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Chapter 1

ESTIMATING STATURE OF ANATOLIAN POPULATIONS FROM NEOLITHIC PERIOD TO OTTOMAN PERIOD

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Introduction

Anatolia has been settled by a lot of different civilizations due to its geographic position. It has been hosting humans for at least 1.2 million years and different parts of it has been populated by different groups. The early attempts to work on these ancient populations go back to early 30's by the first biological anthropologists in Turkey (Günay and Şarbak, 2015). From these first studies up to today, the number of anthropology departments and biological anthropologists has been increasing day by day and thus the osteological studies as well.

In the last 90 years (from 1930 to 2019), numerous studies focused on anthropological analyses of skeletal material of ancient populations. Although the early studies just focused on the fundamental data such as age and sex of the individuals, later studies reveal much more data from the skeletal material. One of these data is estimation of stature. It is one of important characteristic feature of individual and very important for paleoanthropological and forensic anthropological studies. Numerous methods have been proposed but the most commons are Pearson (1899) and Trotter and Glesers's (1952) methods. Turkish studies generally focused on these two methods. Furthermore, another method, which was proposed by a Turkish scholar, has been used (Sağır, 2000) in some of Turkish studies.

Although a lot of studies involve stature information about the relevant ancient populations, just two studies focused on review of stature data from ancient periods. Güleç (1989a) examined the stature of ancient Anatolian individuals from 60 different studies. She presented the results in two tables, one for Pearson formula and one for Trotter and Gleser formula. After taking the average of these two tables, the average stature is calculated as; 169.8 (male) and 157.3 (female) for Neolithic period, 165.6 (male) and 154.1 (female) for Chalcolithic period, 165.9 (male) and 158.8 (female) for Bronze period, 167.9 (male) and 154.3 (female) for Iron period, 162.3 (male) and 157 (female) for Hellenistic-Roman period, 168.9 (male) and 157.1 (female) for Byzantine period and 167.7 (male) and 158.5 (female) for Ottoman period in Güleç's study.

Another study also focused on the stature estimation of 34 different ancient Anatolian populations and they also used the stature data of living Anatolian individuals (Koca Özer et al., 2011). This study is just focused on the stature estimations which are taken from Trotter and Gleser formula. In this study, the average stature is calculated as; 170.9 (male) and 156 (female) for Neolithic period, 165.8 (male) and 154.8 (female) for Chalcolithic period, 165.6 (male) and 157.2 (female) for Bronze period, 170 (male) and 158.4 (female) for Iron period, 165.3 (male) and 155.7 (female) for Hellenistic-Roman period, 169.5 (male) and 158 (female) for Byzantine period.

Our aim is to expose the stature of ancient Anatolian inhabitants after an extensive literature examination. Although Güleç's and Koca Özer's studies revealed important results on this theme, much more detailed literature examination is conducted in this study and thus it is likely to give more precise results because of high number of sample size.

Material and Methods

This study is based on a very intensive literature search. Totally, 542 articles were investigated and 114 of them were used for this research. Although some of other articles have stature data, they are excluded since the dating of the skeletal materials are not clearly represented. After this intensive search, 114 articles were carefully examined and the relevant data recorded to Excel for calculation. The data is analyzed according to time periods. The time periods are determined as the generally used time period in Anatolian history. These are; Neolithic (Beginning of the Neolithic-5000 BC), Chalcolithic (5000-3000 BC), Bronze Age (3000-1200 BC), Iron Age (1200-550BC), Hellenistic-Roman (323 BC-395 AD), Byzantine (395-1453) and Ottoman (1299-1923). The whole data separated and examined in their own time periods. Totally 123 studies were used in this research and the number of studies per period is given in Table 1 (The number of articles (114) and the studies (123) are not same since some articles focus on more than one period). Bronze period is the best represented period according to number of studies (Table 1) whereas Byzantine period has the largest sample size (Table 2).

In some articles, the exact number of individual are not given. In these cases, the number of individual is taken as '1'. Hence, the number of individual, which is given in Table 2, is the minimum number of individuals, whose statures were estimated. Table 2 shows average stature per period as well.

Table 1. Number of studies, used in this research, per period.

Period	**NoS**
Neolithic	17
Chalcolithic	9
Bronze	28
Iron	18
Hellenistic-Roman	18
Byzantine	27
Ottoman	6
Total	**123**

Results

- Neolithic: 17 different studies from 10 different archaeological sites were analysed (Alpaslan Roodenberg, 2001, 2002a, 2008, 2011; Alpaslan Roodenberg and Maat 1999; Alpaslan Roodenberg et al., 2013; Alpaslan-Roodenberg and Roodenberg, 2020; Ferembach, 1970; Molleson et al., 1996; Molleson et al., 2005; Özbek, 1988, 1992, 1998, 2000; Sevim Erol et al. 2011; Şenyürek,1958). The average stature is for males 165,5 (n:117) and for females 155 (n:136).

- Chalcolithic: 9 different studies from 6 different archaeological sites were analysed (Alpaslan Roodenberg, 2011; Erdal and Erdal, 2017; Kansu, 1937a; Roodenberg et al., 2008; Şenyürek, 1949, 1950, 1954, 1955; Şenyürek and Tunakan, 1951). The average stature is for males 165 (n:14) and for females 153,7 (n:11).

- Bronze: 28 different studies from 26 different archaeological sites were analysed (Açıkkol, 2000; Açıkkol et al., 2003; Açıkkol Yıldırım et al., 2014; Alpaslan Roodenberg, 2002b; Angel, 1970, 1986; Başoğlu and Erkman, 2015; Başoğlu and Şener, 2015; Çiner, 1963, 1964, 1965a, 1967; Kansu, 1937b, 1939; Kansu and Atasayan, 1939; Kansu and Ünsal, 1952; Özer et al., 2012; Sağır et al., 2011; Satar et al., 2009; Sevim et al., 2004; Surul et al., 2012; Şenyürek, 1952; Tunakan, 1965; Kansu and Tunakan, 1946; Üstündağ, 2015; Wittwer Backofen, 1986, 1987; Yaşar et al., 2012). The average stature is for males 166,1 (n: 121) and for females 157 (n: 110).

- Iron: 18 different studies from 14 different archaeological sites were analysed (Açıkkol Yıldırım et al., 2014; Angel, 1951, 1973; Çiner, 1965b; Gözlük, 2003, 2005; Güleç, 1986, 1989b; Güleç et al., 1998; Güleç et al., 2005; Kansu and Tunakan, 1948; Sağır et al., 2004; Sevim et al., 2007; Sevim et al., 2007; Tunakan, 1964; Yılmaz et al., 2009; Yiğit et al., 2005; Yiğit et al., 2008). The average stature is for males 166,4 (n: 79) and for females 157,1 (n: 73).

- Hellenistic-Roman: 18 different studies from 17 different archaeological sites were analysed (Akbacak and Gözlük Kırmızıoğlu, 2018; Angel 1951; Başoğlu et al., 2011; Çırak, 2015; Çiner, 1971a, 1972; Gözlük Kırmızıoğlu et al., 2009; Güleç, 1990; Güleç et al., 2006; Güleç et al., 2009; Özbek, 2006; Özbek and Erdal,, 2000; Özer et al., 2012; Sağır et al., 2013; Sevim, 1996, 2006; Şahin et al., 2015; Wittwer Bakcofen, 1987). The average stature is for males 165,8 (n: 67) and for females 157,3 (n: 44).

- Byzantine: 27 different studies from 24 different archaeological sites were analysed (Alkan et al., 2014; Alpagut, 1980; Alpaslan Roodenberg, 2009; Başoğlu et al., 2012; Çiner, 1963, 1969, 1971b; Demirel, 2016;

Erdal, 1991, 2000; Gözlük et al., 2006; Gözlük Kırmızıoğlu et al., 2009; Güleç and Özer, 2009; Kansu and Çiner, 1968; Kaya, 2020; Nalbantoğlu et al., 2000; Özbek, 1984; Özer, and Sağır, 2012; Özer et al., 1999; Özer et al., 2016; Sevim et al., 2005; Sevim et al., 2007; Sevim et al., 2011; Steadman et al., 2015; Üstündağ and Demirel, 2008; Yılmaz and Acar, 2018; Yiğit et al., 2008). The average stature is for males 168,1 (n: 405) and for females 154,9 (n: 262).

- Ottoman: 6 different studies from 5 different archaeological sites were analysed (Alpagut, 2001, 2002; Erdal, 2011; Güleç, 1989c; Köroğlu and Gözlük Kırmızıoğlu, 2017; Yiğit et al., 2010). The average stature is for males 164,2 (n:43) and for females 155,8 (n: 41).

Table 2. Average statures per period for both sexes.

Period	n	Male	n	Female
Neolithic	117	165,5	136	155
Chalcolithic	14	165	11	153,7
Bronze	121	166,1	110	157
Iron	79	166,4	73	157,1
Hellenistic-Roman	67	165,8	44	157,3
Byzantine	405	168,1	262	154,9
Ottoman	43	164,2	41	155,8

As it is shown in Fig. 1, there is not gradual increase or decrease from Neolithic to Ottoman period.

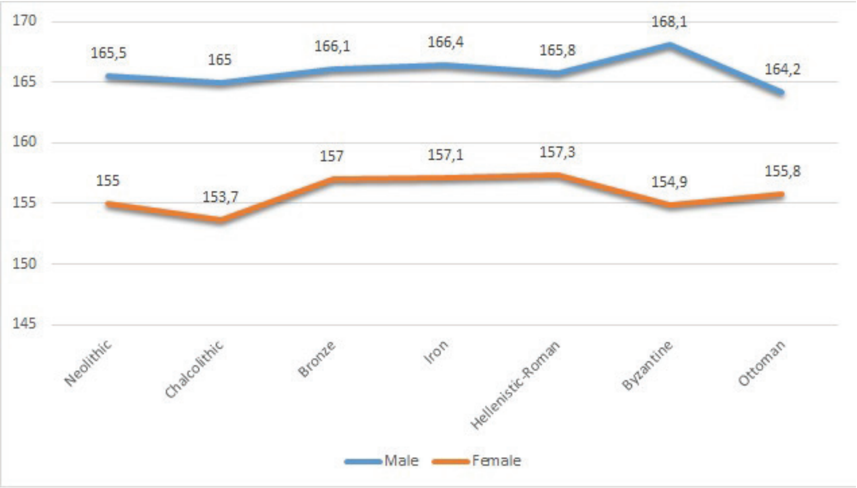

Figure 1. Height changes in ancient Anatolian Populations.

Sexual dimorphism is 10,5 cm for Neolithic, 11,3 cm for Chalcolithic, for 9,1 cm Bronze, 9,3 cm for Iron, 8,5 cm for Hellenistic-Roman, 13,2 cm for Byzantine, 8,4 cm for Ottoman (Table 2) and the average is 10.04 cm for total sample.

Discussion

Estimating the stature of individual is one of the key concepts of biological anthropology studies. After estimating the individual's stature, average stature of the populations or periods can be calculated and thus, secular changes can be determined throughout history. It is also very important to make a profile of victim in forensic investigations. Modern day Turkey has been populated at least 1.2 million years by different groups. Especially with the beginning of the Neolithic, the population of Anatolia increased very fast and reached up 83 million people today. Nowadays, the demographic data, as well as average stature, of Turkish population is evaluated via Turkey Health Interview Survey by Turkish Statistical Institute. Today, average stature is 173,2 cm for males and 161,4 cm for females (turkstat.gov.tr, last data from 2016).

There are very clear evidences that the average stature has been increasing over the years in all over the world. The situation is same in Turkey as well and the results of Turkey Health Interview Survey clearly point out it (Table 3). Although our results do not show a gradual increase from older period to younger one in stature, it is important to remember that stature values depend on just skeletal material represent the individuals whose long bones were preserved. Another important fact, which has to be mentioned, is the effects of aging on bones. It is known that the average stature decreases with age (0.06 per year after 30 years; Trotter and Glesser, 1951). When we combine this information together with the fact that average age is much lower than today in ancient populations, it would not be wrong to say that difference between ancient Anatolian population and present day Turkish populations would be higher.

Table 3. Turkey Health Interview Survey results, T: Total average, M: Male, F: Female (adapted from turkstat.gov.tr, 03.01.2020).

	2008			2010			2012			2014			2016		
Age	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Total	167,2	172,4	161,5	167,2	172,6	161,4	167,6	173,1	161,8	166,9	173,0	161,0	167,2	173,2	161,4
15-24	167,8	173,2	162,4	167,5	172,7	162,1	168,2	173,5	162,8	168,2	174,3	162,2	168,4	173,9	162,7
25-34	168,7	174,1	162,7	168,8	174,7	162,5	169,1	175,0	162,8	168,7	175,2	162,3	169,1	175,5	162,8
35-44	167,4	172,7	161,5	167,8	173,2	161,7	168,0	173,5	162,1	167,5	173,8	161,2	168,1	173,9	162,2
45-54	166,3	170,9	160,7	166,4	171,3	160,8	166,9	171,9	161,4	166,2	171,5	160,8	166,5	172,2	160,7
55-64	165,8	170,5	160,3	165,1	170,1	159,6	165,9	171,2	160,2	165,1	170,8	159,5	165,5	171,2	160,0
65-74	164,5	169,7	159,0	164,9	170,4	159,6	164,7	169,9	159,4	163,6	169,3	158,9	164,1	170,1	158,9
75+	162,7	168,8	157,2	163,0	167,9	157,8	162,5	168,6	157,5	161,6	168,9	156,8	161,3	168,3	156,7

When we compare actual data with the data from Neolithic period, it can be seen that average stature has been increased 7,7 cm for males and 6,4 for females in last 12.000 years. Actually, if we remember that the there is no big change in average stature from Neolithic to Ottoman period, it can be realized that this increase (7,7 cm for males and 6,4 for females) took place after Ottoman period.

Another result of this study is about sexual dimorphism. The average difference between the sexes calculated 10.04 cm for whole sample. According to Turkstat data, it is 11.8 cm in actual Turkish population. This value is higher than all periods except Byzantine (13.2 cm in Byzantine period). So it would not be wrong to say that sexual dimorphism has a tendency towards increase over the periods.

Before this study, two other studies demonstrated the stature information of ancient Anatolian populations (Güleç, 1989; Koca Özer et al., 2011). When we compare the whole data, it can be seen that the results of this study are lower than the other two studies (Table 4) and Koca et al.'s values are the higher ones, especially in Neolithic period. One possible reason is the formula for the estimation. Koca et al. used the stature data from Trotter andGlesser estimation formula. It is very obvious and can be easily seen in the relevant articles that the stature values always higher in Trotter and Glesser's estimation than Pearson estimation. For that reason, the values in Koca et al.'s publication is higher than our results since average of all formulas were used in this study. On the other hand, when we compare the sample size of these three studies, the sample size of this study much more than the other ones. The greater sample size tends to give more accurate results as a statistical fact.

As conclusion, the results show that there is not significant fluctuation from Neolithic to Ottoman period in respect of average height for both sexes. Significant change occurs after Ottoman period and the tendency is towards to increase of height in Turkish population.

Table 4. Comparasion of three studies on height changes in ancient Anatolian Populations. A: Güleç's study (1989), B: Koca et al.'s study (2011), C: This study.

	Male			**Female**		
Period	A	B	C	A	B	C
Neolithic	169,8	170,9	165,5	157,3	156	155
Chalcolithic	165,6	165,8	165	154,1	154,8	153,7
Bronze	165,9	165,6	166,1	158,8	157,2	157
Iron	167,9	170	166,4	154,3	158,4	157,1
Hellenistic-Roman	162,3	165,3	165,8	157	155,7	157,3
Byzantine	168,9	169,5	168,1	157,1	158	154,9
Ottoman	167,7	X	164,2	158,5	X	155,8

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Chapter 2

FINANCIAL AWARENESS IN QATARI SOCIETY: A STUDY FROM THE PERSPECTIVE OF SOCIAL WORK

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Introduction

The interest in financial knowledge, economics, and financial education is one of the essential things that individuals must be familiar with to have a decent life. In the recent period, the lack of financial awareness, poor planning, income management, and ignorance of financial products has been widespread among some members of the society. That led to the emergence of irrational behaviors in consuming, purchasing, and investing, which led to the deterioration of their economic situation. Hence, it caused them to take an advance or debt from other individuals or banks, which results in many social and economic problems that may lead to a deterioration in their mental health.

Awareness in this regard is defined as “the level of information available to consumers about a particular commodity” (Federation of Arab Securities Authorities, 2018). It also identifies as a set of necessary knowledge and skills that enable informed decisions to be taken regarding financial matters. That is to say, the ability to select and understand appropriate options related to financial affairs management, compliance with credit conditions, and familiarity with credit standing. (Emirates Banks Association)

Financial knowledge plays a fundamental role in the lives of individuals, families, and the community in general. Knowledge of financial affairs and awareness in them contribute to building an economically coherent society, which leads to provide a decent life for its individuals and reach a level of social welfare. To reach this, international attention has increased to reach the level of financial inclusion that seeks to enable companies and individuals to access beneficial and affordable financial services and products that meet the needs of individuals in securing credit, savings, payments, and transactions and present them sustainably and responsibly (World Bank, 2019).

Nearly 60 countries have taken the initiative to develop national financial inclusion strategies, and some of them have put in place legislation to help organize the strategy creation process. About 122 global financial institutions have joined the Global Financial Inclusion Alliance, and about 47 developing countries have committed to promoting financial inclusion. In order to achieve financial inclusion, there are several things that must be developed, such as financial education, which is one of the main elements contributing to attain financial inclusion (Arab Monetary Fund, 2015).

Although the Arab countries have made significant progress in terms of financial education and financial inclusion initiatives thanks to the joint efforts between governments, non-profit organizations, central banks, and banks, however, Arabic countries are still lagging behind other regions. Statistics show that only 30% of the adult Arab world population has appropriate financial knowledge. Statistics also indicate a gap between females and males about financial awareness in the Arab countries, where males reached an average of 33.5% in financial knowledge compared to 27.7% among women (Federation of Arab Banks, 2017).

Many Arab studies did not address the issue of financial awareness previously. So, there are not many old statistics that can determine the extent of the problem in the Arabic region. That is prompted some Arabic researchers to do some research on this topic, where (Al-Sayegh, 2017) conducted a study entitled "Measuring Financial Awareness: A Study of a Sample of Iraqi and Arabic Universities." Financial awareness is assessed by a measure of the curriculum in the Banking and Financial Sciences departments and the number of hours it has in ten Arab universities, and it's revealed that there is a malfunction in the financial awareness of the sample members.

Social Work plays a significant role in solving problems resulting from the lack of financial awareness and developing the economic and financial capabilities of individuals. In this research, the Financial Social Work will be highlighted, as many books and studies, especially Arabic ones, did not cover it also, because it is considered as the best field for solving the problem of the absence of financial awareness among members of society, which will be covered in this research.

Since social workers regularly work with individuals who face financial difficulties, they can build the financial capabilities of their clients well. There are indications that there is a growing interest in social work in exerting efforts, researching, and teaching about the issue of financial ability. The University of Maryland School of Social Work launched an Initiative in 2009 to offer a certified program in Financial Social Work, describing it as preparing a social worker to "enhance economic stability and financial well-being for individuals, families, and communities, with special attention to the vulnerable population." To enhance the financial capacity of low-income earners, the Commission for Sustainable Development has adopted a multidisciplinary approach. Since the committee's inception, it has worked with psychologists, sociologists, anthropologists, and economists to conceptualize and implement asset policies. Social workers participated in this program in providing credit counseling services and financial education. Despite the large number of evidence indicating the participation of social workers in building and developing financial capacity, many of them lack the skills to enable them to do so. This is due to the few schools of social work that offer content related to personal finance. However, there are studies that prove the competence of social workers in building the financial capabilities of clients by employing social work methods for that. (Despard & Chowa, 2010)

Components and basics of financial, social work

Financial Social Work is an approach like other approaches and theories, as it is based on elements and foundations that help the social worker that adopting this approach in identifying the problem and determining ways to deal with it at all levels of professional intervention.

- Psychosocial aspects of money: Ideas, feelings, and attitudes toward money are essential, explaining how a person relates to his money often. Where his unconscious and conscious thoughts, his feelings and attitudes toward money are reflected in all his financial decisions and on how to spend, save or not save. Most of the individual's financial attitude is shaped in childhood through messages that come from role models. Insighting into why, when, where and how an individual's feelings and thoughts have become rooted in their belief system, helping them to make financial choices that will enhance their financial future.

- The relationship with money: the individual's relationship with their money is deferent from their financial circumstance, but there is a correlation effect between them. An unhealthy relationship with money leads to unhealthy financial circumstances.

- Financial Behavior: the relationship with money drives financial behavior and financial conditions. So, the knowledge of an individual's relationship with money is important, and it reveals where and how he can start controlling his money and his life. Fear of financing, for example, avoids money management behavior that has negative consequences.

- Financial information and knowledge: One of the reasons why people struggle financially is the lack of financial information and knowledge. (Hassan, 2015)

This research paper addressed a descriptive study of financial awareness among a sample of 43 Qatari individuals who receive financial aid from Qatar Red Crescent. The study also sought to uncover the relationship between social media and the absence of financial awareness. Many studies have proven a relationship between social media and consumer behavior, which is an integral part of financial awareness. For instance, "The Impact of Social Media Ads on the Purchasing Behavior of Kuwaiti Consumers: An Empirical Study on Kuwaiti Society" (Muhammad, 2016). Also, a study entitled "The social media role in the consumption behavior of the family in the city of Riyadh" (Al-Enezi, 2017). A study entitled "Teenagers' use of E-shopping pages on Facebook and its relationship to their purchasing behavior" by (Nasr, Badr Al-Din and Aqeeli, 2017). This study also sought to shed light on the role of social work in facing these problems.

Importance of this study

- The research deals with an important social and economic problem that affects the lives of some members of society, which is the absence of financial awareness.
- This study attempts to show the role of social work in contributing to reduce this problem.
- This research shows the importance of spreading financial awareness, especially among youths in society, in order to have a youth power capable of managing its matters rationally, which contributes to the community's advancement.
- This research deals with the issue of financial awareness, which is one of the problems that have not been dealt with much by social researchers before, which gives it particular importance.

Study hypotheses

- There is a statistically significant relationship between the high standard of living and the absence of financial awareness.
- There is a statistically significant relationship between the use of social media and the absence of financial awareness.
- There is a statistically significant relationship between demographic variables (gender, age, education, work, social status, number of family members) in the extent of financial awareness.

Results

Table (1): Gender

	Frequency	Percent
Male	15	34.9
Female	28	65.1
Total	43	100.0

Table (1) shows the gender of the sample to which the study was applied on, as the percentage of males reached 34.9%, which is the lowest percentage. In contrast, 65.1% of females are considered to be the largest in the sample, as they were 28 out of 43 clients who benefit from financial services provided by the Qatari Red Crescent.

Table (2): Status

	Frequency	Percent
Married	26	60.5
Single	5	11.6

Widower	6	14.0
Divorced	6	14.0
Total	43	100.0

Table (2) shows the social status of the sample members. The percentage of married couples reached 60.5%, which is the largest percentage in the sample—followed by the percentage of widows and divorced clients, where their proportions were equal in the example, reaching 14.0%. Then the percentage of singles with 11.6%, which is the lowest in the sample.

Table (3): Family member

	Frequency	Percent
2	2	4.7
3	3	7.0
4	3	7.0
5	3	7.0
6	17	39.5
7	5	11.6
8	5	11.6
9	3	7.0
10	2	4.7
Total	43	100.0

Table (3) shows the number of family members of the respondents, as it became clear that 17 members of the sample reached the number of family members of 6 members, and this formed the highest percentage in the sample, reaching 39.5%. They were followed by 11.6% for each of the 7 and 8 family members. Then 7.0% in favor of each of the respondents whose family members reached 3, 4, 5, and 9 individuals. The lowest percentage was 4.7% for each of the 2 and 10 family members.

Table (4): Job

	Frequency	Percent
Governmental employee	21	48.8
Private sector employee	10	23.3
Entrepreneur	3	7.0
retired	7	16.3
Out of work	2	4.7
Total	43	100.0

Table (4) shows the job status of the respondents, as it is clear that employees in the government sector are the largest percentage in the sample, reaching 48.8%. They are followed by the proportion of employees in the private sector, where they amount to 23.3%, and by the proportion of retirees, who accounted for 16.3% of respondents. Then, the percentage of self-employed owners is 7.0%, and unemployed which constitute the lowest percentage of the sample, with a rate of 4.7%.

