2006). Based on the learning or life pyramid of Edgar Dale, it can be said that purposeful experiences that are acquired directly by using demonstrations, dramatization, models and samples in which all sensory organs are active increase the recall rate and sense of life to 90% (Saad et al., 2014). Virtual reality technologies such as virtual reality experience programs and occupational simulations work with the principle of appealing to as many sensory organs as possible, or activating the senses to the maximum, as in Dale’s pyramid. From this point of view, it is thought that the use of these programs in gastronomy education with models and samples closest to the reality will be beneficial for learning.

In some projects where virtual reality and molecular kitchen applications are combined, different experiences and opportunities are offered to people. In one of these projects, by copying existing foods, for example, a food item that is perceived as chocolate balls with the effect of the equipment used can actually have different appearance and nutritional values. The team running the project said that they could bring a new perspective to the food activity that enables people to connect with others, improve emotional well-being, and even identify identity, reduce dependence on physical resources and greenhouse gas production by partially simulating or increasing the tasteful qualities of food through digital means, and that such projects can help people not eat alone. (www.projectnourished.com; Dutta, 2018). In addition to simulating our senses, the most important advantage of such projects is seen as providing the opportunity to eat in the same environment with people who are far away. In this case, it seems possible to solve some social problems while eating. Outbreaks such as Covid-19, which spread from China to the whole world and turned into a pandemic in 2019, necessarily put distances between people. It is known that many activities in daily life such as working life, education, theater, concerts during the pandemic process are carried out remotely with the help of technological products. In fact, this situation shows the necessity of virtual reality technologies and the necessity of being developed and adapted to daily life. During the pandemic process, the compulsory remote activities, especially regarding gastronomy, will be able to be performed remotely with much more

advanced versions of virtual reality technology in the future. However, this time it is thought that this technology can be used for hedonic purposes besides necessity. Eating alone may be the problem of some parts of Asia today, but it may be the problem of the whole world in the future, as in the Covid-19 pandemic process. Here, taking advantage of the power of virtual reality technologies will help solve many problems.

Result

When looking at the ideas and theories put forward about reality, it is understood that it is difficult to make a distinction and grouping. As a matter of fact, it is seen that even Einstein and Quantum physicists who claim that reality is variable differ from each other. No matter how different ideas and theories are put forward about reality, it is understood from the examples that today's virtual reality technologies follow a line to simulate sensations. It is understood that some of the virtual reality technologies used in gastronomy today appear as marketing factors. While virtual reality technologies or smartphone applications used in restaurants make people feel good, they actually focus more on businesses' gain. Some virtual reality products used in gastronomy, on the other hand, enable businesses to gain profit and focus on the solution of some health problems associated with eating and drinking. Some virtual reality products are seen as projects that can be very useful when used for educational purposes in gastronomy. It is understood that the understanding of making profit while serving people lies at the center of a significant part of these technologies. It can be said that the rest are studies conducted by scientists, that are not involved in marketing and focus on problem solving. From this point of view, it is thought that consumer behaviors should be understood well in marketing-oriented virtual reality studies. Because the behavior of consumers is seen as very important for the continuation of the use of a product. While the virtual reality technologies used in gastronomy simulate the senses closest to reality, the naturalness element is thought to be very important. The natural element focuses on how believable everything is in virtual reality technologies. In the phenomenon of naturalness, the user should not be disturbed by virtual reality products. It is often thought that a heavy headdress and a heavy dress can destroy the sense of naturalness and cause a distance from reality. Likewise, delays that may occur during the use of virtual reality systems will prevent the perception of the sense of reality.

It is important for the operators using this technology to be able to appeal to as many senses as possible in order for consumers to obtain the sensations they want as close to reality as possible.

It is known that one of the questions about virtual reality technologies is how much these technologies can represent reality. This is also true in gastronomy. When a liquid is drunk that can simulate sensations of color, smell and taste to certain degrees, is it sufficient for the drinker to perceive it as real? The answer to this question will depend on the opinion of the people who think about reality. Some of the most important thinkers of the last century stated that replicas of reality create a new reality, while others point out that reality is variable. From this point of view, it is believed that it is important how much truth is perceived by the people using it rather than how much it is represented. The existence of a world where consumers using virtual reality technology in gastronomy create their own realities beside reaching reality is also important.

It is thought that it is possible to benefit from the benefits of virtual reality technologies in the pandemic process of infectious diseases that cause people to move away from each other, such as Covid-19. In a world where the use of virtual reality and products produced in gastronomy has become widespread in recent years, it is thought that solutions can be produced for the problem of people not being able to socialize. It is known that virtual reality technologies have been developed where people can eat with other people and experience different tastes without leaving their home or away.

It seems possible to benefit from the power of virtual reality technologies in the treatment of food-related diseases, based on the studies presented. There are examples of virtual reality technology where the physical properties of foods that are objectionable to eating in terms of nutrient content can be simulated virtually. It is thought that further development of such technologies will have many benefits in terms of public health.

Today, it is thought that there is a perception that a significant part of virtual reality technologies appeal to the sense of sight and hearing in the form of virtual reality glasses. However, it is seen that there are virtual reality studies aimed at simulating all senses in gastronomy, especially by scientists and some companies. Researchers have a duty to prevent virtual reality technologies from being seen as entertainment tools in society. When the literature is examined, it is thought that the studies on the examination of virtual reality technologies used

in gastronomy and their effects are not sufficient. From this point of view, more scientific studies need to be done in order to understand virtual reality.

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