Table (5): Education

	Frequency	Percent
Do not read or write	1	2.3
Secondary School	4	9.3
High School	13	30.2
Bachelor's degree	22	51.2
Postgraduate	3	7.0
Total	43	100.0

Regarding education, table (5) shows that 51.2% of respondents have a Bachelor's degree, which is the largest percentage in the sample. Followed by those holding a High school certificate who reached 30.2%, and by those holding a secondary certificate 9.3%. Then, those with a postgraduate education rate of 7%, while those who do not read or write have reached 2.3%, which is the lowest percentage among the respondents, where 1 out of 43 subjects obtained it.

Table (6): Income

	Frequency	Percent
Lower than 10000	7	16.3
10000-15000	5	11.6
15000-20000	27	62.8
30000-40000	4	9.3
Total	43	100.0

Table (6) shows the income of individuals, where 15000-20000 income came in the first order 62.8%. Income below 10,000 came in second place, with 16.3%. The income between 10,000-15,000 came in the third rank with 11.6%, and the income from 30000-40000 was in the last ranking, where it accounted for 9.3%.

Hypotheses

Hypothesis 1: There is a statistically significant relationship between the high standard of living and the absence of financial awareness.

Table (1)

T-test			Mean	
axis	T	Probability value	Lower than 15000	15000 and above
Financial awareness	2.092	.043	2.7870	2.2043

Table (1) shows that the probability value associated with the value of T = 2.092 is 0.043, and this value is less than the value of the function 0.05. This indicates that there are statistically significant differences between the two groups in favor of lower-income earners.

Hypothesis 2: There is a statistically significant relationship between the use of social media and the absence of financial awareness.

Table (2)

	Social Media	
Financial awareness	Pearson correlation	-.113
	Probability value	.470

It is clear from the table (2) that the potential value of Pearson's correlation between social media and financial awareness is 0.470. This value is greater than the 0.05 value, and this indicates that there is no statistically significant relationship between social media and financial awareness.

Hypothesis 3: There is a statistically significant relationship between demographic variables (gender, age, education, work, social status, number of family members) in the extent of financial awareness.

Table (3)

T-test			Mean	
Financial awareness	T	Probability value	Male	Female
	-1.824	.075	2.0519	2.5357

Table (3) shows the probability value associated with the value of T = -1.824 is 0.075, and this value is higher than the value of the function 0.05. This indicates that there is no correlation between gender differences and financial awareness.

Table (4)

Financial awareness	Age	
	Pearson correlation	-.478
	Probability value	.001

Table (4) shows that the probability value of Pearson's correlation between age and financial awareness is 0.001, and this value is less than the value of the function 0.05. This indicates a relationship between age and financial awareness. The value of the Pearson coefficient is -0.478 this value indicates an inverse and moderate correlation between age and financial awareness, so that the greater the age, the less financial awareness, and vice versa.

Table (5)

Financial awareness	Number of family members	
	Person correlation coefficient	-.208
	Probability value	.180

Table (5) shows that the probable value of Pearson's correlation between the number of family members and financial awareness is 0.180 and this value is greater than the indicative value 0.05, which indicates that there is no statistically significant relationship between the number of family members and the existence of financial awareness.

Table (6)

T-test			Mean	
Financial awareness	T	Probability value	Lower than the bachelor degree	Graduate and postgraduate
	-3.015	.004	1.9444	2.6711

Table (6) clearly show that the probable value associated with the value of T = 3.015 is 0.004; this value is less than the indicative value of 0.05. This indicates that there are statistically significant differences between those with less education than a bachelor degree and those with a bachelor and above for the benefit of both People holding a graduate and postgraduate certificate.

Table (7)

T-test			Mean	
Financial awareness	T	Probability value	Married	Unmarried
	0.328	0.745	2.4017	2.3137

Table (7) shows that the probability value associated with the value of T = 0.328 is 0.745, and this value is greater than the value of the function 0.05, which indicates that there is no correlation between the social status and financial awareness.

Table (8)

ANOVA			Mean		
Axis	F	Probability value	Governmental	Private or free business	Unemployed
Financial awareness	3,679	0.034	2.6508	2.3077	1.7901

Table (8) shows that the probability value associated with the value of F = 3.679 is 0.034, and this value is less than the value of the function 0.05. This indicates that there are statistically significant differences between workers in the government sector, private sector and self-employed, and unemployed. As employers in the government sector came first in terms of financial awareness, followed by workers in the private sector or self-employment, and in the last ranking came non-working people.

Discussion of basic data

- Through the study, it became clear that females in the Qatari society had the largest percentage of taking financial aid, reaching 65.1%. It can be concluded from this result that women in Qatari society still need to be empowered more in terms of economic and employment.

- The percentage of married people was the largest and the first rank in the sample, followed by divorced and widowed in the second-order, and in the last arrangement the singles. The high percentage of married couples in the sample can indicate the large social and financial burdens on the heads of families. This may cause them to fail in making their financial decisions, which invites them to borrow and request financial assistance as this applies to widows and divorced people, where they may have somewhat similar responsibilities with married couples.

- It turns out though the results of the study that workers in the government sector had the largest share in applying for financial aid, as they reached 48.8% of the respondents. On the other hand, the unemployed were the lowest among the respondents, amounting to 4.7%. It is also clear that the largest group among the sample were those who obtained a university degree with a percentage of 51.2%. As for the lowest percentage of respondents, it was 2.3% in favor of people who neither read nor write. This could explain that education and work have a major impact on financial education and access to financial information, as employees and university students have access to services that can help in overcoming the financial crisis they are going through.

- By looking at the data collected from the sample, it became clear that most applicants for financial assistance are individuals who have an income ranging between 15000-20000 Qatari riyals at 62.8%, and this is often the salary of the employee with a university degree in the government sector. This could clarify that graduate students lack financial planning, which considered as a character of financial awareness, where 83.7% of respondents stated that their salary is not sufficient for them and that 74.4% of them have debts.

Discussion of the hypotheses

Hypothesis 1: There is a statistically significant relationship between the high standard of living and the absence of financial awareness.

- It is clear from the analysis data that people with less than 15,000 income have a higher financial awareness than people with an income of more than 15,000 income. This contrasts with the results of the study of [Al-Qabbani (2014), Badir and Ragheb (2012), Yusri (2011), Al-Habashi (2011), and Ahmad (2009)] that concluded that the higher the level of income, the more planning, and management of personal income. It also differed with the results of the study [Al-Dahyan (2014) and Rayhan (2009)], which resulted in no significant relationship between a high level of income, and planning and income management.
- This result can be explained by the fact that low income can generate a feeling of economic or financial insecurity, which makes individuals more careful while making their financial decisions, and more aware of the importance of planning and managing personal expenses.
- This can also be explained in light of Behavioral Financial Theory, where we can say that an increased sense of confidence about the financial future and the abundance of money for individuals can result in irrational behaviors about financial matters, Such as reckless disbursement or risking investing in projects that have not been proven useful due to the confidence that what was spent will be compensated in the coming month.

Hypothesis 2: There is a statistically significant relationship between the use of social media and the absence of financial awareness.

- It turns out though the results that there is no relationship that confirms the impact of social media on financial awareness. This result contradicts the results of the study of [Muhammad (2016), Al-Enezi (2017), and Nasr (2017)], whose results demonstrated the impact of social media on consumer and purchasing behavior.

This result can be attributed to the age of most of the sample and their lack of interest in following social media.

Hypothesis 3: There is a statistically significant relationship between demographic variables (gender, age, education, work, social status, number of family members) in the extent of financial awareness.

- Through reviewing the results, it is clear that there are no statistically significant differences between the difference in gender and the extent of financial awareness.

- As it became clear, the difference in age has an effect on financial awareness, as the results showed that the younger the sample members, the greater their financial awareness. This result differs from the results of the study [Yusef and Farhat (2012), and Ahmad (2009)], which resulted that getting older had an effect in increasing planning and income management. Also, a study by [Yusri (2011) and Rayhan (2009)] resulted in no statistically significant relationship between age, income management, and financial planning.

The explanation for this result can be due to the fact that as individuals age, they become more adherent to some habits and things they are accustomed to. That may lead to them not keeping pace with the developments in the financial markets of goods, services, and financial products that can contribute to improving their financial conditions.

- The results of the study showed that there is no statistically significant relationship between the number of family members and financial awareness, and this result is consistent with Rayhan's (2009) study.

- The results of the study revealed that those with university education and postgraduate education have a higher level of financial awareness than others with a lower educational level than the university. This result was consistent with the results of the study [Al-Qabbani, Bakhit and Zidan (2014), Badir and Ragheb (2012), Youssef and Farhat (2012), and Al-Habashi (2011)].

This indicates that education and going through the university life experience has a major impact on expanding the perceptions of individuals and develop their awareness. Also, their abilities to manage, plan and arrange their needs and priorities regarding their financial and economic matters.

- Concerning the social status of the sample members, the results of the study showed the absence of a statistically significant relationship between it and financial awareness.

- The results of the study revealed the presence of statistically significant differences between job status and financial awareness. As it became clear that workers in the government sector are more aware than workers in the private sector and entrepreneurs in financial matters, And workers in the private sector and entrepreneurship are more aware financially than the unemployed. This result was consistent with Badir and Ragheb's (2012) study, whose results revealed that employers in the government sector have a higher level of income management planning than workers in the private sector. It also agreed with the result of the study of [Al-Qabbani, Bakhit, and Zaidan (2014)] that women employees are more capable than others of unemployed in managing financial income.

This result can be explained by saying that the effort of individuals and their fatigue during their work makes them more aware of financial matters. This effort makes them more sense of the value of money and more aware that they would not obtain it without effort, which makes their investment, consumption, and purchasing behavior more rational than others who did not experience the trouble of obtaining a living. It can be said that an individual's pursuit of a job is one of the most important characteristics of financial awareness, as they are aware that work is one of the most important financial products for individuals.

Interview result discussion

- The most common problem that brings clients to the Qatari Red Crescent is the debt problem, as this study shows that 74.4% of the sample stated that they have debts.

- 80% of financial service recipients are in their forties. This explains the result of the second hypothesis.

- Most beneficiaries have a less than graduated level. This is the opposite of the results of this research. The reason for this can be due to the time when the study took place, as the study period was short and did not accurately reflect the diversity of clients.

- The clarity of the client's problem, having family, and papers proving his status is one of the most important conditions for obtaining financial assistance services. This explains the Qatar Red Crescent's keenness not to waste the rights of those in need to obtain assistance that ensures that they can have a decent life, and this is an essential part of its ethical commitment to clients and society.

- The Qatar Red Crescent offers two programs to develop financial awareness among beneficiaries, namely the ''Financial Awareness Rationalization and Consumption Program'', and the ''Housekeeping Program''. This indicates that the institution seeks to develop its social workers to not only extend financial assistance but to solve this problem at all levels of treatment, preventive, and development as well.

- The Red Crescent Society has four social workers, and this number is not enough.
- The Qatari Red Crescent does not have specific professional strategies and techniques to deal with the absence of financial awareness.

Conclusion

In conclusion, it is clear that there is a significant relationship between the high level of income and the absence of financial awareness, which indicates that financial awareness avoids individuals at all economic levels in falling into economic problems that call them to seek financial assistance. Despite the fact that many studies have revealed a relationship between the absence of awareness and social media, this study did not prove the validity of this hypothesis. This may be due to the characteristics of the sample members. This study also showed that there is a relationship between some demographic variables of the sample such as age, education, and work in the absence of financial awareness.

Through the interview, it is clear that the role of social service in dealing with clients applying for financial aid is good but still needs to be developed, and it needs to develop clear strategies for dealing with and empowering clients. It turns out that the problem of lack of financial awareness requires greater intervention by social workers and greater knowledge of what is the financial, social work to develop plans at all levels of treatment, preventive and development to reduce this problem, which in turn affects human dignity and limits access to the level of social welfare.

Last but not least, it is recommended that such a study be applied to a different sample from the one used in this study - those who benefit from financial aid services provided by the Qatar Red Crescent- such as youths, teenagers, and those with high incomes. It is also proposed to re-apply the study to a larger sample than the one used in this study in a period of more than two weeks. It is also proposed to provide the Social Work Program at Qatar University with a Financial Social Work course, or to add it to one of the courses of study as a General Practice with Individuals and Families course, which contributes to developing the capabilities of social workers to reduce this problem.

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Chapter 3

THE INTEGRATION OF ERP AND BLOCKCHAIN: DIFFERENCES BETWEEN E-LEDGER AND DISTRIBUTED LEDGER

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1.INTRODUCTION

In today's business world, organizations are continuously in search of new ways to optimize their business processes and improve their financial indicators in terms of information technologies. The effectiveness of an organization is associated with the objective and timely financial information provided by the accounting system whose main goal is to collect, record and report information about the transactions or events that have an economic effect on the organization (Kundeliene, 2011, p.66). Accordingly, accounting information system is important in terms of providing reliable, relevant and useful information to the organization. Accounting information systems aim at transmitting the useful information to internal and external stakeholders during the process of collecting, reporting and analyzing the financial data of organizations.

Phillips (2012), divides the development of information production into three separate categories in terms of accounting software. During the 90s, with the use of the first accounting software programs, only basic accounting transactions were supported. In the 2000s, the concepts of "integration" and "SaaS" (Software as a Service) gained currency. In this way, in addition to the programs that support complex accounting applications, simultaneous access to files and programs was became possible. The 2010s is the period of real-time accounting, financial dashboards and other mobile applications that supported financial reporting.

Today, access to simultaneous data sharing is enabled through the platforms provided by the cloud technology. Since the data are managed by a dedicated third party via virtual platforms in cloud technology, its cost to organizations is significantly lower. Since the platform allows for multithreading, it splits fixed infrastructure costs among organizations.

Traditional accounting practices focus on bookkeeping and financial reporting, and prepare and present financial statements as a final goal. To achieve this objective, simple systems were used to support reporting. In these systems, collection of documents, processing of data, consolidation and final reporting operations were carried out. The audit of the related transactions was also carried out through manual controls or reconciliations. This was because the system did not have an infrastructure to communicate with automatic interfaces. With the emergence of ERP systems defined as software packages, it has become possible to provide information from all functional areas in organizations through a single database that allows full integration of information flow. It is possible to access to all functional areas in organizations through a single database, unified interface and communication channel.

ERP systems have started to be used widely in organizations with the automation of verification and reconciliation controls. From the accounting perspective, the use of ERP systems represents a major change in terms of bookkeeping. Processing, transferring and reporting of data are provided through automatic interfaces between ERP modules. In this way, ERP systems provide a basic infrastructure for management strategy and decision-making processes by taking a step further than traditional bookkeeping practices. With the automation of accounting systems, document collection and its management processes have been automated via development of applications such as e-invoicing, e-archiving and e-payments (Bendovschi, 2015, p.93).

Technology software, which can easily customize the accounting activities for each client and meet the demands of the market, have been created in a way to support the automation of the accounting applications and the accounting process. Today, thanks to information technologies, the concepts of cloud accounting and real time reporting have gained reality for organizations in any size and sector by taking the need for transparent processes into account. The new technological trend that is able to meet the requirements of organizations thanks to its integration with ERP systems is the blockchain technology.

The aim of this study is to evaluate the effectiveness of blockchain technology in corporate applications, and the integration with current ERP systems and to evaluate the difference of e-ledgers and distributed ledgers in databases.

2. BLOCKCHAIN TECHNOLOGY

Blockchain technology is the formation of information and data collected on a network on the internet as a public ledger (Nakamoto 2008, p.2). In this context, it has the world's first distributed consensus system and the largest read-only public ledger attributes with the distributed peer-to-peer network (P2P).

Five key attributes empower the blockchain technology.

Table 1. Blockchain Technology's Attributes

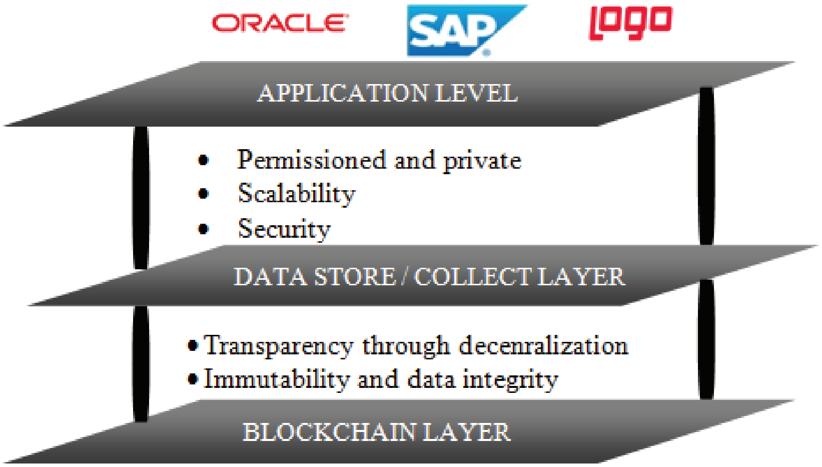
Attributes	**Content**
Variety flexibility of blockchain	It can be designed as public, private and consortium blockchain.
Transparency through decenralization	Once verified, it provides permission-based access and absolute transparency as the information in the block is copied to each node.

Immutability, irreversibility, and data integrity	The records in the nodes are secured cryptographically. The hash values that enable the data to be encrypted represent the unique codes assigned for each block. Anyone without key access is unlikely to change data; therefore, there is not any threat in terms of data integrity.
Scalability	As it utilizes shared computer capacity and servers, it has the ability to secure billions of transactions. As date is duplicated to the nodes, there is no need for synchronous networks, information security or accessibility.
Security	Blockchain database support data encryption and implement complex permission for all participants and the other third parties.

Source: *Banerjee, 2018, p.4*

These five attributes are considered as the five blockchain columns that can fit into different blockchain layers. Each column makes a certain layer type possible. Each layer has a specific purpose and role. In Figure 1, it is shown how these five attributes support three solution layers which are blockchain layer, data store layer and the application layer. Blockchain layer preserves the “hash values” of transactions. This is the layer that represents the integrity of the data. The blockchain layer represents the transparency feature through decentralization, invariance and data integrity. The blockchain layer connects to the next layer which is the data store layer. While the data are kept in data store, the blockchain layer represents the hash values (addresses) of the data. The data that are saved in a special data store act like a distributed relational database that can be linked to other layers. The data store layer organizes auto-hash transaction sets on the chain. A third party cannot obtain meaningful information from the data store unless they have specific keys that allow hash value of each data record. So, this layer represents permission, scalability and security features. The application layer processes the blockchain and data store layers and transforms them into a useful business application. The application layer has tracking units that define the changes in the blockchain layer, read the hash values, receive the decrypted data from the data store layer and perform the final verification. This layer can also interact with other ERP applications such as Oracle and SAP.

Figure 1. The General Architecture of Blockchain


ORACLE
SAP
logo
APPLICATION LEVEL
• Permissioned and private
• Scalability
• Security
DATA STORE / COLLECT LAYER
• Transparency through decenralization
• Immutability and data integrity
BLOCKCHAIN LAYER

Source: Banerjee, 2018, p.4

Blockchain has a high potential for providing benefits to corporate applications. The production phase of technology, which is in the experimental phase today, is estimated as 2025. The ERP products from the beginning and end of the 80s and today's blockchain technology follow a similar process. From the middle to the end of the 80s, there were some ERP products that entered the market such as SAP, Oracle, BaaN, Mapics, JD Edwards and PeopleSoft products. Each of these had expertise such as logistics in SAP, finance in Oracle, human resources in PeopleSoft and production in JD Edwards. Besides these products, there were also various products under development. However, the products that improved their content and were able to fully meet the needs managed to survive today. Similarly, blockchain is also enhancing with very special applications and different usage areas day by day.

3.THE INTEGRATION OF BLOCKCHAINAND ERP

ERP systems that cover the ecosystem of an organization have data-driven structures. They collect the data obtained from the resources of all units in companies such as accounting, marketing, sales, human resources, processes and convert them into meaningful information to be used in the activities of the organization. They enable the management of all resources and processes of an institution on a single platform. The matter that actually manages resources and processes of an organization is the modules of the ERP software. In other words, to manage and follow each process, the ERP module of that process is needed. These modules work independently from each other. The ERP system uses a unified database to enable integration between modules and to store the data it obtains from numerous functions.

One of the building blocks of ERP systems is the financial accounting module. With this module, the accounting activities are performed in the most appropriate and reliable environment. Legal activities of organizations are monitored in the system with this module.

ERP accounting module is a system that provides easy obtain of the charts and analyses that are required for management in addition to the fulfillment of standard functions such as official ledgers, financial statements and declarations. It covers all of the accounting records, customer database information, payment plans, receivables and revenues and other accounting applications.

Figure 2. Accounting Process and ERP Modules

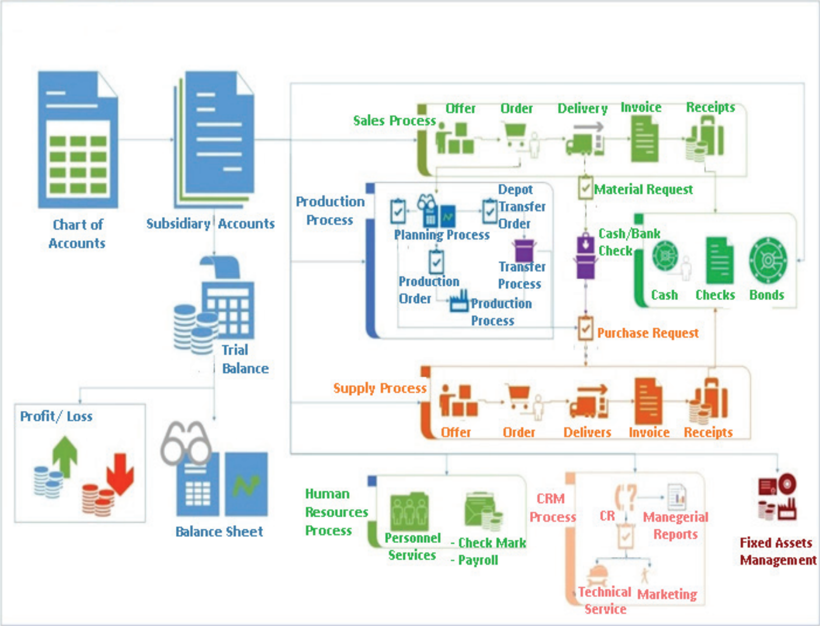


Chart of Accounts
Subsidiary Accounts
Trial Balance
Profit/ Loss
Balance Sheet
Sales Process
Offer
Order
Delivery
Invoice
Receipts
Production Process
Planning Process
Depot Transfer Order
Transfer Process
Production Order
Production Process
Material Request
Cash/Bank Check
Cash
Checks
Bonds
Purchase Request
Supply Process
Offer
Order
Delivers
Invoice
Receipts
Human Resources Process
Personnel Services
- Check Mark
- Payroll
CRM Process
CR
Manegerial Reports
Technical Service
Marketing
Fixed Assets Management

The activities in all processes of an organization such as sales, production and supply are linked to an account in the accounting chart of accounts. The charts of account is presented as standard. Receipt activities in the accounts are kept in the subsidiary ledger module. A summary table in which that the debit and credit balances of the accounts is obtained with the trial balance module. In addition, balance sheet and income statement are obtained. The critical point of this module is the right connection of chart of accounts with the modules such as production, purchasing, human resources, financial processes, technical service and inventory management. In addition to these, there are basic modules for operating the system and sub-features and modules such as stock module, current account module and warehouse module. Modules may also differ from industry to industry.

ERP systems, which host many modules, still have limitations that can be solved with the help of blockchain (Agrawal, 2019, p.6). However, this does not mean that blockchain will replace ERP software. Blockchain is an additive technology that can work with ERP to strengthen the peer to peer operation and the follow-up of all processes. There is a need for an open, standard and interoperable system in which blockchain and ERP systems can be integrated and connected with each other. In this context, it is highly important that the chain is connected with various business application systems such as Enterprise Resource Planning (ERP), Customer Celationship Management (CRM), Warehouse Management System (WMS) and Manufacturing Execution Systems (MES). These systems integrate with blockchain when building, tracking, purchasing and shipping products. They provide a copy of these information into the network which is immutable and indelible and can be tracked and used as a proof for any purpose at any time (Banerjee, 2018, p.6).

The integration of ERP systems with blockchain can help organizations to standardize the data and create transparent consortium with better security and authentication procedures. In particular, this integration will make financial transactions transparent and reliable. Integration with ERP, WMS and MES systems will also reduce disputes related with invoices, shipments, returns and purchases. The origins of the products, departure points and locations can be monitored transparently.

The advantage of integrating ERP with blockchain has two sides. The first one is that it brings transparency, while the second one is that it significantly reduces the cost of monitoring and reporting considering the multi-staged supply chains. It can also automate the business processes of the parties in different geographies, categories and business lines through smart contracts. In addition, there will be a single center data store of terms and conditions accessible by all business partners. Therefore, blockchain can function as an additional layer between trading partners and their ERPs. Even if the data is continuously transmitted to the blockchain digital ledger, the ERP system continues to be used. The blockchain layer will increase the trust and the agility in the transaction and minimize disputes.

4. THE DIFFERENCES BETWEEN OF E-LEDGER AND DISTRIBUTED LEDGER

4.1. E-LEDGER

The e-ledger application is a system that allows the journals and general ledgers, which have to be kept by organizations legally, to be stored on the digital platform and declared with digital signatures defined to them. The ‘Summary Declaration’ file contains the original signature data of the e-ledger and a summary of the main account items for financial reporting.

With the time stamp, all transaction flows are verified by the electronic signature or financial seal in order to determine the time when the data are produced, changed, sent, received or recorded (Özer, 2015, p.65). The purpose of the digital stamp as the security mechanism is to verify the faithful and true of a digital document signed by the company. It also maintains the integrity of the stamped data. Summary declaration files are created and signed for stamped data. The checked files are transferred to the legal authority via the web service. Thus, the approved and signed summary declarations are stored in the database.

It is possible to record and report according to different accounting principles with e-ledger integrated into the financial accounting module of ERP systems. The accounting records that are kept electronically, are converted into files using an international standard called XBRL (eXtensible Business Reporting Language), signed and submitted electronically. In other words, XBRL constitutes the technological infrastructure of e-ledgers (Acar and Öksüz, 2013, p.85).

XBRL, which is the business reporting language, is essentially a way of expressing an information for users. In this context, the ledgers are prepared on the basis of XBRL by updating the ERP systems according to e-ledger format. Accordingly, the e-ledger application, which is also called on-line accounting record system, provides the advantage of accelerating the financial reporting processes and saving on time.

The most important function in ensuring the reliability of e-ledger information belongs to accounting or ERP software. This function can be provided by the software having some features such as preventing unauthorized access, providing data to the user in a short time and storing of the changes made in the records with a certain history.

With e-ledger applications, all transaction history can be monitored, and deletions of records are prevented. Thus, it reduces the field of motion in order to prevent informality. In this context, it provides a transparent, fast, effective and reliable communication network between government-business (G2B: Government to Business).

Besides the advantages of e-ledger application to users, there are also disadvantages. First of all, within the scope of e-ledger application, only journals and general ledgers are kept electronically. In addition, the application is necessary only for organizations of certain size. Also the security concerns and tax privacy violations are important details for the ledgers kept electronically (Gökçen and Özdemir, 2016, p.151).

Another problem with the e-ledger application is that file sizes are very large; therefore, it is difficult to process these ledgers. For example, in Turkey, it is requested to exceed the 200MB size of the ledgers in XBRL format. Accordingly, the ledgers are supposed to be split, and the parts should be named respectively. The other problem at this stage is that the length of free text fields varies on company basis, although the ledger areas are fixed. The segmented ledgers have to contain period information. The opening date of the second ledger that follow each other must be the same or one day later as the closing date of the first ledger. Various software are developed to overcome these problems.

In ERP systems where e-ledger applications are integrated, only transaction owners have the access right to the information. However, blockchain technology offers a system infrastructure that collects the transaction processes that different parties follow on different platforms in a common and distributed ledger. Cryptographic transaction tracking is provided on this distributed database which contains a transparent structure for the buyer and seller.

Blockchain is a distributed ledger technology (DLT). It is a multilateral system where participants agree on shared data and their validity in a distributed network without a central coordinator. It is defined as an umbrella term to identify multilateral systems operating in an environment without a central operator or an authority. In other words, blockchain technology is a custom type of DLT that uses cryptographic techniques to save and synchronize data.

The effective implementation of blockchain in the accounting ecosystem has the potential to improve the quality of the information included in the financial reporting process (McComb and Smalt, 2018, p.2). It allows transactions to be published in a distributed ledger on a network, rather than keeping information in a central authority.

This technology solves two important problems in the accounting ecosystem. Firstly, it improves the accuracy of the information by verifying and checking the entries via multiple parties. Secondly, the entries provide audit evidence that can be used as a part of an approval contract.

4.2. DISTRIBUTED LEDGER

A distributed ledger is defined as a verifiable, auditable and searchable blockchain accounting system, where organizations publish all their business transactions and make them accessible to regulatory authorities, managers and stakeholders (Potekhina and Riumkin, 2017, p.13). In this context, a distributed ledger is a distributed database that allows data sharing of different communication networks and different institutions and organizations in different geographies. Any data that can be digitized can be saved in a distributed ledger (Hancock and Vaizey, 2016, p.5). A consensus mechanism is required for peer-to-peer network in the distributed ledger and for sending and receiving data between participants involved on this network (Scardovi, 2016, p.36). If the consensus mechanism allows, all participants of the peer-to-peer network can have a duplicate copy of the database. The changes in the data stored in the distributed ledger are updated by transmitting them to all peers within a few minutes (Hancock and Vaizey, 2016, p.5).

One of the key attributes in the distributed ledger technology ecosystem is the decentralization. DLT system can have various degrees of decentralization on each of its layers. In DLT systems that are open to the public and do not require permission, a single party cannot close the system, manipulate the ledgers or perform censorship operations. This situation also increases the flexibility. It ensures that the system is always alive all the time regardless of the loss of network participants.

Today, existing data management systems consist of software and hardware components that require large IT investments in a central structure. Network and communication systems are also included in this structure to enable the transmission and sharing of the data. However, this system has a significant weakness: The system may become inoperable as a result of cyber attacks or hardware failures due to the storage of data at one point. However, the blockchain is inherently difficult to be affected by cyber attacks; because the data are not stored at one point and the database has large number of identical copies shared from multiple points. The reliability and security of the blockchain are also the result of its distributed structure. Databases are connected to each other through a peer-to-peer network. When a new data reaches one of the peers through this network, all databases are updated. In order for an attack to be successful on blockchain, the access of all databases must be blocked simultaneously. Therefore, the increase in the number of peers in the blockchain network makes the blockchain network more reliable (Doğan and Ertugay, 2019, p.1657).

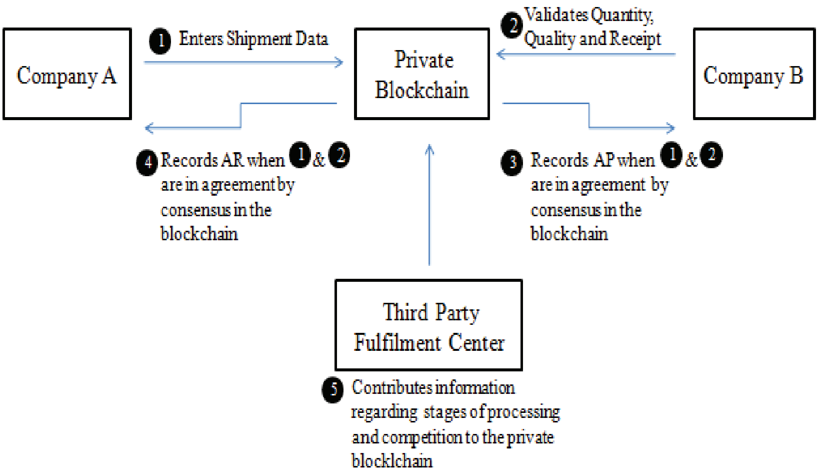
In the traditional system, the parties of commercial transactions record the transactions in their own ledgers by using the double-entry accounting system. The distributed ledger structure which verifies the records in the accounting system based on blockchain technology participates in the registration process as a third party. In this way, instead of keeping separate accounting records in each organization, a registration system is created with the participation and approval of all parties, which allows the record of transactions directly in a common ledger without any doubt about the accuracy and completeness of the data. For this reason, this recording system is called “triple-entry accounting system” by some researchers (Potekhina and Riumkin, 2017, p.13). As the records are cryptographically signed and distributed to the all peers, it becomes almost impossible to hide transactions, falsify or destroy records.

The double-entry accounting system is expanded with a third blockchain layer embedded in it. Debit/credit accounts in the double-entry accounting system are recorded as cryptographic transfers in this third ledger. In that, each blockchain account is connected to its corresponding double entry account in an ERP system, including an interlocking recording system. The third blockchain layer is more like a third internal ledger built on a "decentralized" blockchain database rather than the traditional "central" ERP database. Blockchain framework does not recommend replacing of the ERP system; instead, they suggest adding an additional blockchain based system over the ERP system (Dai and Vasarhelyi, 2017, p.7).

"Instead of keeping separate records based on transaction receipts, companies can write their transactions directly into a joint register, creating an interlocking system of enduring accounting records" (Deloitte, 2016, p.3).

A purchasing transaction for the triple entry accounting system is shown in Figure 3.

Figure 3. Purchasing Transaction in Triple Entry System


Company A
❶ Enters Shipment Data
Private Blockchain
❷ Validates Quantity, Quality and Receipt
Company B
❹ Records AR when ❶ & ❷ are in agreement by consensus in the blockchain
❸ Records AP when ❶ & ❷ are in agreement by consensus in the blockchain
Third Party Fulfilment Center
❺ Contributes information regarding stages of processing and competition to the private blocklchain

Source: McComb and Smalt, 2018, p.6

A private blockchain can be created for A&B companies to keep a joint ledger to verify and record Accounts Receivable for Company A and Accounts Payable for Company B. Upon approval of a sales transaction according to the identified accounting principles, the "smart contract" attributes initiates the recording of daily entries to reflect the transaction's impact on the financial statement. Through smart contracts, the system moves by itself according to pre-determined conditions, it performs the process of sending information, recording information and executing transactions automatically (Potekhina and Riumkin, 2017, p. 20). In this regard, there will be no need to audit and reconcile with others such as banks and the counterparty of this transaction, if all transactions are recorded in such a third public ledger.

5. CONCLUSION AND DISCUSSION

Blockchain is a chronological database that runs on a distributed network of multiple nodes or computers that track data transactions. Information about a certain number of transactions are organized and encrypted into 'blocks'. Each new block is confirmed when it reaches a consensus over their nodes or computers network. Blockchain technology is a unique combination of technologies such as peer-to-peer networks, cryptographic techniques, reconciliation protocols and distributed data storages. Blockchain is a technology that securely enables the independent circulation of digital data between parties in a decentralized way, without a third party or intermediaries. In this context, the blockchain technology offers a solution to cope with errors and frauds so that the only recorder of commercial transactions are not companies. As a third party, simultaneous and cryptographically secure entries of transactions in the blockchain is provided.

The accounting systems on the basis of blockchain technology with the distributed ledger attribute will not be in substitution for ERP, but it will be a complementary function by moving to the blockchain database via an integrated operation. Integration of the blockchain technology into ERP systems will create a highly secured collaboration platform where the recording system can be shared freely with trusted parties. Thus, the integration of the blockchain and ERP will provide a non-labor-intensive system with the accessibility to decentralized and distributed data. This system will prevent unauthorized data changes. In this context, control mechanisms will be structured through smart contracts, and this will ensure the protection of company data against cyber attacks.

A standard in XML format is based on e-ledger applications that are integrated into ERP systems. Although the potential importance and the use areas of blockchain technology are addressed in the literature, there are also opposing view. Blockchain technology is compared to XML technology. At the annual technology roundtable meeting of the Journal of Accountancy, J. Carlton Collins compared the potential impact of blockchain technology on the accounting profession to the application of XML technology that developed several years ago. Drew (2017) stated that XML technology was used much less than promised that it was a technology that could transform accounting.

However, it is clear that the blockchain technology will become an inseparable part of the information technology ecosystem. It has an integrated solution feature with the combination of many different approaches such as guarantee of its invariance through serial signatures cryptographically and the need of verification tools to control data invariance. Thus, a real transparency will be provided, and a quick dataflow will be realized between regulatory institutions, accountants and auditors.

Although a full-scale adoption and implementation of the use areas of blockchain technology has not been realized yet, it will certainly be considered for organizations which try to improve the timeliness, quality and accuracy of their accounting information.

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Chapter 4

PUBLIC DEBT AND ECONOMIC GROWTH NEXUS: THE CASE OF EMERGING MARKET AND DEVELOPING ECONOMIES

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1 Introduction

There has been a renewed interest to the relationship between debt and growth since 2008 global financial crisis (GFC). This can be attributable to increasing debt levels all over the world in the aftermath of the GFC. Public debt has an important share in the rise in global debt, reflecting the economic downturn and the corresponding policy response following the GFC, as well as the effects of fall in commodity prices and rapidly increasing spending in emerging markets and low-income developing countries (IMF, 2018a).

Public debt can potentially impact economic growth through several channels. According to the conventional view, fiscal deficits (or higher public debt) can raise aggregate demand and output in the short run but reduce capital stock and output in the long run (Mankiw and Elmendorf, 1999). High public debt can also derail growth through higher future distortionary taxation (Barro, 1979; Greiner, 2012), larger primary surpluses (Lo and Rogoff, 2015) and greater uncertainty about macroeconomic environment (Sutherland and Hoeller, 2012). On the other hand, public debt may positively impact growth subject to the type of public goods financed with debt, such that if public spending finances public infrastructure investment, then higher debt can increase growth rates in transition to the steady state (Aizenman et al., 2007). There are also channels running from growth to public debt. Sluggish growth can lead to a rise in debt and vice versa. When the economic activity weakens, debt level rises due to the impact of economic stabilizers and decrease in tax revenues (Puente-Ajovín and Sanso-Navarro, 2015).

The rise in public debt has provided the motivation to revisit the relationship between debt and economic growth from the perspective of emerging end developing economies (EMDEs). This study contributes to the literature in several aspects. Firstly, the causality between public debt and economic growth for a large data set comprised of 95 EMDEs is explored for the period of 2001-2016. To our knowledge, causality relation between public debt and growth is mostly investigated for advanced economies in the existing literature. Panel vector autoregressive (panel-VAR) technique of Abrigo and Love (2016) is followed in order to examine the dynamic relationship between public debt and economic growth. Secondly, the public debt and economic growth linkage according to income levels is analysed. To this end, the data set is divided into two groups as low and lower-middle income (LLMI) and upper-middle and high income (UMHI) countries according to the World Bank's country classification by income level. This division may partly diminish the sources of heterogeneity in the empirical model. Thirdly, the public debt and economic growth linkage with respect to debt levels is also examined. In doing so, as categorized in Reinhart and

Rogoff (2010), countries are split into four according to their public debt/ GDP ratios as low debt (LD, below 30%), medium debt (MD, 30% - 60%), high debt (HD, 60%–90%), and very high debt (VHD, above 90%). A flaw in this categorization is that the values of the thresholds are arbitrary. However, there is no consensus that any econometric model will provide a more appropriate threshold for the underlying data. The related literature is inconclusive in this regard.

The paper is organized as follows. Section 2 reviews the literature. Section 3 presents the data set, the methodology and the empirical findings. Section 4 discusses the key findings and concludes.

2 Literature Review

The relation between public debt and economic growth has been subject of many empirical studies in the recent literature. The studies on the topic have gained pace following the influential paper by Reinhart and Rogoff (2010). They show that for a sample of 44 countries the growth rate dramatically decreases for both advanced and emerging country groups when the public debt level exceeds the 90% of GDP. However, Herndon et al., (2013) replicate the study of Reinhart and Rogoff (2010) and come up with revised results by fixing the problems related to coding errors, exclusion of some of the available data and weighting of summary statistics. Their results suggest that the average GDP growth at the level of public debt to GDP ratio exceeding 90% is not noticeably different at the level when this ratio is below 90%. Egert (2015) applies a nonlinear threshold model, with a variant of Reinhart and Rogoff (2010)'s dataset and confirms the presence of a negative nonlinear relationship between public debt and growth in the very rare cases where the negative correlation starts at very low levels of public debt (between 20% and 60% of GDP).

Cecchetti et al., (2011) examine the threshold value for government debt for 18 OECD countries from 1980 to 2010. They show that when public debt is around 85% of GDP, further increases in debt may begin to have a significant effect on growth such that a further 10 percentage point increase reduces trend growth by more than one tenth of 1 percentage point. In the same vein, Woo and Kumar (2015) present findings about the inverse relationship between debt and long-run economic growth for a large panel of developed and emerging economies over almost 4 decades. They show that a 10 percentage point rise in the initial debt to GDP ratio leads to a slowdown in per capita GDP growth of around 0.2 percentage points on average per year, with the effect being smaller in advanced economies. They also present some evidence of the non-linearity with higher levels of initial debt (above around 90% of GDP) having more significantly negative impacts on growth.

In a related strand of literature, Checherita-Westphal and Rother (2012) examine the relationship between debt to GDP ratio and growth rate of GDP per capita for 12 countries in the euro area over the years 1970–2008. They find a nonlinear relationship between growth and government debt such that when the debt reaches 90-100 % of GDP, the debt ratio impairs the long-term growth. Moreover, the negative impact of the government debt on the growth starts when debt to GDP ratio reaches 70-80 % levels. In a following paper, Baum et al., (2013) investigate the non-linear impact of public debt on GDP growth for the same country sample over the years 1990–2010 using dynamic threshold panel methodology. Their findings indicate that public debt has positive and significant impact on economic activity until public debt to GDP ratio reaches 67 % in the short-term, but decreases to close to zero and loses significance beyond public debt to GDP ratios of 67%. They also show that in the case of high debt ratios (above 95%) additional debt has a negative impact on economic activity.

Gnegne and Jawadi (2013) also employ nonlinear tests under threshold models for US and UK in order to investigate the public debt dynamics over more than four decades. They show that the public debts of both countries show asymmetric and nonlinear patterns. Moreover, public debt dynamics are influenced by various regimes such as economic downturns, financial and other crises and can have various thresholds depending on the regimes.

Afonso and Jalles (2013) inspect the linkage between fiscal policy developments and economic growth for 155 countries over the years 1970-2008. They show that the growth effect of a 10% increase in the debt ratio is -0.2 % for countries with debt ratios above 90% of GDP and 0.1 % for countries that maintained an average debt ratio below 30%. They also find the threshold debt to GDP ratio as 59 % for the full sample, 58% for the Euro area, and 79% for emerging countries. Furthermore, Afonso and Alves (2015) explore the impact of government debt on economic growth for 14 European countries for time span of 1970-2012 by taking into consideration interactions of debt ratio with monetary, macroeconomic, public and institutional variables. Their results indicate that 1% increase in public debt leads to 0.04% decline in annual growth rate in the euro-area. Additionally, they find that the threshold value of debt to GDP ratio is around 75%. When the interactions of debt with other variables are regarded, the banking crisis has the most detrimental effects on growth in the euro-area.

Globan and Matosec (2016) investigate the determinants of public debt and relative importance of fiscal consolidation and economic growth on the debt to GDP ratio in 13 EU new member states over the time period of 2000-2015. Their panel data analysis suggests that the achievements in the budget balance and increases in economic growth result in decreases in public debt-to-GDP ratio. However, the impact of improvements in budget balance is smaller than the effect of economic growth. On the other hand, Kourtellos et al., (2013) employ a structural threshold regression methodology to examine the relationship between public debt and economic activity by considering the various factors related to quality of countries' institutions. They find that if a country's institutions are low quality or the country is under low-democracy regime, large public debt results in lower economic performance.

Eberhardt and Presbitero (2015) study the relationship between public debt and long-run growth in a panel of 118 countries and find some evidence for the negative effect of public debt on the long-run growth performance across countries, but no evidence for a common debt threshold within countries. More recently Jacobo and Jalile (2017) seek the threshold value for government debt to GDP ratio for 16 Latin American countries from the years 1960 to 2015. Their findings indicate that the short-run government debt has positive impact on economic growth until the debt ratio reaches 64 – 71%, but beyond these values, this positive impact approaches to zero.

Caner et al., (2010) analyse the thresholds in long-term average public debt to GDP ratios for 101 countries (75 developing and 26 developed) for the period of 1980–2008 and the impact of debt on long-term GDP. Their main findings point out that the threshold level of the average long-run public debt to GDP ratio on GDP growth is 77% for the full sample and 64% for the subsample of developing countries. The difference between the threshold for the full sample and the threshold for developing countries suggests that developing countries face growth rate problems at a lower debt to GDP level. Furthermore, Dinca and Dinca (2015) examine the link between public debt and economic growth for 10 former Communist and European countries over the period of 1999-2000. Their empirical findings suggest economic growth can deteriorate when public debt to GDP ratio exceeds 50%.There also exist studies exploring the causal relationship between debt and economic growth. Puente-Ajovín and Sanso-Navarro (2015) examine the Granger-causality between debt and economic growth for a panel of 16 OECD countries for the period of 1980–2008. Their study does not support the existence of causality running from public debt to growth, whereas they find a number of causal relationships running from growth to debt. Furthermore, Lof and Malinen (2014) construct a panel-VAR analysis for 20 and 10 developed countries over two sub-periods of 1954–2008 and 1905–2008, respectively by considering the endogenous relationship between sovereign debt and economic growth. They offer no evidence of significant impact of debt on growth even if the debt ratio is high, while they present negative effect of growth on debt implying that as economy improves the sovereign debt tends to decline. Panizza and Presbitero (2014) use an instrumental variable approach to explore the causal link between public debt and economic growth in a panel of OECD countries. The results are consistent with the existing studies that have found a negative correlation between debt and growth. However, the link between debt and growth vanishes once the endogeneity is corrected, suggesting that a causal link may not exist.

The existing empirical literature on the public debt and economic growth nexus could be summarized as follows: (i) Many papers find an inverse relation between debt and economic growth. (ii) The findings on the threshold level are mixed, depending on the economies included in the panel, data frequency and the time period under review. (iii) In general, the turning point beyond which an increase in public debt has a negative impact on growth is found to be higher for advanced economies. However, strong policy recommendations should be avoided as these models may raise endogeneity issues whereby low growth leads to higher debt. (iv) The studies that examine the causality between public debt and growth are relatively scarce and mostly focus on advanced economies. Current studies reveal different results regarding the existence and direction of causality. (v) The causality relationship between debt and growth needs to be further investigated, particularly for emerging and developing countries.

3 Data, Methodology and Empirical Findings

3.1 The Data and the Methodology

The data set includes economic growth (EG) and public debt (PD) indicators for 95 EMDEs over the period of 2001-2016. The EG is gauged by annual real GDP per capita growth and retrieved from World Development Indicators (WDI) database of the World Bank. On the other hand, PD is measured by the general government gross debt as a percentage of GDP and obtained from World Economic Outlook (WEO) database of the IMF. According to Levin-Lin-Cu (2002) ve Im-Pesaran-Shin (2003) panel unit root test results, the EG variable is stationary at level, whereas PD variable is stationary at first-difference level according to Im-Pesaran-Shin (2003) test results for both country groups. Hence, the first-difference series of PD variable is used. The list of countries is given in Table A1. Analysis are performed for both income and debt categorizations to account for the heterogeneity across countries.

Panel-VAR technique of Abrigo and Love (2016) is utilized. This methodology not only treats all the variables as endogenous variables in the system but also allows existence of the unobserved individual heterogeneity as fixed effects (Love and Zicchino, 2006). Hence, panel-VAR technique provides the combination of the traditional VAR approach with panel data. Despite its advantages, the methodology does not take into account cross-sectional dependency across countries. However, it should be noted that the data set in this study is a micro panel (i.e. with large N and small T dimensions) and according to Baltagi (2005) cross dependency is a problem for macro panels (with large T dimensions) leading to misleading results, rather than micro panels.

The general panel-VAR(p) model is constructed as in Eq.1:

$$V_{it} = \mu_i + \delta_1 V_{it-1} + \delta_2 V_{it-2} + \cdots + \delta_p V_{it-p} + u_{it} \quad (1)$$

where *i* and *t* denote countries and years, respectively. and represent the vector of endogenous variables including {PD, EG} and the error terms, respectively. However, the panel-VAR framework imposes some restrictions. First, the error terms are expected to be independent and identically distributed. Nevertheless, in practice this cannot be valid since the actual variance-covariance matrix errors are unlikely to be diagonal. In order to isolate the shocks to one of the variables in the VAR system, it is required to decompose error terms to make them orthogonal. Cholesky ordering of variables is used when estimating orthogonalized impulse response functions (IRFs). With this ordering, the variables appear earlier in the system influence the following variables simultaneously and with a lag, whereas the variables appear later affect the preceding variables with a lag (Love and Zicchino, 2006; Galariotis et al., 2016). In the VAR structure the public debt is assumed as more exogenous than economic growth as in the studies of Checherita-Westphal and Rother (2012) and Greiner (2012). Second, the underlying structure is same for all countries in the panel data set, which means that there exists no cross-country differences in estimation of coefficients. However, this assumption can be violated in practice. Panel-VAR framework allows individual heterogeneity under fixed effect, (Love and Zicchino, 2006; Galariotis et al., 2016). However, in order to efface the panel-specific fixed effects, Helmert procedure, also known as forward-mean differencing, suggested by Arellano and Bover (1995) is applied as in the study of Love and Zicchino (2006). Love and Zicchino (2006) prefer Helmert procedure instead of mean-differencing method since they assert that mean-differencing method used to eliminate fixed effects could estimate biased coefficients due to the fact that the correlation between fixed effects and regressors resulting from the lags of dependent variables. They also claim that since the mean of available future observations are removed from each observation in the sample under Helmert procedure, the orthogonality is provided between lagged regressors and transformed variables, and the lagged regressors can be utilized as instruments in order to obtain coefficients under generalized method of moments (GMM) approach.

3.2 *The Estimation Procedure and Empirical Findings (Income Level)*

The first step of panel-VAR analysis is the determination of optimal lag length. The optimal leg length according to income levels is determined based on the consistent moment and model selection criteria (MMSC) proposed by Andrews and Lu (2001) for GMM estimation in panel models and based on the Hansen's (1982) J statistics. The lag length providing the smallest MMSC under Akaike information criteria (MAIC), the Bayesian information criteria (MBIC) and the Hannan-Quinn information criteria (MQIC), is regarded as optimal leg length (Abrigo and Love, 2016). The lag selection test results for both countries are provided in Table A2. All three criteria suggest the optimal lag lengths for both country groups as 1. Thus, first-order panel-VAR models are constructed for both country sets. Both panel-VARs are found to be stable. The results of panel-VAR(1) models, estimated by GMM, are offered in Table 1.

Table 1 The estimates of panel-VAR(1) models for LLMI and UMHI countries

Dependent Variables	**Independent Variables**	
	Low and Lower-Middle Income	
	EG(t-1)	PD(t-1)
EG(t)	0.3349*	-0.0357*
	(0.000)	(0.000)
PD(t)	-0.595*	0.289*
	(0.000)	(0.000)
	Upper-Middle and High Income	
	EG(t-1)	PD(t-1)
EG(t)	0.440*	-0.0194
	(0.000)	(0.649)
PD(t)	-0.243**	0.409*
	(0.021)	(0.000)

*Note: The reported numbers are the coefficients of panel-VAR(1) models estimated by GMM. The standard errors are robust. P-values are in the parentheses. *, **, *** represent the significance at 1%, 5% and 10% levels, respectively.*

Figure 1 and Figure 2 plot the orthogonalized IRFs with 95% confidence intervals of standard errors generated by 1000 iterations of Monte Carlo simulations for LLMI and UMHI country sets, respectively. Figure 1 shows that one standard deviation (std) shock to economic growth decreases the public debt in LLMI countries sharply initially, but this effect tends to diminish and die after 5-year horizon. The negative and statistically significant coefficient in panel-VAR estimate for LLMI countries is consistent with this finding. Similarly, one std shock to economic growth also leads to significant decrease in public debt in UMHI countries as observed in Figure 2 and panel-VAR estimates. However, the debt-reducing effect of economic growth is more than two times higher in LLMI countries than in UMHI countries.

On the other hand, as observed in Figure 1 and Figure 2, one std shock to public debt in both LLMI and UMHI countries leads to a decline in economic growth during the first 5-years. The negative impact of an increase in public debt on economic growth is also observed in the respective panel-VAR estimates (Table 1.). This negative effect is significant for LLMI group, whereas it is found to be insignificant in UMHI countries according to panel-VAR estimates.

Figure 1 Orthogonalized Impulse Response Functions (LLMI countries)

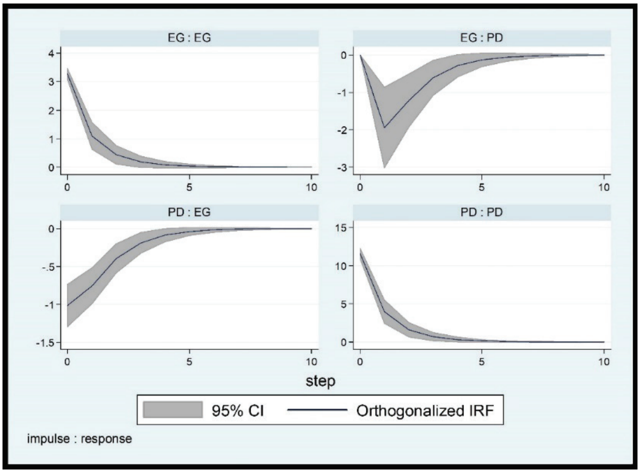
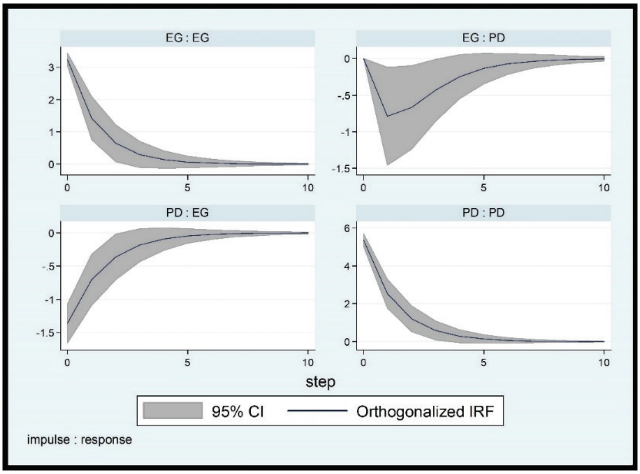


Figure 2 Orthogonalized Impulse Response Functions (UHMI countries)



3.3 *The Estimation Procedure and Empirical Findings (Debt Level)*

The optimal lag length according to debt levels for each panel-VAR model is determined as 1 since most of the criteria give the smallest values when the lag length equals to 1 in Table A3. Therefore first-order panel-VAR models are preferred and the estimates are presented in Table 2. All panel-VAR structures are stable.

Table 2 The estimates of panel-VAR(1) models for LD, MD, HD and VHD countries

Dependent Variables	Independent Variables	
Low Debt		
	EG(t-1)	PD(t-1)
EG(t)	0.553*	-0.036
	(0.000)	(0.570)
PD(t)	-0.111	0.688*
	(0.182)	(0.000)
Medium Debt		
	EG(t-1)	PD(t-1)
EG(t)	0.230*	-0.038***
	(0.001)	(0.054)
PD(t)	-0.375*	0.406*
	(0.003)	(0.000)
High Debt		
	EG(t-1)	PD(t-1)
EG(t)	0.334*	-0.027***
	(0.001)	(0.074)
PD(t)	-0.797**	0.296**
	(0.024)	(0.024)
Very High Debt		
	EG(t-1)	PD(t-1)
EG(t)	0.509*	-0.034**
	(0.000)	(0.011)
PD(t)	-0.249	0.217***
	(0.500)	(0.058)

*Note: The reported numbers are the coefficients of panel-VAR(1) models estimated by GMM. The standard errors are robust. P-values are in the parentheses. *, **, *** represent the significance at 1%, 5% and 10% levels, respectively.*

Figure 3, Figure 4, Figure 5 and Figure 6 plot the orthogonalized IRFs for all debt groups. For the LD countries, one std shock to economic growth results in decline in public debt as seen in Figure 3, and the negative coefficient of the panel-VAR estimate also reflects this impact. However, the negative impact of economic growth on public debt seems insignificant, and this impact tends to wane over time. On the other hand, one std shock to public debt also cause a decline in economic growth in LD countries but this impact is not significant and tend to approach zero through time. This is also supported by panel estimates with insignificant negative coefficient. Overall, for the lowest-debt group countries the relation between public debt and growth does not seem to matter.

As for MD countries, one std shock to economic growth leads to severe and significant decline in public debt in the initial periods as in Figure 4. This result is also reinforced with negative and significant coefficient in panel-VAR estimates of this country set. Furthermore, one std innovation in public debt also results in significant decline in economic growth particularly initial years, but this impact tends to decline and die off after 5-year horizon.

Figure 5 presents that one std innovation in economic growth significantly decreases the public debt level in HD countries, and this negative impact seems larger when compared to MD countries. Moreover, one std shock to public debt also affect economic growth negatively at initial years, and negative impact tends to decline as time passes and vanishes after 5-year horizon. The negative and significant link between public debt and economic growth is also detected in panel-VAR estimations of HD country group.

Figure 6 displays that an increase in economic growth negatively affects the public debt level in VHD country set, but this impact seems statistically insignificant as observed in panel-VAR estimations. As debt levels are considerably high, even if economy improves, the debt use cannot be decreased immediately in these countries. On the other hand, one std innovation of public debt causes significant decline in economic activity, which is also observed in panel-VAR estimates. In VHD countries the negative impact of debt on the economic growth starts to diminish and wane later than in MD and HD countries.

Figure 3 Orthogonalized Impulse Response Functions (LD countries)

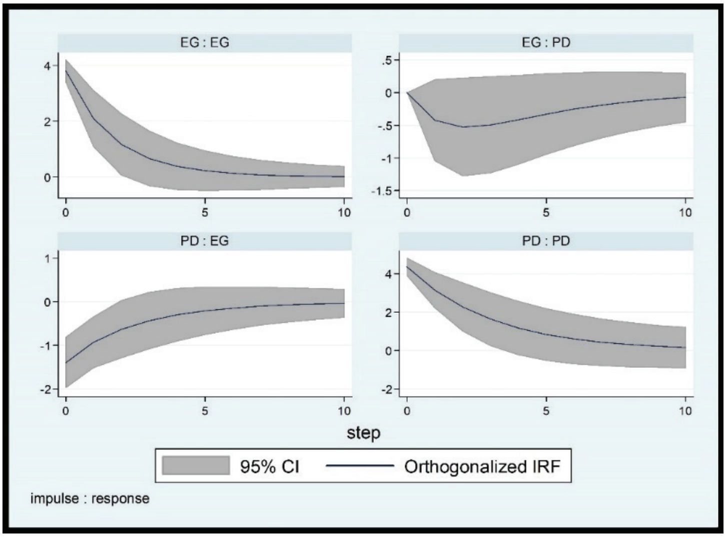


Figure 4 Orthogonalized Impulse Response Functions (MD countries)

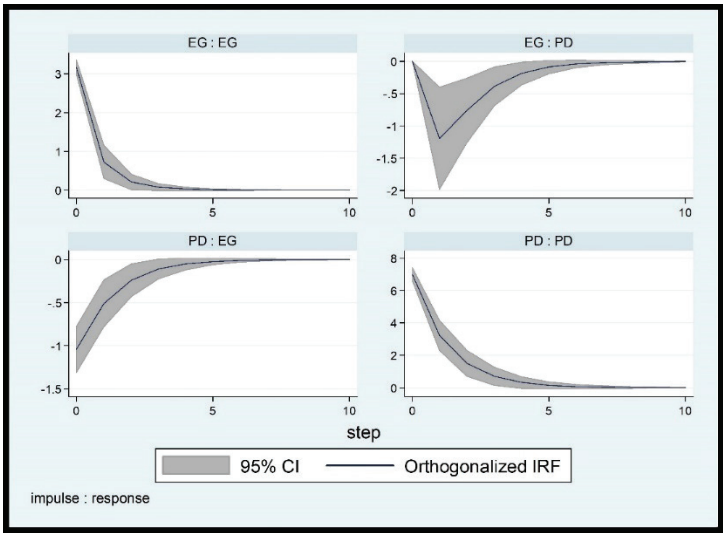


Figure 5 Orthogonalized Impulse Response Functions (HD countries)

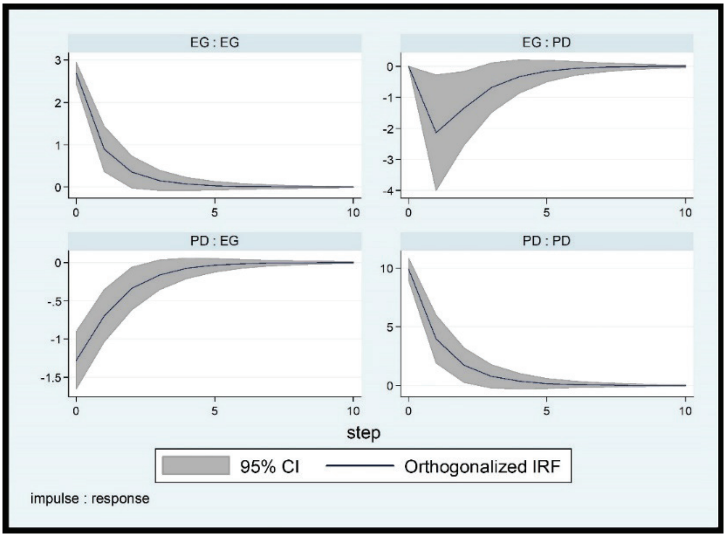
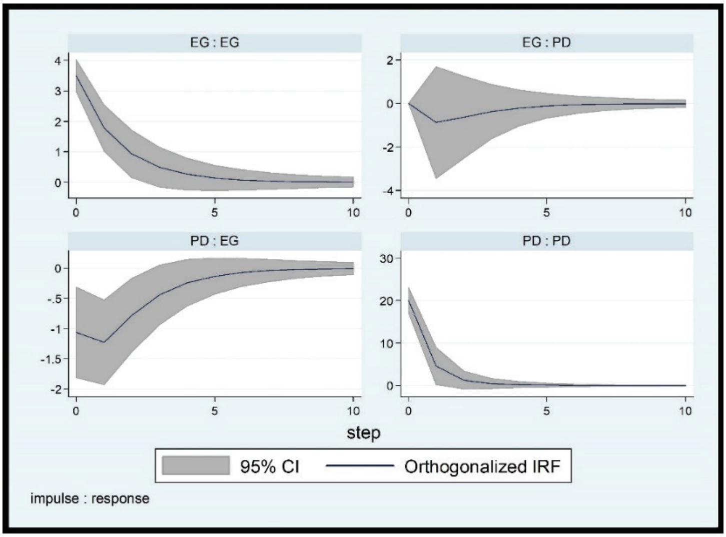


Figure 6 Orthogonalized Impulse Response Functions (VHD countries)



4 Discussion and Conclusion

This paper examines the public debt and economic growth relationship in 95 EMDEs over the period of 2001-2016, taking into account both income and debt levels by employing the panel-VAR technique in Abrigo and Love (2016).

The findings with respect to income level grouping suggest that debt to GDP ratios tend to decrease significantly in both LLMI and UMHI countries as the economies grow, but the decrease in LLMI countries is more than UMHI countries. Furthermore, higher public debt adversely affects economic growth in LLMI countries, whereas the effect is insignificant in UMHI countries. These findings can be explained by the less developed domestic financial markets, the weak institutional structures and the structural bottlenecks of low income countries. Policy makers in these countries should resort to fiscal consolidation against the increasing public debt, while the composition of measures should be growth friendly. It is argued by the IMF (2018b) that cutting investment has more negative impact on growth as compared to reducing primary spending. In this context, policy makers in LLMI countries should make an effort to safeguard public investment while designing the fiscal adjustment. In the meantime, addressing structural weaknesses is essential to improve the growth potential in these countries.

The findings with respect to debt level grouping also reveal important points. The results show that when debt to GDP ratio is low, an increase in public debt does not have a significant effect on economic growth and vice versa. But, an increase in debt deteriorates the economic growth significantly in the MD, HD and VHD economies. Moreover, when the debt levels exceed 90 %, the negative impact of higher debt on output lasts longer. While this study does not attempt to find a threshold level for the negative impact of additional debt on economic growth, its results lend support to the findings in the relevant literature that the threshold is generally lower/higher for emerging and developing economies/advanced economies. In this context, the threshold is estimated by Checherita and Rother (2012) for 12 euro area countries as 90–100%, by Baum et al., (2013) for the same economies as 95%, by Cecchetti et al., (2011) for 18 OECD countries as 86%, by Caner et al., (2010) for 75 developing countries as 64% and by Afonso and Jalles (2013) for the Euro area and emerging countries as 58% and 79%, respectively.

On the other hand, higher output significantly declines public debt levels both in MD and HD countries, while this decrease is not statistically significant in VHD countries. Given that additional debt lowers growth in VHD countries, expansionary fiscal policies may not be appropriate to stimulate growth in these countries. Policymakers should focus on other policy measures to achieve higher growth rates rather than fiscal stimulus.

Overall, there is no one-size fits all answer to the direction of causality between public debt and economic growth. The findings suggest that the relation between debt and growth is complex and differs across countries, therefore caution is needed when making policy recommendations. A policy that is appropriate for one country may be irrelevant or misleading for the other.

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Notes

1. All panel-VAR stability condition test results are available upon request.

Appendix A

Table A1 Country list in the data set

Low Income & Lower-Middle Income (LLMI)				
Angola	Comoros	Haiti	Moldova	Senegal
Armenia	Rep. of Congo	Honduras	Morocco	Sri Lanka
Bhutan	Democ. Reb. of Congo	India	Mozambique	Sudan
Bolivia	Côte d’Ivoire	Indonesia	Myanmar	Swaziland
Burundi	El Salvador	Jordan	Nepal	Tajikistan
Cabo Verde	Georgia	Kenya	Nicaragua	Tunisia
Cambodia	Ghana	Kyrgyz Republic	Niger	Uganda
Cameroon	Guetemala	Madagascar	Pakistan	Ukraine
CentralAfrican Republic	Guinea	Mali	Philippines	Vietnam
Chad	Guinea-Bissau	Micronesia	Rwanda	Zambia
Upper-Middle Income & High Income (UMHI)				
Albania	China	Guyana	Mexico	South Africa
Algeria	Colombia	Hungary	Panama	St. Kitts and Nevis
Antigua and Barbuda	Costa Rica	Iran	Paraguay	St. Lucia
Azerbaijan	Croatia	Jamaica	Peru	St. Vincent and the Grenadines
Bahamas, The	Dominica	Kuwait	Poland	Suriname
Bosnia and Herzegovina	Dominican Rep.	Lebanon	Romania	Thailand
Brazil	Fiji	Macedonia	Samoa	Trinidad and Tobago
Bulgaria	Gabon	Malaysia	Saudi Arabia	Turkey
Chile	Grenada	Mauritius	Serbia	United Arab Emirates

Table A2 Lag selection of panel-VAR according to income level

LLMI				
Lag	**J-Statistics**	**MBIC**	**MAIC**	**MQIC**
1	16.99582	-58.7232	-7.004178	-27.21512
2	13.72583	-36.75352	-2.274172	-15.74814
3	5.499563	-19.74011	-2.500437	-9.237419
UMHI				
Lag	**J-Statistics**	**MBIC**	**MAIC**	**MQIC**
1	15.2274	-59.2273	-8.772603	-28.57942
2	8.186971	-41.44949	-7.813029	-21.01758
3	0.118059	-24.70017	-7.881941	-14.48421

Table A3 Lag selection for panel-VAR according to debt level

LD (below 30%)				
Lag	**J-Statistics**	**MBIC**	**MAIC**	**MQIC**
1	17.75524	-44.29057	-6.24476	-21.67595
2	11.13911	-30.22476	-4.860889	-15.14835
3	5.320295	-15.36164	-2.679705	-7.823435
MD (30% - 60%)				
Lag	**J-Statistics**	**MBIC**	**MAIC**	**MQIC**
1	15.92521	-60.03144	-8.074792	-28.36094
2	8.520459	-42.11731	-7.479541	-21.00364
3	2.571258	-22.74763	-5.428742	-12.19079
HD (60% - 90%)				
Lag	**J-Statistics**	**MBIC**	**MAIC**	**MQIC**
1	18.72686	-45.99667	-5.273139	-21.71838
2	8.783857	-34.36516	-7.216143	-18.17963
3	1.500562	-20.07395	-6.499438	-11.98118
VHD (above 90%)				
Lag	**J-Statistics**	**MBIC**	**MAIC**	**MQIC**
1	8.905351	-44.82269	-15.09465	-27.07133
2	4.332546	-31.48615	-11.66745	-19.65191
3	1.933148	-15.9762	-6.066852	-10.05908

Chapter 5

RETHINKING THE NEXUS BETWEEN POLLUTANT EMISSION, FINANCIAL DEVELOPMENT, RENEWABLE ENERGY CONSUMPTION AND ECONOMIC GROWTH IN G7 COUNTRIES

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1. Introduction

The United Nations has named the era 2014-2024 as the Period of Clean power for everyone (SE4All, 2015). Achieving balance in power usage is expected to lead to a sustainable atmosphere, better exposure to voltage, enhanced energy quality with little pollutant sources in addition to increased innovation in green technologies. In the international sense, there is a growing use of green infrastructure that aims to tackle greenhouse pollution and to expand accessibility to electricity for billions of citizens who are now in the deprivation pit. An unprecedented 19.1 percent of international total power demand was generated by renewable in 2013. The rapid increase in the voltage market is powered by wind, sun Panels and hydropower. The increase in warming efficiency is at a constant rate, then the development of biofuels for travel has lately risen after a fall in 2011 through 2012. Under a more ambitious forecast established by the International Energy Agency (IEA), the sustainable portion of power production may grow around 18.3% throughout 2002 towards 39% around 2050. Renewable energy sources may play a crucial function in minimizing the long-term average international warming increase below the range around 2.0 to 2.4^{0}C (IEA, 2009) to cut overall CO_2 pollution through 50% mostly by 2050.

Renewable production in previous times has largely propelled by government-supported policies via grants, levy benefits and additional opportunities. It play a part growing the cost-effectiveness of clean technology supplies. For many other nations, renewable are largely compatible with traditional power supplies. Together with Europe in addition to the United States, current policies happening green power emerged in nations in Asia, Africa and Latin America. It has produced global suppliers and installations of clean energy technology beyond Europe and the United States. The discourse on power consumption-economic development has become extensively studied (see Wolde- 2009; Costantini & Martini , 2010; Bhattacharya, Rafiq, & Bhattacharya, 2015; Ozturk, & Bicimveren, ,2018; Bekun et al.,2019a; bekun et al.,2019b; Adedoyin et al.,2020)[3] but findings on clean power are nevertheless scarce. The increasing value of sustainability as a supply of electricity has given rise to a great deal of concern from both scholars and electricity policy observers.

In a way to minimize environmental pollution from the rising demand of energy, this study considered the degree to which renewable energy supply from the G7 countries adds to the development of CO_2 emissions and proposed measures to mitigate it. Furthermore, this study adds a control variable in the context of financial developments to understand the effect of CO_2 emissions. Therefore, setting the analysis as necessary and reliable as it circumvents the problem of missing variable bias. It is supposed to be a priority for researchers and policy developers.

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[3] For the want of space, the energy-growth literature holds fours hypothesis namely. (i) Growth literature (ii) conservative hypothesis (iii) feedback hypothesis and (iv) neutrality hypothesis (see Ozturk, 2010)

The rest of this study follows: Section 2 explains the materials and methods used. Section 3 empirical results and discussion while Section 4 presents the concluding remarks.

2. Methodology

Here, we suggest a basic processing method where, with conventional input, clean power sources are utilized in the manufacturing cycle. A carbon- income function is fitted to cumulative output model is used, with trade, renewable energy consumption, financial development and economic growth as explanatory inputs.

$$CO_{2it} = f\,(REU_{it}, GDP_{it}, TRD_{it}, FD_{it}) \qquad (1)$$

The subscripts i and t denote investigated countries and time period respectively. Where, we represented CO2 as CO2 emissions (metric tons per capita), Renewable energy consumption (% of total final energy consumption) was denoted as REN, GDP growth (annual %) as GDP, Trade (% of GDP) was also denoted as TRD and Domestic credit to private sector (% of GDP) was denoted as FD. All these dates were access from the Work Bank indicators (2020)

Transforming data sequence into normal logarithm removes the issues connected with the complex features of the dataset. The log conversion of the dataset is a preferable method, since each coefficients arising from the regression equation can be viewed as elasticity. The empirical method is as follows:

$$LnCO_{2it} = \beta 1_i + \beta 2_i LnREU_{it} + \beta 3_i GDP_{it} + \beta 4_i LnTRD_{it} + \beta 5_i LnFD_{it} + \varepsilon_{it} \qquad (2)$$

Where = $\beta 1_{i,}$ $\beta 2_{i,}$ $\beta 3_{i,}$ $\beta 4_{i,}$ $\beta 5_i$ are elasticities of output which denote renewable energy use, GDP growth, trade and financial development respectively. ε denote error term. The GDP was not log because it we took the GDP growth which has already be log.

Countries within the G7 were used for this analysis which consist of Canada, France, Germany, Italy, Japan United State and United Kingdom from the timeframe of 1990 to 2018.

3. Empirical results and discussion

This segment addresses all scientific observations and explains them appropriately. Table 1 reveals that the emission of contaminants has the highest average over the duration under review. All sequence display negative skews with the exceptions of pollutant emissions, whereas Pearson's pairwise association indicates that CO_2 emissions are strongly associated with economic growth and other control parameters studied.

Table 1: DESSCRIPTIVE/CORRELATION METRIX ANALYSIS

	LNCO2	LNREU	GDP	LNTRD	LNFD
Mean	2.297674	1.866631	1.746592	3.794827	4.770917
Median	2.245845	1.840130	1.885960	3.915519	4.727410
Maximum	3.004630	3.122420	6.868609	4.484931	5.399467
Minimum	1.520209	-0.497146	-5.697152	2.773456	4.068999
Std. Dev.	0.400264	0.858430	1.872376	0.432141	0.374135
Skewness	0.269221	-0.586680	-1.064477	-0.654106	-0.035659
Kurtosis	2.000168	3.080138	5.786027	2.441375	1.755917
Observations	203	203	203	203	203
	LNCO2	LNREU	GDP	LNTRD	LNFD
LNCO2	1				
LNREU	0.0946	1			
GDP	0.2854***	-0.0449	1		
LNTRD	-0.2756***	0.3691***	0.0346	1	
LNFD	0.5422***	-0.092	0.0498	-0.457***	1

Note: ***, ** and * are 1%, 5% and 10% significant level respectively

A next stage is test of unit root properties with Dickey and Fuller (ADF) (Dicker and Fuller, 1981) was utilized to view the current research test for stationary structures among many of the parameters regarded. The Cointegration Test, which had been introduced to assess the long-term equilibrium interaction among the parameters in Eqs. (2). Kao's Residual co-integration experiment suggested by Kao (1999) and updated by Kao (2000). The ARDL method was used to determine both the short-and long-term elasticity of CO2 using control variables. Eventually, Dumitrescu and Hurlin (2012) are checked for heterogeneous causality in the context of causality.

Table 2: Unit root test

Statistics (Level)	LnCO2	LnREU	GDP	LnTRD	LnFD
	0.7214***	0.9007	0.0000***	0.8506	0.9898
	0.0044***	0.8225	0.0003**	0.6029*	0.5351
Statistics (1^{st} difference)	LnCO2	LnREU	GDP	LnTRD	LnFD
	0.0000	0.0002***	0.0008***	0.0009***	0.0029
	0.0000	0.0013***	0.0040***	0.0056***	0.0093

Note: ***, ** and * are 1%, 5% and 10% significant level respectively Note: ***, ** and * are 1%, 5% and 10% significant level respectively; thus, *is with constant, is with constant and trend.*

Table 2 above indicates that at level form all series just not significant, because there was no stationarity between the outlined variables, but after first differencing all outlined variables became stationarity. Finding a stationary led us to the co-integration test in Eq. (2). By Applying the Kao Residual Cointegration Examination

Table 3. Cointegration tests

	t Statistic	P-value
ADF	-2.543896***	(0.0055)
Residual variance	0.001264	
HAC variance	0.000504	

Note: ***, ** and * are 1%, 5% and 10% significant level respectively

The consequence of the Cointegration Test in Table 3 reveals that the null hypothesis of a secure interaction provided by Kao (1999), which was indeed updated by the same individual in 2000, reveals that there is a 1% co-integration effect among the variables.

Table 4. ARDL (3, 1, 1, 1, 1) for Long and short run for CO2 emission.

LONG RUN			
VARIABLES	COEFFICIENT	STD. ERROR	t-STATISTIC
LNREU	-0.010065	0.046744	-0.215323
GDP	0.067326***	0.018413	3.656445
LNTRD	-0.067157	0.067561	-0.994019
LNFD	-0.218291**	0.099595	-2.191779

SHORT RUN			
VARIABLES	COEFFICIENT	STD. ERROR	t-STATISTIC
COINTEQ01	-0.177290***	0.063769	-2.780191
D(LNREU)	-0.239797*	0.135673	-1.767460
D(GDP)	-0.003298*	0.001817	-1.814656
D(LNTRD)	0.001110	0.090838	0.012223
D(LNFD)	0.145073	0.157113	0.923371
C	0.573003***	0.197299	2.904233

Note: ***, ** and * are 1%, 5% and 10% significant level respectively

In attempt to justify the precision and robustness of the experiments, these are the short-and long-term figures for the current study with a fast-change probability of 90 percent, which is significantly meaningful at 1% of the equilibrium position with the inclusion of other regressors. The equilibrium of the equipped template is expressed in the yearly accumulation of 17.73 per cent by the output of the regressors. From the analysis it was proven that both renewable power intake and GDP growth have short run negative significant association with pollutant emission. This indicate that both renewable power intake and growth both trajectory in the G7 nation helps reduce CO2 emissions which affirms the evidence from Bhattacharya et al. (2015). Moreover, GDP growth had a positive significant to pollutant emission at 1% level whiles financial development had a negative significant to pollutant emission at 5% level.

Subsequently, after evaluating long-and short-term elasticity among the variables, it became very interesting to learn if there became causality within the variables. For this reason, we discussed the Causality of Pairwise (Dumitresucu & Hurlin, 2012). The key feature of this method is that it embraces all the variables to be stationary, which are cross-section variants.

Table 5: Heterogonous Panel Causality test

Null Hypothesis:	Zbar Stat	p-value
LNREU $\neq$ LNCO2	4.31335***	(2.E-05)
LNCO2 $\neq$ LNREU	2.49715**	(0.0125)
GDP $\neq$ LNCO2	-0.08467	(0.9325)
LNCO2 $\neq$ GDP	-0.78091	(0.4349)
LNTRD $\neq$ LNCO2	3.41644***	(0.0006)
LNCO2 $\neq$ LNTRD	1.40883	(0.1589)
LNFD $\neq$ LNCO2	8.01445	(1.E-15)
LNCO2 $\neq$ LNFD	-0.16060	(0.8724)
GDP $\neq$ LNREU	1.10488	(0.2692)

LNREU ≠ GDP	1.10054	(0.2711)
LNTRD ≠ LNREU	0.65168	(0.5146)
LNREU ≠ LNTRD	3.99373	(7.E-05)
LNFD ≠ LNREU	5.59237	(2.E-08)
LNREU ≠ LNFD	0.89153	(0.3726)
LNTRD ≠ GDP	2.54520**	(0.0109)
GDP ≠ LNTRD	3.75822***	(0.0002)
LNFD ≠ GDP	6.84668	(8.E-12)
GDP ≠ LNFD	3.52285***	(0.0004)
LNFD ≠ LNTRD	1.15115	(0.2497)
LNTRD ≠ LNFD	1.41350	(0.1575)

Note: ***, ** and * are 1%, 5% and 10% significant level respectively while ≠ *denote does not "Granger cause"*

The estimation from the table above shows a bi-directional causality regarding trade and GDP growth. Furthermore, there is a Uni-directional causality among pollutant emission and clean power intake, and trade and pollutant emission. Any of the above-mentioned causal theory has far-reaching consequences. For instance, causality among CO2 pollution, clean power intake, trade and GDP growth indicates that economic development is a perfect evidence of CO2 pollutant. Such results are an apt roadmap for decision makers and other stakeholders alike.

4 CONCLUSION

This analysis examined renewable energy intake, GDP growth, trade and financial development impact on pollutant emission in the G7 nations. From the 1990'S these nation has invested much in their economy and have turn them industrial nation. For this doing there are a lot of human activities which requires the consumption of energy being it renewable or non-renewable which produce much CO$_2$ emission and cause environmental degradation. It from this which most nation has taken into consideration to reduce pollutant emission produce within these countries by adhering the Kyoto procedural which the G7 is not left out. Therefore the study employed the ARDL economic technique to access if the control variables do contribute to the production of emissions with the G7 nation. The result from the ARDL indicated that, renewable energy intake and GDP growth both reduces pollutant emission in the short run. Furthermore, financial development decreases pollutant emission and GDP growth increases pollutant emission in the long run.

Additionally, the result reviews that, renewable power intake only have effect on CO$_2$ pollution in only the short run but is insignificant in the long-run. It therefor advisable to the policymakers within these nations to continually support policies like subsidies for infrastructure insulations, tax benefits and financial assistance to the firms which produce these infrastructures. Furthermore, the government should support research and development (R&D) in energy innovations and the adoption of renewable energy techologies, which are reputed to be more environmentally friendly.

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Chapter 6

A REVIEW OF THE COMPLAINTS IN THE TRAVEL WEBSITES ABOUT HOSPITALITY ENTERPRISES

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Introduction

As the proportion of the service sector within the economy increases, the competition among the enterprises in this sector also increases. Therefore, the customer satisfaction has increasingly gained importance. It is observed that the share of the hospitality enterprises within the service sector also increases. In this context, it is a very sensitive issue for the managers of the hospitality enterprises to be able to reach customers complaints. In service enterprises, customer complaints are generally emerged from certain factors concerning employees, customers, and products. Some other complaints emerge from prices and distribution.

In the past, reaching customer complaints for the hospitality enterprises was only possible through satisfaction surveys applied to customers. But the reliability of these surveys was not as high as customer reviews posted on internet travel websites. That's why enterprises are now able to access the unbiased feedbacks of customers thanks to the customer reviews on travel websites. If the enterprise has an effective complaint management system and a high rate of responsiveness to the reviews, customer loyalty is likely to be high.

For these reasons, the aim of this study was to categorize the complaints in reviews posted on *Tripadvisor* travel website about hospitality enterprises operating in Kars and to identify the factors that the customers particularly complained about. It is significant that this study will fill the gap in the literature since there is no previous study conducted on assessment of hospitality enterprises in Kars province.

Literature Review

It was determined that this study is in parallel to the following previous studies in the related literature; Alrawadieh and Demirkol (2015), Güzel (2014), Kılıç and Ok (2012), Şahin et al., (2017), Aylan et al. (2016), Kılıç et al., (2013) and Unur et al. (2010).

In the study conducted by Alrawadieh and Demirkol (2015), the complaints were examined that were posted about 10 highest-priced five-star hotels in Istanbul. As a result of the study, it was observed that the problems receiving the highest number of complaints were the price and the physical environment, which included the quality and cleanliness of the hospitality enterprises.

In the study conducted by Güzel (2014), complaints were examined about a hotel with brand value, ultimately revealing that the mostly complained issues for this hotel were the behaviors of other customers in the hotel and themes concerning the physical environment.

Kılıç and Ok (2012) conducted a study at a five-star hotel in Istanbul to determine customer complaints through the survey method. In the study, it was concluded that price was the second important element.

In the study conducted by Şahin et al., (2017), the reviews posted on travel websites for hospitality enterprises in Bishkek were examined and the most complained issue was determined to be product-related factors.

In the study conducted by Aylan et al., (2016), it was intended to determine the complaint categories of customers who received service from thermal hotel enterprises, and to identify to what extent thermal hotel enterprises responded to these complaints. The study concluded that the prices and advertising campaigns had the highest number of complaints from the customers of the thermal hotels.

In another study conducted by Kılıç et al., (2013), the effects of positive attitudes and behaviors, which were displayed by the employees to solve the service quality complaints of the customers, on the perception of service quality were examined. As a result of the study, it was observed that the customers, who received positive responses to their complaints, displayed both behavioral and attitudinal dimensions of loyalty such as using the service again and recommending that enterprise to friends and relatives.

In the study conducted by Unur et al., (2010), it was aimed to explain the relationship between the concepts of customer satisfaction and customer complaint. The study focused on the complaints encountered in package tours organized by travel agencies and the frequency of these complaints. In order to determine the extent of the complaints, the content analysis was conducted for 123 complaints posted on *"www.sikayetvar.com.tr"* website about package tours. As a result of the analysis, it was determined that travel agencies received the highest number of complaints about the behavior of agency officials and employees as well as about prices.

Importance of Customer Satisfaction for Hospitality Enterprises

Understanding the importance of customer satisfaction for hospitality enterprises depend primarily on understanding the concept of customer satisfaction. Satisfaction can be treated as the response of the customer for the service (Bulut, 2011: 390).

There are numerous definitions for the concept of customer satisfaction. Duman (2003: 47) described customer satisfaction as "*the cognitive and emotional response to the service that results from the comparison of the expectations and experiences of customers concerning the service*." According to another definition, customer satisfaction is a psychological concept that expresses the good feeling or satisfaction for gaining what the customer expects from a product or service (Pizam and Ellis, 1999: 327).

The most frequently used tool for measuring customer satisfaction in hospitality enterprises is “review documents for the guests” (Su, 2004). Initially, these documents were left in the guest rooms in an attempt to gain feedbacks, whereby only the managers of the hotels could benefit from the information obtained through this traditional method; however, today, travelers also have access to this information through various platforms such as *Tripadvisor* (Stringam and Gerdes Jr, 2010).

In fact, the implementation of complaint management begins with the inspection of all instruments that have a direct impact on customer satisfaction. Problem areas are identified and an action plan is developed. This action plan consists of strategic applications for complaint management (Çeltek, 2013: 70).

On the other hand, customer complaints are a reality of the organizational life. Customers are dissatisfied when they receive lower performances from the enterprises and enterprise employees compared to what they expected, or when they believe they are being treated unfairly (Ang and Buttle, 2012: 1021). In this context, customer satisfaction is vital for hospitality enterprises. Therefore, the owners of the hospitality enterprise should keep track of whether the customers are satisfied with the service they receive and whether they are doing well in managing complaints.

In the study, the problems that cause dissatisfaction of the customers were examined within four clusters: product-related, price-related, customer-related and distribution problems.

Product-Related Problems

Hotel enterprises are service producing businesses. The most basic feature of service is that it is abstract. For this reason, hotel customers often evaluate the service they receive based on the tangible features they encounter. For instance, from the moment the customer first enters the hotel, the interior and decoration of the hotel shape the first impressions about the quality of the service. In addition, food and beverage services, facilities offered and additional activities and opportunities such as a pool, gym and restaurant are also visible physical assets that the customer can easily perceive and be influenced in terms of customer satisfaction. Customer satisfaction can be measured in parallel to their level of benefit when using the mentioned physical evidence (Yılmaz and Çemrek, 2016: 185).

Price-Related Problems

In the hospitality sector, where competition is very high, it is very difficult for enterprises to profit and ensure continuity of this profit. Therefore, when determining their prices, hospitality enterprises aim to achieve both profit and continuity of customer satisfaction. Hospitality activities should not only be seen as a day-to-day gain, but rather as a continuous activity (Kozak, 2007: 148).

Customer-Related Problems

Dissatisfaction occurs when customer expectations exceed the existing product and service performance; on the contrary, if product and service performance meets customer expectations, satisfaction occurs. However, the problems experienced in hospitality enterprises are not always caused by the enterprises, and sometimes customers can be the cause of problems as well. For example, there may be problems caused by the regret that customers experience when they act with hearsay without having full knowledge of the business. Another example is the problems arising from the fact that customers don't know the channels to solve the problems they face (Mil, 2014: 32).

Distribution Problems

With the improvements in technology, new distribution channels have also emerged in recent years. These include social media tools or travel websites through which booking can be made online. Inconsistent information posted on these distribution channels may lead to distribution problems. For example, a tourist, who relies on the information in a brochure showing the spectacular sea view together with the greenery of a holiday village, the well-arranged beach view, the gleaming room photos and the quality of service features with all kinds of equipment, can ultimately encounter a dirty environment, a stony beach, bad showers etc. (Hayta, 2008: 45).

Method

Aim and Significance of the Research

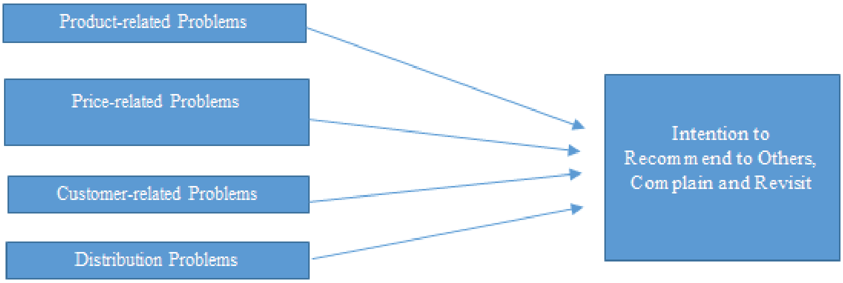
The hospitality enterprises that serve in the tourism sector, which is one of the sectors with an intense competition, have to exercise due diligence to customer satisfaction in order to maintain their presence and improve the quality of their services. Therefore, following the travel websites, where customers share their experiences, evaluating the complaints, suggestions and recommendations and responding immediately will both increase customer satisfaction and help the hospitality enterprise to recognize its own shortcomings.

Travel websites have started to provide the convenience of preliminary information about a variety of holiday programs for potential customers who are searching for holiday. In this context, the aim of this study is to evaluate the complaints of customers who visit travel websites about hospitality enterprises in Kars.

The Model and Hypotheses of the Research

While creating the model of the research, the customer complaint criteria were used that were defined in the book of Evrim Çeltek titled "Electronic Customer Relations in Tourism Businesses" and printed in 2013.

In this context, the model of the research is as follows:


Product-related Problems
Price-related Problems
Customer-related Problems
Distribution Problems
Intention to Recommend to Others, Complain and Revisit

Hypotheses developed for the study based on this model are:

H_1: Product-related problems faced by customers in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.

H_2: Price-related problems faced by customers in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.

H_3: Customer-related problems in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.

H_4: Distribution problems in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.

The Population and Sample of the Research

The population size of the research is comprised of 43 hotels in Kars province and Sarıkamış district that are listed as hospitality enterprises certified by the municipality for tourism enterprise according to the information in the official website of the Kars Provincial Directorate of Culture and Tourism (https://kars.ktb.gov.tr, 31.12.2019). The sample size of the study consisted of 34 hospitality enterprises in Kars province and Sarıkamış district that were reviewed about on the *Tripadvisor* website.

Data Collection Tools of the Research

The data of the research were obtained from the *Tripadvisor* website, which has almost 460 million monthly unique visitors (https://www.tripadvisor.com.tr, 31.12.2019). As the data, a total of 1929 reviews were analyzed that were posted about the hotels in Kars province and Sarıkamış district.

Data Analysis Method

In the study, the data obtained from travel websites were analyzed using the content analysis method. Based on the definition made by Stone et al., (1966: 213); content analysis method is a research technique used to draw systematic and unbiased conclusions from certain characters identified within the text.

The content analysis method is a data analysis method that is frequently used in the social sciences. In this method, a systematic and repeatable technique is used in which some words of a text, such as books, book chapters, letters, historical documents, newspaper titles and writings are summarized with smaller content categories (Sert et al., 2012: 353).

In the study, each review of the customers was analyzed and clustered within following groups;

* Product-related problems,

* Price-related problems,

* Customer-related problems,

* Distribution problems.

Findings

The findings as a result of the content analysis are presented below.

Table 1. Number of Reviews Posted on the Tripadvisor website Concerning the Hotels Located in Kars Province and Sarıkamış District

No	Hotel name	The number of reviews posted
1	Hotel Katerina Palace	256 reviews
2	Ekinata Grand Toprak Hotel	136 reviews
3	Sarıkamış Habitat Hotel	124 reviews
4	White Park Hotel	120 reviews
5	Konak Hotel	119 reviews

6	Sim-Er Hotel	116 reviews
7	Kar’s Hotel	116 reviews
8	Cheltikov Hotel	106 reviews
9	Kayı Snow Hotel	88 reviews
10	Hotel Kent Ani	82 reviews
11	Kale Hotel	74 reviews
12	Snowflake Mountain Hotel	73 reviews
13	Güngören Hotel	68 reviews
14	Grand Anı Hotel	61 reviews
15	Çamkar Hotel	46 reviews
16	Kars-ı Şirin Hotel	44 reviews
17	The Karspark Hotel	36 reviews
18	Hotel Temel	36 reviews
19	Karabağ Hotel	35 reviews
20	Hotel İpekyolu	26 reviews
21	Wintercity Hotel	25 reviews
22	Hotel Kafkasya	20 reviews
23	The Gala Palace Hotel	19 reviews
24	Kars Teacher’s Lodge	17 reviews
25	Bildik Hotel	14 reviews
26	Hotel Aras	13 reviews
27	Kent Hotel	13 reviews
28	Işıl Park Hotel	11 reviews
29	Şehr-i Beyza Hotel	11 reviews
30	Kars Konak Hotel	9 reviews
31	Sarıkamış Kar Hotel	7 reviews
32	Miraç Hotel	5 reviews
33	Hotel Bizim	2 reviews
34	Taş Hotel Group	1 reviews

Source: https://tripadvisor.com.tr, 12.31.2019.

The reviews posted until December 31, 2019 about the hotels located in Kars province and Sarıkamış district are presented in Table 1. Evaluations were made about a total of 1929 reviews posted concerning 34 hotels located in Kars province and Sarıkamış district.

Table 2. Rating of the Satisfaction Reviews Posted About the Hospitality Enterprises Located in Kars Province

Rating	**Number**
Perfect	854
Very Well	471

Moderate	289
Bad	159
Awful	156

Source: https://tripadvisor.com.tr, 12. 31.2019.

As is seen in Table 2, when the reviews posted about the satisfaction levels were rated, it was observed that out of 1929 reviews, 854 were rated as *"Perfect"*, 471 as *"Very Well"*, 289 as *"Moderate"*, 159 as *"Bad"* and 156 were rated as *"Awful"*.

Considering the rating of the reviews posted on the *Tripadvisor* website, it was observed that the highest number of reviews made by the customers of the hospitality enterprises were posted as *"Perfect"*. In this context, it is observed that the customer satisfaction level is *"high"* for the 34 hotels.

The customer reviews, which were rated as *"Bad"* or *"Awful"*, are the indicators that should definitely be examined by the enterprises. If an enterprise wants to create customer loyalty, initially, it should focus on the reviews of customers who are not satisfied with the service they received. It is the only way to increase the service quality.

Table 3. Classification of the Complaint Factors in the Reviews that were Examined

Complaint Criteria	**Number**
Product-related Problems	338
Price-related Problems	52
Customer-related Problems	52
Distribution Problems	88

Source: https://tripadvisor.com.tr, 12.31.2019.

In Table 3, complaint factors in reviews posted on the *Tripadvisor* website are classified. The total number of all the reviews for all the hotels in Kars province and Sarıkamış district is 1929. However, when the content analysis was applied on these reviews, it was observed that, among the 530 reviews specifically stating the experienced problem, there were 338 product-related reviews, 52 price-related reviews, 52 customer-related reviews, and 88 reviews concerning distribution problems.

It was observed that the reviews specifically focused on product-related problems. As per the product-related problems, certain factors were taken into account such as cleaning, breakfast services, lobby services, genial attitudes of the employees and sleep quality. It was observed that the reviews in this branch particularly focused on cleaning-hygiene criteria. It was observed that customers of the hotels particularly complained about the cleaning issue, advising hotels to correct this issue. At the same time, other frequently mentioned issues were about the design and usefulness of the items in the room, the comfort of the beds, and the functionality of the Wi-Fi service. It was complained that the intense smells of the meals are even felt in the rooms. It was also found that certain criteria were evaluated such as the adequacy of restaurant services provided, and adequacy, variety and quality of meals and breakfasts. Furthermore, the distance of the hotel to the city center and to the historical sites was also evaluated.

Second, concerning the distribution problems criterion, certain reviews were taken into consideration in which the customers purchasing the service through the distribution channels realized during the consumption of the service that the information they acquired through these channels was incorrect or incomplete and expressed regret about this situation. In these reviews, it was particularly emphasized that reservations made through the internet were more expensive than those made over telephone; in such cases, it is considered that the enterprise is not a reliable enterprise. Another factor that was complained about in the reviews was that when the customer arrived at the hotel they were told that there was no such reservation, even though the reservation was transacted over the internet.

It was observed that particularly the price-performance criterion was taken into consideration for the price-related problems. In the reviews of the customers, they explained that the service was not sufficient in exchange for what they paid. Hospitality enterprises offer their customers different pricing options such as full board or half board. However, it was observed that it was not the case in the practice. It was observed in the reviews that customers were charged extra payments for drinks services offered in the lobby despite booking full board. Similarly, despite booking for “breakfasts included”, customers complained about the lack of service offered in terms of variety or quantity. Another criterion complained by the customers was about the restaurant services particularly for dinners that remained far below their expectations in the hotels which they preferred for being *“5-star”* or *“4-star”*. Therefore, it is observed that there is a deep gap between the price paid by the customers and the performance of the hospitality enterprise.

It was realized that the customer-related complaints are including regretful statements of the customers. It was often mentioned that customers had to stay in other hotels because there was no room. In addition, customers expressed their regrets when they encountered a service that was far below their expectations particularly in the hotels that they preferred with high expectations due to the positive reviews made on travel websites.

In this context, when the results of the hypotheses developed for the study were examined, it was observed that all four basic hypotheses were accepted.

Table 4. Hypotheses Results

HYPOTHESES	ACCEPTED/REJECTED
H_1: Product-related problems faced by customers in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.	Accepted
H_2: Price-related problems faced by customers in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.	Accepted
H_3: Customer-related problems in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.	Accepted
H_4: Distribution problems in the hospitality sector are effective on the intentions of customers to recommend to others, complain and revisit the business.	Accepted

Conclusion and Suggestions

Today, the high rates of internet usage are deeply affecting the tourism sector as well as all sectors. People, who have been able to transfer their touristic experiences among each other and their own environments until recently, can now share them with people they have never seen, or even show evident with photographs. Therefore, in this study, it was aimed to categorize the complaints in reviews made on *Tripadvisor* website about hospitality enterprises operating in Kars and to identify the factors particularly complained about.

Initially, the customer reviews used in the study were divided into four categories as *product-related* problems, *price-related* problems, *customer-related* problems, and *distribution* problems.

The product-related problems include cleaning, breakfast services, lobby services, genial attitudes of employees, and sleep quality. As a result of the study, it was observed that the customers primarily evaluated the product-related issues in the service they received. It was also concluded that subsequent to fulfilling a satisfaction with the product, other factors were evaluated.

Concerning the price-related problems, it was observed that price-performance relations were particularly observed. In other words, it is about whether the customers are satisfied enough with the product they receive in exchange for the money they pay. The reviews indicated that the customers were satisfied with the hotels located in Kars concerning the price-performance relationship, but not for the hotels located in Sarıkamış. Customers find the hotels in Sarıkamış expensive without providing the promised service.

In the reviews, it was evaluated that the regretful statements of customers were about customer-related problems. Customers were affected by the reviews made on websites of the hospitality enterprises and expressed regret that they preferred them but received a service that was below their expectations. Among the reviews examined, 52 reviews clearly identified customer-related problems. In order to eliminate the shortcomings of the businesses, the enterprise owners should also evaluate such reviews in an attempt to increase the service to the expected level.

Distribution problems represent the issues that customers experience as a result of incomplete information they obtain from distribution channels such as social media tools, hospitality websites and travel websites. Enterprises should carefully monitor their websites, social media channels and reviews of their enterprises on travel websites. In particular, it is recommended that the price policy applied in the enterprise should be consistent among the distribution channels.

Due to the time and travel website limitation applied in the study, it was conducted within a specific date range and over a single travel website. Therefore, it is suggested that further studies should be conducted on different travel websites and in a different date range.

As the conclusion of the study, which was conducted on hotels in Kars province and Sarıkamış district, it was observed that the responsiveness rates of these hotels were low for the customer reviews posted on travel websites. Therefore, it is recommended that hospitality enterprises located in Kars province and Sarıkamış district should not only use travel websites more actively but also respond more to the customer reviews.

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Chapter 7

USE VALUE OF PATARA ANCIENT CITY: AN APPLICATION OF TRAVEL COST METHOD

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Anneme

Introduction

Ecosystems provide a flow of goods and services that society benefits. Policy changes or individual actions may affect this process so that costs and benefits occur. Assessing these costs and benefits is the core for evaluation of the projects concerning the environment. Without taking account of monetary valuation such decisions would be unreliable. However, standard economic tools fail to deal with this issue since environmental goods and services show public good characteristics and are usually not bought and sold in the markets. For this purpose, non-market valuation techniques have been developed by economists (Carson, 2000, Throsby 2012, Freeman et. al., 2014).

Cultural heritage goods also have public good attributes. Even though these goods may vary in their levels of non-excludability and non-rivalry, they are still subject to socially optimal level of provision. In order to be able to make trade-offs, economic theory states that the marginal cost of the good should be equal to its marginal benefit. For cultural goods, it can be transformed so that the optimal number of heritage sites could be achieved when marginal cost of protecting one site is equal to the marginal benefit from it (Navrud and Ready, 2002).

Non-market valuation techniques can be categorized as revealed and stated preference approaches (Carson and Czajkowski, 2014). Revealed preference (RP) approach uses observed behavior of individuals todetermine the (ex-post) willingness to pay (WTP) for different kinds of non-market goods. In contrast, stated preferences (SP) aim to measure the (ex-ante) WTP and construct hypothetical markets in which consumers are asked to evaluate or choose between various scenarios (Whitehead et. al., 2008). Fig. 1 shows a detailed classification of both approaches.

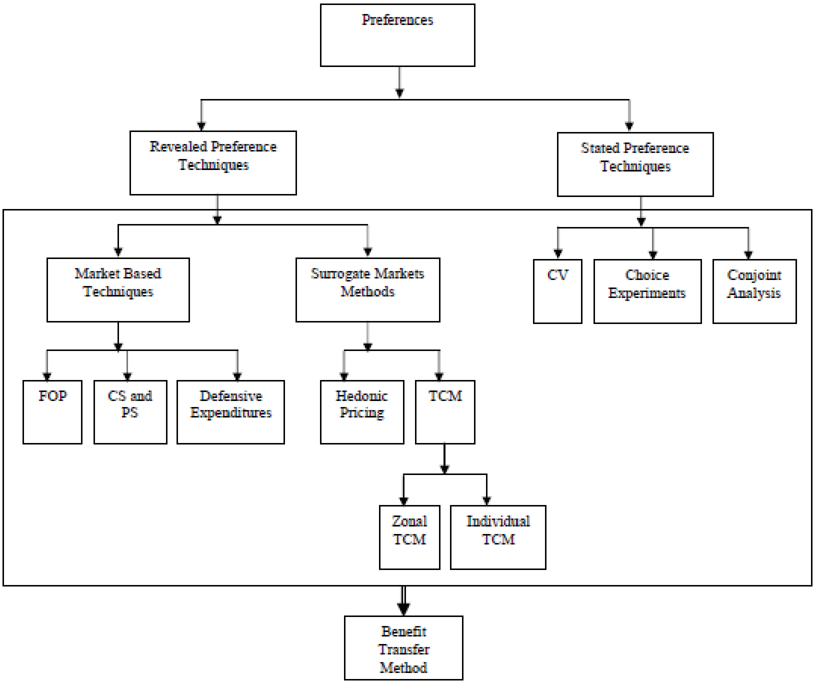

Preferences
Revealed Preference Techniques
Stated Preference Techniques
Market Based Techniques
Surrogate Markets Methods
CV
Choice Experiments
Conjoint Analysis
FOP
CS and PS
Defensive Expenditures
Hedonic Pricing
TCM
Zonal TCM
Individual TCM
Benefit Transfer Method

Fig. 1: Classification of non-market valuation tehniques (Nde, 2011)

The economic valuation of a non-marketed cultural good usually refers to its use value (Nijkamp, 2012). The use value is the maximum WTP that an individual willing to pay for the access to the site. This can be observed as direct and indirect use values. While the former refers to the value directly derived through the market mechanism (for ex. the higher rents yielded due to heritage characteristics of a building), the latter refers to the value gained by non-heritage characteristics of the good (for ex. the utility derived by archeology students continuing their education on a heritage site) (Rojas, 2012). For most of the cases, cultural goods yield not only use values but also non-use values. Non-use values can be defined as the utility derived by individuals since they know that the site is inherited and protected. The non-use values consist of a variety of sub values which are known altruistic, bequest, option and existence values. In economic terms, the non-use values refer to value that the society is willing to pay to be sure that the site is protected (Navrud and Ready, 2002). Other than these, heritage sites also have a wide range of sociocultural values presented in Table 1 (Rojas, 2012).

Use value	Non-use value	Socio-cultural values
Direct use	*Alturistic*	*Aesthetic*

Indirect use	*Bequest*	*Spiritual*
	Option	*Social*
	Existence	*Historic*
		Symbolic

Table 1. Taxonomy of non-market values

In this paper, our aim is to determine the use value of Patara ancient city for recreational purposes. In this framework, we applied an individual travel cost method (ITCM) for a single site to assess the consumer surplus generated by accessing the site. The paper adds to literature in this concept since these kinds of valuation studies are very rare especially in developing countries.

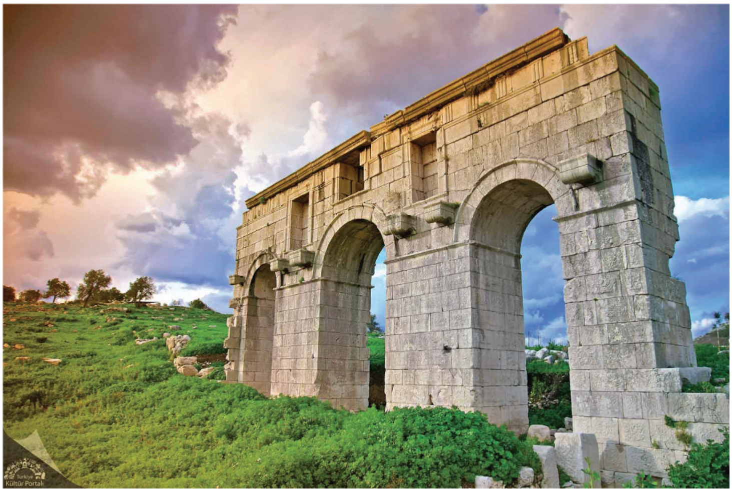
Many projects concerning the areas like Patara are being undertaken without taking account of values generated by them. This leads policymakers to take misleading decisions and causes inefficient investment projects to be supported. Moreover, valuation studies provide information about the economic preferences of potential users (or non-users) which is crucial for the management of the site. Revealing public preferences may act as guide for the decisions over heritage sites and provide solutions to the issue of up to which level should the site be publicly funded (Navrud and Ready, 2002).

Study Area

The ancient city of Patara, described by many scholars as the place where "Lycia opens to the world", is not only the one of the most important settlements in Lycia but also one of the prominent ancient harbour settlements of North Eastern Mediterranean (Koçak and Dündar, 2019). Among the finds made through the archaeological excavations conducted since 1988, one find puts back the date of settlement of the city to the end of the fourth or start of the third millennium B.C. However, the stone axes that have been found without context in the area are thought to date from even earlier periods (Işık, 2011). Moreover, the obsidian implements found in excavations in another Lycian city, Tlos, provide indications concerning the use of the harbour at Patara about 8000 B.C. which had a large trade network (Takaoğlu et. al., 2014).

According to the current state of knowledge, the earliest written source to mention the name Patara is in the hieroglyphic script from the holy area of Yalburt. From this Luwian inscription, it can be understood that the great king IV. Tudhaliya of the Hittites (1240-1220 B.C.) visited the country of Lukka (Lycia), erected monuments and made vows to the gods (Poetto, 1993). The history of Patara was parallel to the history of Lycia in classical times (Schüler, 2019). In this understanding, the important historical facts are: the sovereignty of the Persians around 450 B.C.; that Patara was an autonomous city which can be determined by the coins with the Patara legend minted by I. Vekhssere (450-430/425 B.C.) and by II. Vekhssere (430/20-410/400 B.C.); that a large garrison was established by the Hecatomnids in the 4th century B.C.; the conquest of Patara and the whole of Lycia by Alexander the Great in 334/333 B.C. by attacking this garrison; followed by the formation of a new garrison by the Ptolemaic Dynasty in 280 B.C. after the death of Alexander the Great; and the renaming of the city as Arsione for the length of a century (Dündar and Rauh, 2017).

Fig. 2: The Arch

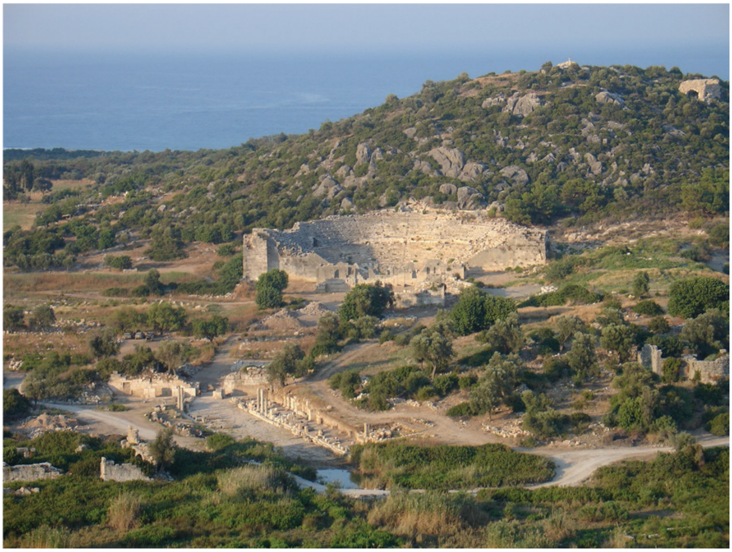


Patara in the 2nd century B.C. was defined as “caput gentis Lyciae” by the Roman historian Livius, meaning, “Head of Lycian Nation”, in other words “the capital city of Lycia”. This capital status was maintained in the province of Lycia founded by the Roman Emperor Claudius in 43 A.D. and in the joint province of Lycia et Pampylia founded in 72 A.D. by Emperor Vespasian (Zimmerman, 2019). The latest historical information is that Cem Sultan, a son of Fatih Sultan Mehmet, sent an envoy from Patara in 1478 to the Knights of St. John (Işık, 2011).

With its still standing theatre, harbour street, harbour temple, harbour storehouse, the early settlement of Tepecik, the double city walls constructed in different periods, the aqueduct of Delikkemer, five public baths, ten churches, ten temple graves, the Roads Monument/Monumentum Patarense, esteemed as the epigraphic monumental find of the century and other numerous buildings, Patara is regarded as one of the most magnificent cities in Anatolia (İşkan, 2016a). The Lycian League, described by Montesquieu as “the most perfect model of a republic” held meetings in the parliament building, one of the foremost structures in the city (İşkan, 2019). The lighthouse constructed in 64/65 A.D. by Emperor Nero as a prestige building will be restored to its full 26 meters height (İşkan, 2016b). In addition, Patara has an important structure of technological heritage dating from more recent times, a wireless telegraph station constructed by order of Sultan Abdulhamid II, which began operations in 1906 (Tanrıkut, 1984).

As a city in which St. Nicholas was born, Patara has not only a rich cultural heritage, but also has a very special status due to its natural environment. In particular the 12 km. long beach has worldwide recognition being one of the most important breeding areas for the Caretta Caretta turtles in the North East Mediterranean; while the beach at Patara is also a crucial tourism destination (Anonymous, 2020).

Fig. 3: The Theater



Methodology and Data

TCM is the main revealed preference approach used for recreational demand estimates. It was proposed by a letter of Hotelling (1949) to the National Park Service and has become one of the “success stories” of non-market valuation techniques (Smith, 1993). The idea behind the TCM is that the trip costs to the site borne by individuals can be used to determine the price for the recreation site. In this concept when individuals make a trip to a site, they also reveal their WTP for the recreational use of the site (Parsons, 2003). The model was later empirically developed by other researchers (Clawson, 1959, Clawson and Knetsch, 1966).

TCM is a survey based method. A questionnaire is prepared by the researcher aiming to gather necessary socioeconomic, demographic and trip cost information of the visitors. This information is usually the visitors' residence, visitation frequency to the site, education level, marital status, gender and costs associated with the trip. A demand function relating number of visits and trip costs can be obtained from this information and this function can be used to estimate the recreational use value of the site (Bateman, 1993).

Three main categories of TCM are zonal travel cost method (ZTCM), ITCM and the random utility model (RUM) approaches. The ZTCM was the original approach proposed by Hotelling (1949). It relates the average visits per population of each zone to average cost of the trip from each zone. ITCM based on unique travel costs of individuals and takes into account of households' socioeconomic characteristics and cost of travel time. And finally, the RUM approach based on random utility theory (RUT) and models the travel behavior through an indirect utility function which can be decomposed into travel related data and site attributes (Morrison, 2009, Bennett, 2011).

In our case, a single site ITCM has been chosen due to following reasons. Firstly, the study site is a purely unique area so that we believe that the substitution effects would be very low (Tourkolias et. al., 2015). Secondly, in order to implement the RUM model, we had to conduct surveys in all sites close to Patara ancient city which was not feasible due to limited budget of the study. The zonal approach also has not been chosen because it uses aggregated data which can lead to loss of capturing heterogeneity among visitors and inefficient estimates (Ward and Loomis, 1986).

The general framework of a single site model

The theoretical framework of TCM finds its roots in neoclassical consumer theory. Following (Freeman et. al., 2014), let us consider a recreationist facing the following utility maximization problem:

$$max u_{z,x} = (z, x, q), \quad s.t. \qquad (1)$$

$$M + w.t_w = z + p_x \qquad (2)$$

and

$$t^* = t_w + (t_1 + t_2)x \qquad (3)$$

where z is the quantity of the numeraire good, x is the number of trips to the site, q is the quality of the site, M is the exogenous income, w is the wage rate, p_x is the monetary cost of the trip, t^* is the total available time, t_w is the hours worked, t_1 is the round-trip travel time and t_2 is the time spent on the site. The recreationist's utility depends on the time spent on the site, quantity of numeraire good and quality of the site. If fixed visit duration is assumed, then the time spent on the site can also be presented by number of visits to the site.

From *(3)*, it can be seen that the recreationist faces not only a monetary budget constraint but also a time budget constraint. The time spent both for travel and on-site activities have an opportunity cost reflected by the time spent on other activities. If we assume that the recreationist has flexible work schedule, which means that she can choose her working hours freely, then the opportunity cost of time equals the wage rate.

Let us further assume that the trip cost consists of the admission fee, *f*, which can be zero, and monetary cost of trip, $p_d.d$, where p_d is the cost of trip per mile and *d* is the round trip distance. If we substitute time budget constraint into money budget constraint, we get:

$$M + w.t^* = z + c.x \qquad (4)$$

and

$$c = p_x + w.(t_1 + t_2) \qquad (5)$$

$$= f + p_d.d + w.(t_1 + t_2) \qquad (6)$$

where *c* reflects the total cost of the trip. From *(5)*, it can be understood that the total cost of the trip depends on admission fee, cost of travel, cost of travel and on-site time. Solving the optimization problem yields the following Marshallian demand function:

$$x = x(c, M, q) \qquad (7)$$

The main limitation of the single site model is that it does not provide any information about the changes in site quality. The sites attributes are assumed to be constant among visitors, which means that there is no variation and visitors do not face any "trade-offs". However, since assessing the "total costs" and "total benefits" is the core in economic analysis (Carson and Mitchell, 1989, Carson, 2000, Freeman et. al., 2014), estimating the total use value of a cultural site can still be a useful guide.

The individual travel cost method

The single site ITCM, or namely the “seasonal demand model”, treats the recreation demand as visitations to a particular site during the entire season. In this concept, the quantity demanded is the “number of trips taken to the site” and the price is “the cost of the trip”. This yields the following demand function (Parsons, 2003):

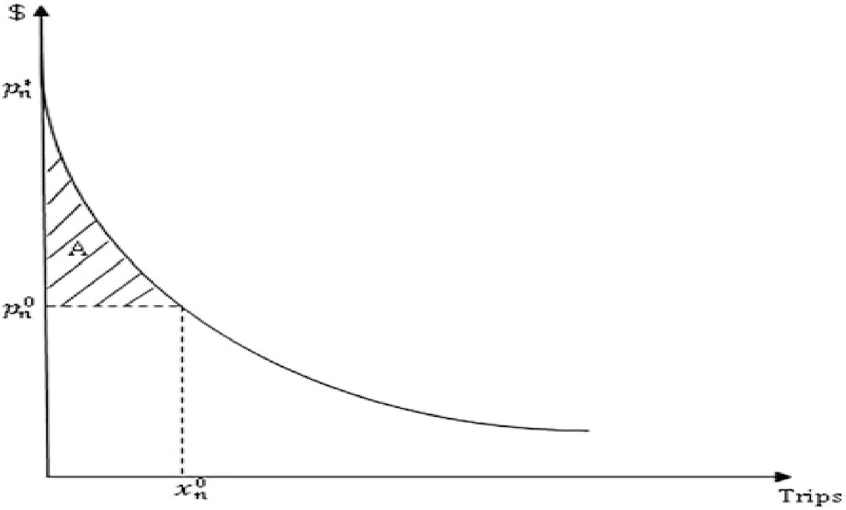
$$x_n = f(p_n, R_n, Z_n, y_n) \qquad (8)$$

where x_n is the number of trips, p_n is the cost of the trip, R_n is the trip costs to substitute sites, Z_n is the vector of sociodemographic characteristics and y_n is income. It is assumed that the number of trips decline as the distance increases which yields a downward-sloping demand curve. One can obtain the consumer surplus by integrating *(8)*:

$$cs_n^{site} = \int_{p_0^0}^{p_n^*} f(p_n, R_n, Z_n, y_n)\, dp_n \qquad (9)$$

where p_n is the actual trip cost and p^* is the price which equates the number of trips to zero (choke price). Fig. 4 graphically shows the consumer surplus.

Fig.4: Consumer surplus



The area between p_n and p^* can be interpreted as the access value to the site. The widely used log-linear form of *(7)* for econometric estimation can be written as:

$$\ln(x, n) = \alpha p_n + \beta_R R_n + \beta_Z Z_n + \beta_y y_n \qquad (10)$$

Using *(10)*, the individual consumer surplus per trip simply equals *-1/α.*. The multiplication of this value with the total number of visitors during the season gives the total use value of the site (Bateman, 1993).

Survey design

The data used in this study was drawn randomly among visitors through on-site sampling. The survey was conducted from the 1st through 20th of September in 2019. The peak season was selected to capture the seasonal demand characteristics of the visitors. A pre-survey was practiced in order to eliminate potential problems with the questions and feedback from this pre-survey were evaluated to give the final shape of the questionnaire. The survey was conducted at 4 different areas of the ancient city; namely the Pylon Street, the Parliament Building, the Theater and the beach. The reason of adding the beach option is that majority of the visitors on ancient areas refused to take part of the survey stated that they had no time, it is uncomfortable with the small children etc.

The survey team was informed by the researcher about the topic and how should they answer to possible questions from the respondents. The respondents were also informed verbally by pollsters. The goal of the survey was to reach 300 respondents in total. However due to time and budgetary constraints, a total of 200 questionnaires were able to completed. Of those, 158 were usable after the assessment. The structure of the questionnaire consists of demographic, socioeconomic and revealed behavior questions. The first part includes typical demographic and socioeconomic questions like sex, age, household size, income. A five level Likert scale for entry fee evaluation was also added to this part. The second and last part embraces the travel cost questions.

Potential Issues with TCM

Despite its usefulness, the TCM is subject to some methodological issues. These difficulties can be defined as how the value of time should be treated (Hanley and Barbier, 2009), multi-purpose trips (Kuosmanen at. al., 2004), overnight stays (Parsons, 2013) and substitute sites (Randall, 1994}-). The above mentioned methodological problems arising with the application of TCM and how we dealt with them is explained in the following subsections.

Value of time

It has been a long debate in recreation literature how to measure the value of time in monetary terms recreational welfare studies. Time is a scarce resource and people spent it to travel to a certain site which means that it should be included in recreation modeling (Hanley and Barbier, 2009). Since the work of Cesario (1976), it has become common in practice to measure the value of time as a fraction of wage rate, usually one third (Englin and Cameron, 1996, Egan et. al., 2009, Huhtala and Lankia, 2012). Even though the opportunity cost of time was found to have significant impacts on consumer welfare estimates (Smith et. al.,1983, Bockstael et. al., 1987, McKean et. al., 1995), the literature still lacks a common way of how to measure it and incorporate into analysis (Randall, 1994, Larson, 1993, Czajkowski et. al., 2015).

Another important distinction is between the on-site time and the value of travel time. The value of on site time is assumed to be endogenous to the recreationist while the latter is exogenous unless the visitor is able to make choices between different routes and modes of transport. In empirical literature, it has been common to ignore the on-site time while for the value of travel time researchers applied different methods (McConnell, 1992).

In this study we focus on the value of travel time and assumed that visitors are "out of the market" for the time spent on site. For this purpose, we estimated three models. In model 1, we assumed zero opportunity cost for the travel time. Then we conservatively applied the *1/3* fraction of the hourly wage rate as the cost of travel time. In model 3, we followed (McConnell and Strand, 1981) and let the fraction of the wage rate to be determined in the regression.

Multi-purpose trips

The trip to a particular site may sometimes be a part of a more general trip. This is usually referred to "multi-purpose" or "multiple site trips" in recreation demand literature. If this is the case, the trip generates more than one recreation and the theory of TCM is violated (Parsons, 2013). Ignoring or treating multi-purpose trips like single trips may lead biases in consumer surplus estimates (Kuosmanen at. al., 2004).

Possible treatments of multi-purpose trips in the literature are as follows: using only the part of the cost associated with the site (Bedate et. al., 2004); evaluating costs occurred from each trip as some fraction of total cost and estimating separate demand curves for each (Haspel and Johnson, 1982) and defining a combination of sites where visitors of a particular site frequently stop and treat them as additional sites (Mendelsohn et. al., 1992).

In this study, we follow the first approach and limited the trip only from the last stop to the site. Visitors were asked "How much did you pay in total (fuel, bus fare, flight ticket etc.) to get this ancient city? (Please consider your LAST location)". They were also reminded verbally by the survey team.

Overnight stays

Including overnight stays needs careful treatment of the model. Firstly, total costs will increase. Secondly, the visitors may visit and lodge in all possible sites which means the accommodation expenses made in the visited site should be distinguished. Finally, many overnight trips tend to have multi-purpose trip characteristics. It has become a common practice that assuming the trip costs are only associated with the distance. In this case accommodation costs are ignored (Parsons, 2003). Another practice is estimating demand curves for day and overnight trips separately (Bin et. al., 2005).

In our case, more or less \%70 of visits were day trips. Moreover, for the rest of the visits indicating overnight stays, we constrained the analysis to lodging only in the area; in the village called Gelemis. We stated this in the questionnaire by asking "How many days do you plan to stay in this ancient city?". Respondents were provided two answers, day trip or an open-ended option for their length of stay. If the respondent specified her length of stay, she was asked "How much did you pay for accommodation? (Please answer this question only if you lodge in Gelemis village)".

Substitute sites

Although difficult to handle (Willis et. al., 2012), substitute sites are expected to affect the recreation demand through visit price, entrance fee and environmental quality. However, additional surveys are required to be conducted in order to add these variables to the estimation. They are in practice rarely included to analyses due to high survey costs. If the effects of substitute sites are fully desired to be captured, surveys should be conducted on each possible site (Bateman, 1993).

For cultural goods, it is still in debate that substitute sites really exist. Since these goods show truly unique characteristics, it is questionable that they face a competition (Bedate et. al., 2004). One solution might be to include the nearest site with similar attributes to analysis (Freeman et. al., 2014).

Nevertheless, in this study we adopt the view that Patara Ancient City is a truly unique site and thus the substitution effect would be very low (Prayaga et. al., 2006, Tourkolias et. al., 2015, Ortega et. al., 2018). Moreover, if sites are clustered, which is the case in our study, studies showed that adding the substitution effect would yield biases in consumer surplus estimates (Bateman, 1993).

Previous Literature

Since its first introduction, a wide body of literature applying TCM has come into existence. Studies show great variation from forests (Bertram and Larondelle, 2017, Borzykowski et. al., 2017), beaches (Rolfe and Gregg, 2012, Windle and Rolfe, 2013, Zhang et. al., 2015, Zambrano-Monserrate et. al., 2018), rivers (Kaoru et. al., 1995, Gillespie et. al., 2017, Grilli et. al., 2018), lakes (Fleming and Cook, 2008), bird sanctuaries (Czajkowski et. al., 2014) to fishing areas (Curtis and Stanley, 2016, Curtis and Breen, 2017). For cultural field, studies also vary among tangible and intangible goods. Poor and Smith (2004) conducted a ZTCM to elicit the use value of Historic St. Mary City in Maryland, United Kingdom. They measured the consumer surplus between 75,492$ and 176,550$. Melstrom (2014) estimated ITCM for three different American Civilwar Battlefields. His results show that the consumer surplus varies between 8$ and 25$ per individual. Tourkolias et al. (2015) implemented a ZTCM for Poseidon Temple in Sounio, Greece. Their analysis indicates that the use value is in range of 1.5€-24.5€ million per year. Ortega et al. (2018) applied both ZTCM and ITCM for National Museum and Research Center in Almira, Spain. The results of their study showed that the total surplus varies between 4.75€ and 8€ million per year. Studies concerning the use value of intangible cultural assets also exist in the literature. In their study, Prayaga et al. (2006) carried out a ZTCM in order to determine the use value of 'Gemfest' in Queensland, Australia. They conducted two surveys in years 1998 and 2002. According to their results, the value of the fest was 1.5$ million in 1998 and 0.81$ million in 2002, showing a significant variation.

In the context of this study, we carried out an ITCM to evaluate the use value of Patara ancient city. Our study site is one of the most important ancient cities in Turkey and capital of the Lykia Region. This paper is one of the very few studies in Turkey applying non-market valuation techniques to a cultural heritage site and therefore contributes to literature. According to our best knowledge, this study is the first applying non-market valuation techniques to an ancient capital city showing global importance and uniqueness.

Econometric Approach

The earlier estimates of TCM assumed continuous probability distribution for the dependent variable. Count data models became later popular allowing the dependent variable to be only non-negative integer. The ability of dealing with truncation, excess zeros and heterogeneity made them widely used among researchers in recreation demand estimation (Parsons, 2003).

The probability density of basic count data model, Poisson, can be written as (Haab and McConnell, 2002):

$$\Pr(x_i = n) = \frac{e^{-\lambda_i}}{\lambda_i^n} . n!, n = 0,1,2, \ldots \qquad (11)$$

Since $\lambda > 0$ is the necessary condition, the exponential function becomes,

$$\lambda_i = \exp(z_i\beta) \tag{12}$$

The sample likelihood function then can be written as,

$$L(\beta|z,x) = \prod_{i=1}^{T} \frac{\exp(-\exp(z_i\beta)\exp(z_i\beta x_i)}{x_i!} \tag{13}$$

and the log-likelihood function is,

$$\ln\left(L(\beta|z,x)\right) = \sum_{i=1}^{T} -e^{z_{i\beta}} + z_{i\beta} + x_i \ln(x_i!) \tag{14}$$

The main characteristic of the Poisson distribution imposes that the conditional mean and conditional variance of the dependent should be equal. However, it may not always be the case. When the variance exceeds the mean, the model suffers from overdispersion. In this case, the negative binomial model (NBM) can be preferred relaxing this assumption (Haab and McConnell, 1996, Greene, 2003).

Truncation and endogenous stratification

One faces two issues with an on-site sampling: truncation and endogenous stratification. Since the sampling is on-site, only the visitors are included leading to truncation of the number of visits at zero. The sample is also endogenously stratified because the probability of a person being sampled increases with the frequency of her visits (Creel and Loomis, 1990, Englin and Shonkwiler, 1995, Haab and McConnell, 1996).

The two above mentioned issues should be corrected in order to eliminate the biases in analysis. As Shaw (1988) suggested, these biases could be corrected by simply abstracting one from the number of visits *(n)*. Thus, the corrected on-site density function becomes,

$$P(x_i = n) = \frac{exp(-\lambda_i)\lambda_i^{n-1}}{n-1!} \tag{15}$$

Overdispersion

The inequality between the mean and variance of a Poisson regression model (PRM) is known as overdispersion. It usually occurs due to positive correlation between the response variables or when data is clustered. Possible outcome of overdisperison is biased estimation of standard errors resulting a variable to be significant in fact it would not have been (Hilbe, 2011).

Our data shows significant evidence of overdispersion. The fit of observed-predicted values also addresses that the Negative Binomial Model performs better especially for the excess zeros. So, the NBM has been selected as the main estimation method.

Estimation strategy

The dependent variable is a right-skewed non-negative integer including large number of zeros and is assumed to follow a Poisson distribution. In this case, the OLS would be inappropriate and yield biased estimates since it may take negative values and has the assumption of homoskedastic variance (Cameron and Trivedi, 2013).

The logarithmic transformation of the dependent variable would also be not adequate due to following reasons. Firstly, the independent variable contains a mass number of zeros so that their logarithm value can not be taken. Secondly, the log transformation of the dependent variable yields poor estimates. Finally, the log transformation might give meaningless and uninterpretable predictions for dependent variable (O'hara and Kotze, 2010, Du et. al., 2011, Cameron and Trivedi, 2013).

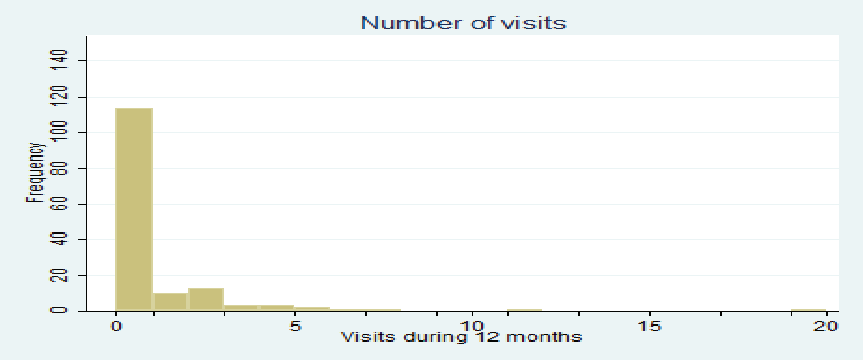


Fig. 5: Number of visits to the site during 12 months

The recreation demand to a particular site can be specified as;

$$x_i = f(tc, z) \qquad (16)$$

where x_i is the number of trips to the site, *tc* is the travel cost including the opportunity cost of time and *z* is socioeconomic characteristics of visitors. Since x_i is a non-negative integer, the model for this type of data to be estimated is the Poisson model. However, the Poisson model provides poor fit due to overdispersion. Instead, the NBM satisfies the condition of inequality of mean and variance and provides better fit. The NBM overcomes this by adding a parameter, capturing the unobserved heterogeneity among observations. Thus, the negative binomial regression model (NBRM) can be written as (Long and Freese, 2006):

$$\tilde{\mu} = \exp(\beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon_i) \qquad (17)$$

By substituting the variables of interest into (17), the econometric equation to be estimated becomes as follows:

$$VISIT = \exp(\beta_0 + \beta_1 PCAPTCOST + \beta_2 AGE1 + \beta_3 AGE2 + \beta_4 AGE3 + \beta_5 UNIV + \beta_6 INC1 + \beta_7 INC2 + \beta_8 INC3 + \beta_9 FIRSTVIS + \beta_{10} CAR + \beta_{11} REASON) \qquad (18)$$

Per capita trip cost

To obtain the per capita travel cost, we aggregated per capita accommodation cost, per capita entry fee, per capita on-site expenditure and per capita trip cost. For models including the opportunity cost of time, we multiplied the hourly wage of each visitor with the corresponding fraction, multiplied it again with the round trip length and added to per capita trip cost.

Results

The final number of questionnaires used for the analysis is 136. The demographic examination showed that %63 of the visitors were male and %37 were female. The age pattern of the visitors was considerably young. %63 of the respondents were between 25 and 44 years while %19 was 45 and older and %18 was younger than 25. The education level is significantly high when compared to average level of education in Turkey so that %72 of the visitors have at least an undergraduate degree. Respondents' average household size is 2,93 ~ 3, close to the average household size in the country. When we look to the employment conditions, %71 of respondents' stated that they work and %29 don't. It is worth noting that the income level of the visitors are surprisingly high when compared to general income pattern of the country. 29 visitors reported that their monthly household income is less than 5000 Turkish Lira (TL). %44 of the visitors stated their monthly income is between 5000 and 10.000 TL whereas %36 stated that they earned more than 10.000 TL per month.Only %20 of the respondents declared that their monthly income was less than 5000 TL. The percentage of the visitors who have their own home was %62. This is also presumably contradicts with the general tendency of the country. Car ownership was also significantly high among the respondents so that %91 of the visitors stated that they used their own car as means of transport. The reason of the trip was also used as a regressor which might have a potential effect on visitation frequency. This variable captures whether the main purpose of the trip is just to visit the ancient city. According to this, %74 of the visitors stated that the main purpose of their trip was not just to see the ancient city. Another variable which has been considered to be influential on annual visits is the first visit variable. This is also a dummy variable and captures whether the current visit is respondent's first visit to the site or not. The summary statistics of this variable stated that %76 of the respondents had never visited the site before. Tab. 1 presents the brief definiton and descriptive statistics of the variables.

Tab. 1: Definition of variables and descriptive statistics

Dependent Variable	*Definition*	*Mean*	*Min.*	*Max.*	*Std. Dev.*
Visit	Number of annual visits	1,63	1	12	1,55
Independent variables					
PCAPTCOST	Per capita travel cost in local currency (TL)	448,71	10	2524	595,29
AGE	Age of the respondent				
AGE1	Dummy variable; =1 if respondent's age is less than 25	0.19	0	1	0,39
AGE2	Dummy variable; =1 if respondent's age is between 25 and 44	0.63	0	1	0,48
AGE3	Dummy variable; =1 if respondent's age is more than 44	0.17	0	1	0,38
UNIV	Dummy variable; =1 if respondent has at least undergraduate degree	0,72	0	1	0,45
INC	Respondent's monthly gross income				
INC1	Dummy variable; =1 if respondent's income is less than 5000	0,19	0	1	0,40
INC2	Dummy variable; =1 if respondent's income is between 5000 and 10000	0,44	0	1	0,49
INC3	Dummy variable; =1 if respondent's income is more than 10000	0,36	0	1	0,48
FIRSTVIS	Dummy variable; =1 if respondent visits the site first time	0,73	0	1	0,44
CAR	Dummy variable; =1 if respondent's primary means of transport is her private car	0,91	0	1	0,28

REASON	Dummy variable; =1 if respondent's main aim is the visit of the site	0,25	0	1	0,44

NBM estimations

The resılts of NBM are presented in Table 3. The analysis has been performed with STATA 13. It can be seen from the table that the coefficient of the variable PCAPTCOST is negative and statistically significant at P<=0.05 for the first two models and significant at $P<=0.1$ for the third model showing consistency with the economic theory. Among the income groups, only the INC2 is found to be statistically significant for all models at P<=0.01. The FIRSTVIS variable is highly significant at P<=0.01 level with negative coefficient. Results also showed that age group variables AGE2 and AGE3 have significant impact on annual visits for all models. Finally, the CAR variable referring to the means of transport is found to be significant at P<=0.1 level. Surprisingly, the education level captured by UNIV variable shows no significance for all models. The income group variable INC3 also shows no significance for all models. The dummy variable REASON capturing the main purpose of the trip has also been found to be insignificant overall.

As mentioned in section 3, we used the traditional 1/3 fraction of wage rate as the opportunity cost of time in model 2. In model 3, we simply estimated a separate regression as stated in (McConnell and Strand, 1981) to simply let the wage fraction to be determined by the sample. For this purpose, we estimated the following equation:

$$VISIT = \beta_0 + \beta_1 PCAPTCOST + \beta_2 HINCROUND + \beta_3 AGE2 + \beta_4 AGE3 + \beta_5 UNIV + \beta_6 FIRSTVIS + \beta_7 CAR + \beta_8 REASON \qquad (19)$$

where HINCROUND is the product of hourly income and roundtrip. The ratio of the coefficients of the variables HINCROUND and PCAPTCOST (β_2/β_1) gives the fraction of the wage rate which equals 0,77 = %77 in this case.

*Tab. 2: Results of NB estimation; * p<0.1, ** p<0.05, *** p<0.01. Standard errors in parentheses*

Dependent Variable			
VISIT			
Independent Variables	Model 1	Model 2	Model 3
PCAPTCOST	-0,0006371** (0,0002853)	-0,0004626** (0,0002159)	-0,0003707* (0,0001969)
AGE1 (reference group)			
AGE2	0,80** (0,37)	0,75** (0,38)	0,74* (0,38)
AGE3	1,18** (0,54)	1,11** (0,54)	1,12** (0,54)
UNIV	-0,38 (0,63)	-0,33 (0,63)	-0,32 (0,63)
INC1 (reference group)			
INC2	1,27*** (0,43)	1,24*** (0,43)	1,24*** (0,43)
INC3	0,40 (0,48)	0,47 (0,48)	0,45 (0,49)
FIRSTVIS	-3,23*** (0,57)	-3,20*** (0,58)	-3,20*** (0,58)
CAR	1,12* (0,61)	1,12* (0,60)	1,12* (0,60)
REASON	0,60 (0,48)	0,62 (0,47)	0,63 (0,46)

Consumer surplus and total use value

Given the form of (18), the consumer surplus per trip equals $-1/\beta_{PCAPTCOST}$ (Parsons, 2013). It can be clearly seen from Tab. 3 that the consumer surpluses increase as the fraction of wage rage increases, reflecting the opportunity cost of time. Surplus per capita has been calculated by dividing the per visit surplus by average number of people[1] in the group including the visitor herself. Considering the annual total number of visitors are around 150.000, the total recreational use value of the site would be equal to surplus per capita times annual number of visitors. The site generates a total recreational use value[2] of 78-135 million Turkish Lira per year.

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[1] The average number of people in the group is 2,86 ~ 3.

[2] The total recreational use value is calculated as consumer surplus per capita times the number of annual total visitors.

Tab. 3: Consumer surplus and total use value

	Model 1	Model 2	Model 3
Consumer surplus per trip (TL)	1.570	2.161	2.697
Consumer surplus per capita (TL)	523	720	899
Total recreational use value (TL)	78.450.000	108.000.000	134.850.000

Discussion and Conclusion

Non-market goods generate both use and non-use values that can not be observed directly through the interactions of market forces. In order to estimate these values, application of non-market valuation techniques are necessary. Whereas the stated preference methods are able to determine both use and noon-use values, revealed preference methods can only determine the use values.

In the concept of this study, we focused on the use value of the Patara ancient city for recreational purposes. To our knowledge, this study is the first attempting to measure the recreational use value of this ancient city. Compared to United States or European countries, such kind of studies are very rare in Turkey which could provide a beneficial guide to policymakers.

Like many natural areas, habitats and cultural heritage sites, Patara ancient city is also under threat of human pressure especially in peak season and uncontrolled construction and urbanization activities. Since the city has also a beautiful coastal area with a blue flag award, it is also under pressure of visionless and short-term profit oriented tourism activities.

Measuring the use and non-use values may provide a good tool for policymakers for the comparison of benefits generated from the site and costs of providing it or losses due to an investment project. In this study, we estimated a total recreational use value of the Patara ancient city ranging between 78-135 million Turkish Lira per year. The per capita consumer surplus were calculated as 523 – 720 TL.

The main limitation of our study might be the sample size. Unfortunately, we could not reach the desired level of sample size. Due to relatively small sample, the estimated confidence intervals also have wide ranges. In addition to this, the survey was only conducted with the domestic visitors due the language constraints of the survey team. The ancient city also welcomes reasonable number of foreign visitors each year whose recreational preferences would be a topic for future research.

The issues arising with the TCM are multi-purpose trips, overnight stays, substitute sites and the opportunity cost of time. For the first three, we tried to provide solutions within the context of the literature. Nevertheless, for the opportunity cost of time there is no agreed method in the literature, so we followed the traditional way of valuing the travel time as a fraction of wage rate and used the fraction determined by the sample itself. One method to estimate the opportunity cost of time would be simply to include a stated preference approach to the travel cost survey (Ovaskinen et. al., 2012, Czajkowski et. al., 2015). However, that would increase the length of the survey and decrease the efficiency when considered the majority of the people were unwilling to participate in the survey. For these reasons, we did not prefer this approach.

The willingness to preserve for cultural goods are closely related with the general awareness and knowledge of public. However, these goods generate also values independent from this such as existence and bequest values. Cultural goods should be preserved even though the preferences or socioeconomic conditions of the public does not match with the idea of conservation. It should be kept in mind that these goods possess intertemporal characteristics, which means that they can not belong only to current generation.

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Chapter 8

ANALYSING TOURISM PRODUCT RELATED BEHAVIORS OF DISABLED TOURISTS:

AN IMPLICATION IN FLORIDA-USA

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1. Introduction

As a defination; “persons with disabilities” includes all persons who owing to the environment being encountered, suffer a limitation in their relational ability and have special needs during travel, in accommodations, and other tourism services, particularly individuals with physical, sensory and intellectual disabilities or other medical conditions requiring special care, such as elderly persons and others in need of temporary assistance. (World Tourism Organisation [WTO], 2001). Beside this defination, a typology of impairments is identified including mobility, sensory and communication impairments to intellectual/ mental disorders as well as hidden impairments in the form of health problems (Buhalis et al; 2005: 63). According to activists in the disability movement, it is important to distinguish between ‘impairment’ and ‘disability’. They claim that impairment refers to physical or cognitive limitations that an individual may have, such as the inability to walk or speak. In contrast, disability refers to socially imposed restrictions, that is, the system of social constraints that are imposed on those with impairments by the discriminatory practices of society (Burnett and Baker, 2001: 8).

Beside the definations, two major models of disability exist: the medical and the social model. The medical model positions disability as being the ‘problem’ of the individual. Health is a multifaceted phenomenon, encompassing physical health, emotional well-being and social cohesion (Shaw and Coles,2003: 398). This alternative approach is often called the social model. It stresses that disability should not be regarded as a deviance but as a normal aspect of life and it is the society that should build appropriate structures to cater for people’s needs (Buhalis et al., 2005; Aitchison, 2003). Within this approach the focus is placed on providing necessary services in order to remove or minimise social and environmental barriers to full social, physical and leisure participation (Aitchison, 2009; McKercher et al, 2003; Shaw and Coles, 2004)

Depend on the ageing populations and the higher risk of disability in older people as well as the global increase in chronic health conditions, the disabled population’s increasing rate will be a greater concern in the next decades (Buhalis et al., 2005; WHO and WB, 2011; Europen Commission 2010; ITB,2012; ENAT,2012). Based on 2010 global population estimates that more than one billion people in the world live with some form of disability (WHO and WB, 2011), of whom nearly 200 million experience considerable difficulties in functioning (WHO and WB, 2011) and the disabled population constitutes approximately 8% of its population (UNESCAP, 2000). This is higher than previous World Health Organization estimates, which date from the 1970s and suggested around 10% (WHO and WB, 2011). 56.7 million people, 19% percent of the population and it means nearly 1 in 5 people have a disability in the United States (Americans with Disabilities Report, 2010), the number of people with disabilities is expected to double to around 100 million people by the year 2030 (Lach, 1999; Burnet and Baker 2001; Var et al, 2008). In Europe alone, there are 80 million people with disabilities, according to research. When including travel companions, the potential size of the "accessible tourism" market is estimated at 133 million people. These figures mean that roughly 10% of the population needs "barrier free" or "accessible" travel in the world.(ITB 2012; ENAT,2012). In fact, this figure is even greater, taking into considerations that all citizens need some degree of accessibility for their general comfort and quality when travelling (Buhalis et al., 2005: 65). According to the research, it could be clearly seen that the total population of disabled people create a significant market segment (Murray and Sproats, 1990; Vignuda, 2001; McKercher et al., 2003; Ray and Ryder, 2003).

Both national and local, especially governments, and also private organizations are becoming more sensitive about the disabled people and their travel rights because of the significant proportion of disabled people within the world's population (Burnett and Baker, 2001: 7). At the same time, national and local government agencies responsible for tourism development have also been charged with widening access to tourism opportunities, most recently as part of a social justice agenda which recognizes tourism participation as a right of citizenship (Richards et al, 2010: 1098). The size of the disabled market is suggested to be one main motive for such studies (Huh and Singh, 2007; Kaufman and Scarborough, 1998). Also, efforts to better understand people with disabilities may be based on recent legislative endeavors rooted in US law and subsequently enacted in Europe and elsewhere.

Some countries have introduced legislation designed to make it compulsory for tourism suppliers to create an environment that is accessible to disabled people. The American Disabilities Act (Part III passed in 1990) and the Disability Discrimination Act (Part 3 passed in 1995) symbolize a new stage with regard to the civil rights of people with disabilities. These laws were further modified (for example, the ADA Amendments Act of 2008) and serve as models for protecting the civil rights of people with disabilities. Other countries such as, Bermuda (Forbes, 2009), Scotland and Northern Ireland relied on the DDA and the ADA (SAIF, 2009) to establish their own codes of practice. Other countries such as Israel and Canada established country specific codes of practice and regulations based on civil rights and equal opportunity laws relating to access to accommodation. The impact of the ADA and the DDA is also evident in hotel chains and associations (e.g. Hotel Association of India, 2009), many of which established specific practice codes. Such codes relate primarily to hotel rooms and public areas (British Standards, 2008), almost exclusively focusing on the physical aspects of the environment and the mobility considerations of people with disabilities (Poria et al, 2011:577).

The main purposes of the acts are to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity. The Acts gather persons with disabilities who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others. However, the introduction of specific legislation aimed at people with disabilities (e.g. the Americans with Disabilities Act, 1990) does not guarantee that disability discrimination will not occur or that industry sectors will proactively address disability access requirements (Grady and Ohlin, 2009: 163).

Although, to take advantage of this potential niche market will depend on how the tourism sector as a whole and the tourism industry in particular will address the issue of tourism accessibility for people with disabilities. Indeed good access will benefit not only people with disabilities, but also many other members of the community, especially senior citizens. Several tourism entities throughout the world have been conducting or funding on a regular basis travel projects that are designed to provide baseline information about travelers and to develop appropriate marketing strategies and management actions (Uysal et al, 2000: 91). Indeed, destination tourism officials need to know more about the nature of visitor characteristics and how actual and potential visitors perceive destinations. Because, unsecured information adversely affects the trust of individuals towards the institutions and organizations, which may lead to tangible and intangible losses (Yağcı et al., 2019: 262).This type of information is primarily utilized in positioning or repositioning a given place in the tourism market place. In addition, such information allows destination marketers and managers to better position themselves so that increased demand for visitation may be generated to their respective destinations(Uysal et al., 2000: 92). To maintain or capture a significant population, marketing firms are often challenged to create positive product perceptions. Some service providers may need to augment supply resources to match demand and meet tourist expectations, and thus to create an enhanced perception of the existing resources (Uysal et al., 2000: 92).

Gilbert (1990:27) articulated that tourism establishments should promote themselves using the distinct attributes to entice demand. Based on the literature, an assessment of tourist's perceptions helps marketers position their products and services more effectively (Uysal et al., 2000: 93).

It should therefore be the first priority of tourism planners to develop strategies to promote accessible tourism by taking into account the primary benefits sought by potential customers. The accessibility market will only become a profitable market for the tourism industry if it is properly positioned and subgroups within this segment are well understood. Given the spectrum of people requiring accessibility, it can be seen that the market for accessibility is not homogenous but multifaceted and wide-ranging(Buhalis et al., 2005: 76). A service offering reliable information on accessibility supports thereby a variety of target customers. Some people might acquire a greater level of accessibility needs for a limited period of time (pregnancy, broken limbs, etc.), whereas others have accessibility requirements during their whole life. Everyone has specific individual requirements due to different abilities. Thus, it is a heterogeneous market which entails a series of different sub-markets.(Buhalis et al., 2005: 76)

By looking specifically at people with impairments as well as the elderly population, 7 main clusters can be identified:

1) mobility impaired individuals (with varying levels of mobility)

2) blind or partially sighted individuals

3) deaf or partially hearing individuals

4) speech impaired individuals

5) mental/ intellectually impaired individuals

6) travellers with hidden individuals

7) elderly individuals (which often suffer from one or more of the above disabilities)

All these target customers might travel alone or in company of able-bodied assistants, friends or family member, illustrating the real market size for accessibility. The need for inclusive design on the one hand and good market segmentation on the other can support organisations to deliver adequate tourism products and services to these groups. Dividing the market into distinct groups of people with similar needs and wants allows tourism planners and managers to understand what really matters for consumers and to create unique product offerings. By targeting these groups, they have the chance to achieve competitive advantages through differentiation (Buhalis et al., 2005: 77). Further, the establishment of well-defined demand types has profound implications in the marketing and positioning of destinations and organisations. The higher the access requirements, the more attention has to be paid to certain accessibility criteria. Individuals with the highest accessibility requirement might therefore be better served by specialized providers that have a profound knowledge of their high needs. Other people with more moderate needs should be served by mainstream providers who have utilised inclusive design in their facilities.

This is mainly due to two reasons: First, many people who suffer from a temporary disability do not often see themselves in need of special services and hence purchase tourism products from mainstream providers. Secondly, disabled people with moderate or low access needs do not feel that they should be using specialised facilities that may stigmatise them and argue for an inclusive design and service. Increasing legislative and social responsibility will enable mainstream players to adapt their offering to all types and grades of disability. So, tourism facility developers need to appreciate different types and levels of accessibility requirements in order to address them accordingly (Buhalis et al., 2005: 64).

Despite the large number of persons with disabilities around the world and the new business opportunities acknowledged for the tourism industry (Bi et al, 2007; Daniels et al, 2005; Darcy et al, 2010), disability is still a relatively neglected subject within tourism research (Bizjak et al, 2011; Richards et al., 2010). In fact, literature dealing with tourism and disability(ies), although stressing the frequent exclusion of persons with disabilities and emphasizing the potential benefits related to tourism activities (Haukeland, 1990; Yau et al, 2004) seems to neglect the diversity of disabilities. However, as Figueiredo et al. (2012:533) recently pointed out, persons with disabilities are a quite diverse group from the point of view of experiences, views and needs and nature of the disability.

Changes to legal and social environments have contributed to the expansion of the disabled tourism market. However, despite this growth, within tourism there is a distinct lack of research of this nichemarket, and in particular of the barriers which impede or prevent those with disabilities from participatingin tourism (Lee et al., 2012: 571).Existing literature tends to suggest that people with disabilities face a number of barriers to participation tourism activities (Yau et al., 2004, Murray and Sproats, 1990). Nevertheless it is widely accepted that desire to travel is the same for persons with or without a disability (Yau et al., 2004: 950). Because of these barriers, they have less opportunities to access tourism than people without disabilities (Turco et al., 1998: 81). It suggests the need to eliminate such obstacles so as to increase the participation of disabled people in tourism movements (Israeli, 2002; McKercher et al., 2003).

Tourists with disabilities, today are not content with staying within the confines of a resort hotel compound, being bussed to individual sites and entertained in places that mainly cater to tourists. Instead, tourists with disabilities are increasingly interested in experiencing diversity of holiday environment in all aspects, including its people, culture, nature, architecture and way of life. This trend will be even more marked as disabled consumers become better informed about options and entitlements, as well as more sophisticated and less willing to accept poor quality facilities and services that entail discomfort and stress. Tourists with disabilities want access to everything that a city or a country has to offer. In view of the changing consumer demand, tourism for all is an increasingly important sales argument in a competitive market. At the same time, it can serve as an effective tool in furthering the human rights of people with disabilities in the destination communities.

Investigating specific travel patterns of disabled people has shown that most needs, preferences, requirements and quality expectations are similar to the able-bodied population(Yau et al., 2004; Paga´n, 2012; Richards et al., 2010). Differences exist only in the travel duration and travels spending as disabled people tend to stay longer than able-bodied and have a higher disposable income for holidays. Hospitality operators who believe that ‘‘accessibility remains largely an exposure to risk and the minimum action needed for compliance and risk minimization’’,perhaps unwittingly, have adopted a very narrow view of accommodating travelers with disabilities which is focused primarily on the accessibility of the facility itself but which largely ignores the broader service components of accommodating the guest’s unique set of needs (Rice, 2006: 68).

As a priority, to improve performance, service firms must ‘‘provide customers with the services they require in a manner which is acceptable to them ’’ (Gray et al., 2002:190) While one could interpret this as encouraging the customization of hospitality services, the recommendation can perhaps be more accurately understood as a way to conceptualize service provision in away that ensures that tourists with disabilities and able-bodied tourists alike are provided hospitality services in an equivalent manner which ensures equal enjoyment of the goods and services provided. (Grady and Ohlin, 2009: 163).

The question is not whether mainstreaming ‘OR’ specialised is best for the market of people who require accessibility: both are needed. Customers expect to have the freedom to choose which kind of tourism accommodation suits them best in terms of their expectations, the care and services they need, and personal preference. Therefore mainstreaming and specialized tourism should be viewed as complementary(ENAT Report, 2012)

A qualitative research study by NOP consumer on behalf of VisitBritain (2003) revealed that disabled consumers in the UK generally preferred accessible tourism accommodation to be in the mainstream tourism sector and not ‘specialist-disabled’. (ENAT Report, 2012). Results of a recent study by Vos (2007) partly confirm these findings: If possible, holidays with a special focus on care for persons with high-end access needs should be organised in the mainstream tourism sector, as the majority of families with children prefer to go on holiday with their family and stay in accommodation which reflects ‘the holiday feeling and atmosphere’. On the other hand, because of the necessity of care and medical treatment and the provision of specific services and facilities for these people with high-end needs, it is not always possible to organise these holidays within the mainstream venues(ENAT Report, 2012).

When the tourism literature is examined, it can be realized that some researchers have advocated that, insufficient research within tourism research and allied field has been published examining tourism and disability (Lee et al., 2012; Aitchison, 2009; Burnett and Baker 2001; Darcy, 2002; Richards et al., 2010; Paga´n, 2012). According to the Researchers, tourism researchers have failed to attribute importance to the disability issues although, the meaningful growth in tourism knowledge over the past half century (Richards et al., 2010; Tribe, 2009) and also tourism research has barely scratched the surface of disability (Tribe,2009: 16). On the other hand, some researchers have supported that, a great deal of research has investigated disabled tourism and there has been a series of well-documented constraints and problems that people with disabilities encounter with especially accessible tourism facilities (Darcy,2010 ; Bi et al, 2007; Daniels et al., 2005; Daruwalla and Darcy, 2005; Tantawy et al., 2004).

A number of researchers mentioned this idea in the late 80’s and early 90’s (Driedger 1987; Murray and Sproats, 1990). Indeed, when the tourism and disabled literature is examined based on both different perspectives, it can be indicated that, after the acts, which were enacted by the goverments for making the disabled people’s life easy and equal as well as the people without disability, the awareness has increased within the years (Darcy and Taylor, 2009; United Nations, 2006; Driedger 1987; Muloin 1992; Murray and Sproats 1990). Since Smith’s (1987) seminal study of tourism and people with disabilities, academic interest in this field has been growing then this area(Yau et al., 2004; Paga’n, 2012) and in this context, over the years, both quantitative and qualitative remarkable academic research has published about this subject (Darcy,2010 ; Bi et al., 2007; Daniels et al., 2005; Daruwalla and Darcy, 2005; Tantawy et al., 2004). However, academic researches in this field make sufficient sense for understanding several attributes of the people, especially tourists with disabilities, throughout the researches, it is still not enough to see the all picture clearly for gaining long-term success in this vital market segment.

In this context, as a cumulative result from the examined reserches, it is claimed that disabled tourism is a type of tourism that has its own characteristics and depending on this reason, many tourism businesses have confusion about the disabled needs which can be distinguished from the regular ones. Therefore, varying disabilities of the disabled individuals cause them to have different needs and requests from the beginning of their vacations to the end (Buhalis et al., 2005: 77). For instance; requiring extra expenditures on ramps, specially fitted rooms, and the loss of prime parking. In fact, the confusion is coming from the stereotypical perspectives and having limited knowledge about the disabled essential needs. In this case, disabled tourism market is affected negatively from this situation besides it can't develop as fast as the other market segments can.

This research tries to take this kind of superficial understanding away and offers new perceptions into the possibilities associated with the disabled, including general trends and need sets, furthermore to determine and identify the content of the tourism product-based requirement of the disable tourism.

2- Methodology

This research aims to contribute to filling the existent gap in literature regarding the disable tourism subject, by analyzing several forms of being disabled. For this purpose, this research was designed to further the understanding of the tourists with disabilities vacationing in the United States. As secondary market data are rather scarce for this market segment, primary data collection was necessary to identify and analyze market segments on the basis of tourism product behavior. For this reason, a questionnaire was developed for data collection purposes.

2.1. Questionnaire Development

The questionnaire for this study was a multiple-page, self-administered instrument, which probed travel patterns, attitudes, tourism product related behaviors and gathered demographic information of tourists with disabilities. The behavioral questions which were related with the tourism product levels and demographic questions were largely for classificatory and profiling purposes. The variables of interest in these two sections of the survey instrument included such variables as frequency of travel, mode of travel, reason for travel, gender, age, and marital status, to name a few. These variables were scaled by closed-ended questions.

In constructing the tourism product related behavior of tourists with disabilities assessment scale, items were derived from the tourism literature (Burnett and Baker, 2001; Daruwalla and Darcy, 2005; Yau et al., 2004; Fleischer and Pizam, 2002) and also marketing studies (Upchurch and Seo, 1996; Uysal et al., 2000 ; Chen and Uysal, 2002). After examining the both literature, 35 items that related with the tourism product levels were obtained and then, these 35 items were submitted to principal components factor analysis with the Harris-Kaiser Case II oblique rotation (SPSS 1990). This was done to gain a clear understanding of the underlying structure of the 35 reasons for tourism product considered.

2.2. Sampling Procedure & Data Collection

Study was implicated in Florida. There are several important reasons for conducting this study in Florida. Florida is the fourth largest state in the nation, with more than 18 million residents currently and it presently has the largest proportion of older adults in the United States. More than18% (approximately 2.7 million) of Florida's population is 65 and older, and this population is expected to increase by one-third in the next 15 years. On the other hand, this location was selected as a destination that offers a variety of travel experiences, including beach vacations, business and meetings, art and heritage tourism, leisure and sport activities, medical tourism, and ecotourism. Due to the variety of tourism types developed in Florida, the state also offers a wide selection of different hotel properties, such as leisure/beach hotels, resorts, business/conference hotels, limited service, select service, and full-service properties. Besides these reasons, from transportation options to hotels, to attractions to even getting around the beaches, Florida extends a warm welcome for people with special needs. These all ressons allowed us to collect sufficient and currently responses from the tourists with different kinds of disability.

In this context, survey sample population consisted of the people with disabilities who visited Florida as tourists during the research period. For reaching the respondents, two different methods were used. First is getting in contact with several disability organizations. This was determined to be the first viable method to reach a statewide cross-section of the population of the people with disabilities in sufficient numbers. Two important disability organisations gave positive responses for getting involved to the research (SATH (Society for Accessible Travel and Hospitality) and FDOA (Florida Disabled Outdoors Association)). Discussions with these key organizations were held during development process of the questionnaire. Then, questioneires were delivered to the members of the organisations via e-mail by the organisations. They did not allow us to obtain access to organizational e-mail mailing lists. Second used method was sending web-based questioneries to the Florida hotels. For reaching to the contact e-mail address of the hotels, a data-based was bought. After that, questioneries (goggle survey tool was used for giving a standart form to the questionerie and also sending the forms fastly and getting the responses easily) were sent to the contact e-mails.Survey process took three mounths (from the beginning of July 2019 to the end of September 2019).

Of the **900** actual questionnaires mailed to the hotels based on e-mail data, **637** were returned because of an incorrect address or other delivery problems**. 263** questionnaires were returned by respondents who were staying at these hotels, with **112** discarded because of serious omissions. In the end, **151 (16.7%)** usable questionnaires were obtained from the Florida hotels. Of the **1000** actual questionaires were mailed to the memebers of the organisations by the officials of the organizations, **418** questionnaires were returned, with **62** discarded because of serious omissions. In the end, **356 (35.6%)** usable questionnaires were obtained from the disabled organizations. Totally, **507** usable questionnaires **(52.3%)** were analyzed. Limited time and difficulties prevented a follow-up mailing. Still, this response rate is considered quite acceptable.

2.3. Hyphothesis and Factor Analysis

The only one difference which distinguishes people with disabilities from the other people is the disabilities that they have. By looking at this idea, it is indicated that the people with disabilities have no differences about their desires for travelling or taking holiday than the other people like the other social facts so this idea can be stated as a back bone for this study. In this context, this study aimed to reveal the tendency and the severity of the tourism product related behaviors of the tourists with disabilities according to their disability types and profile attributes. As a result, this research is aimed to create a new vision for both tourists and the business and tried to eliminate the prejudices about the disable tourism by gaining better understanding about the desires which are based upon tourism product levels.

As stated previously, research indicates that the people with disabilities will tend to display tourism product behaviors when selecting a holiday destination. The following hypotheses were tested in the present study:

Hypothesis 1: There is a statistically significant difference between demographic variables in terms of the types of disability.

Hypothesis 2: There is a statistically significant difference between travel behaviors in terms of the types of disability.

Hypothesis 3: There is a statistically significant difference between opinions for the holiday in Florida in terms of the types of disability.

Hypothesis 4: There is a statistically significant difference between opinions for tourism product levels in terms of the types of disability.

Hypothesis 5: A positive relationship exists between tourism product levels and the opinions for the holiday in Florida.

After defining the five hypothesis of the research, analyses were done depend on these five research questions. The first step of the analysis process consists of the Factor analysis. Before the factor analysis, which was done for gathering the items under the meaningful factors within the tourism products levels approach, The Kaiser–Meyer–Olkin Measure of Sampling Adequacy value of 0.705, exceeds the recommended value of 0.6 (Kaiser 1970, Pallant, 2007) and Bartlett's Test of Sphericity was statistically significant to the 7.021, percent level (p=0.000), supporting the factorability of the correlation matrix (Bartlett 1954 cited in Pallant, 2007).

Table 1: Factor Structure Of Tourism Product Related Behaviours

Factor Composition	Factor Loadings	Variance Explained (%)	Cronbach's a
Factor 1: Core Product		28.3	.91
Peaceful/quiet atmosphere	0.768		
Affordable price	0.748		
Holiday resorts	0.694		
Unpolluted environment	0.585		
Weather condition	0.526		
Factor 2: Facilitating Product		20.6	.87
Quality and diversity of the accommodation facilities	0.824		
Service quality	0.812		
Security conditions	0.781		
Hospitality	0.643		
Personal care services	0.596		
Reliable information sources	0.483		
Factor 3: Supporting Product		15.8	.83
Shopping opportunities	0.827		
Tour opportunities	0.781		
Socializing opportunities	0.628		
Medical opportunities	0.584		
Gastronomy	0.493		
Culture-history	0.472		
Originality of experience	0.446		
Factor 4: Augmented Product		14.3	.81
Accessible information	0.783		
Accessible booking services	0.756		
Accessible transport	0.695		
Accessible public spaces	0.670		

Accessible accommodation facilities	0.636		
Accessible restaurants, cafes and bars	0.625		
Accessible attractions, museums, cultural venues	0.574		
Tour operators with accessible information and offerings	0.510		
Well educated and trained staff in disability	0.496		
Accessibility of the public restrooms	0.475		
Accessible parking lot	0.463		
Appropriate signage of accessibility	0.451		
Availability of disability aids	0.429		

Note: KMO Index =0.705; Bartlett's test=7,33.326 (significance = 0.000). Eigenvalues for each factor : Factor 1=7.938, Factor2=6.215, Factor 3 = 3.112 and Factor 4 =2.453, Factor Items shown in table are those with factor loadings ≥.429.

As shown in Table 1, four reasonably pure factors were extracted. Overall, 31 out of 35 items (four of the items were rejected because of their low communalities in the first rotated solution to improve the factor analysis.) for tourism product related behaviors loaded significantly (a factor loading of at least .429) on one of the four factors. These for factors explain 78% of the variance.

Factor 1 - Core Product: Factor 1 was defined as "Core Product". It consists of five items. These items respectively are "peaceful/quiet atmosphere", "weather condition", "unpolluted environment", "holiday resorts" and "affordable price". These all five items generate "what the tourists are really buying" so this factor is named as "core" which is the main and also the first part of the tourist product level and all of them should exist in a tourism destination.

Factor 2- Facilitating Product: Factor 2 was defined as "Facilitating Product". It consists of six items. These items respectively are "quality and diversity of the accommodation facilities", "service quality", "security conditions", "hospitality" and " personal care services" and "reliable information sources" Facilitating product is described as "goods or services that must be present for the guest to use the core product" so these items are gathered under it which is the most important supporter of the core product and the second level of the tourist product.

Factor 3- Supporting Product: Factor 3 was defined as "Supporting Product". It consists of seven items These items respectively are "shopping opportunities", "tour opportunities", "socializing opportunities", "medical opportunities", "gastronomy", "culture-history" and "originality of experience". Supporting product is described as "Extra products offered to add value to the core product and help to differentiate it from the competition" so these items are gathered under the 3th tourism product level.

Factor 4- Augmented Product: Factor 4 was defined as "Augmented Product". This product level is the most important part of the scale because of the items that it has. It consists of 13 items These items respectively are "accessible information", "accessible booking services", "accessible transport", "accessible public spaces", "accessible accommodation facilities", "accessible restaurants, cafes and bars", "accessible attractions, museums, cultural venues", "tour operators with accessible information and offerings", availability of disability aids", "accessibility of the public restrooms", "accessible parking lot", " appropriate signage of accessibility" and "well educated and trained staff in disability". The augmented product includes accessibility, atmosphere, customer interaction with the service organization, customer participation, and customers' interaction with each other. Depend on this definition, all accessible tourism products of the scale are gathered under this level.

3.2. Analysis

Analysis was done with the total number of respondents which was 507. The first part of the analysis began with the segmentation of the respondents by types of disability. Results were as follows: mobility, 60,1%; sensory,19,3%; communication,11,2%; mental, 4,1% and other (long-term health condition, asthma / allergy, special diet, travelling with baby / small child) 5,1%. Table 2 summarizes the results for the socio demographic traits across the five disability groups, that is, mobility, sensory, communication, mental and other. Chi-square was employed to assess the likelihood of differences. Because of the small cell size, age, income, marital status, and employment status had to be collapsed into fewer categories.

The analysis by respondents' socio-demographic profiles indicated there is a difference between disability types and the disabled people's gender ($\chi2 = 56.78$, $p = .044$), age ($\chi2 = 70.22$, $p = .00$), annual income ($\chi2 = 62.16$, $p = .05$), marital status ($\chi2 = 63.60$, $p= .00$), employment status ($\chi2 = 81.48$, $p = .00$) and severity of disability ($\chi2 = 64.38$, $p = .05$). Analysis indicated that the most common type of disability is the mobility within the respondents' socio-demographic profiles. It can be indicated from the analysis results according to the five different disability types; the most of the respondents were woman. In terms of the aged of the respondents, "more than 60" aged group was the majority within the groups. As for the annual income of the respondents, the majority of the respondents had an average level of income. As for the married status, married respondents were the majority for all types of disability except the respondents with the mental disability and the severity of disability level was mainly moderate for all types. These patterns closely parallel national figures on the disabled.

Table 2: Sociodemographic Characteristics Of The Five Disability Types

Demog-raphic	**Total**	**mobility**	**sensory**	**communication**	**mental**	**other**
Sample size	*507*	*305*	*98*	*57*	*21*	*26*
Gender(χ2 = 56.78, df = 2, p = .044)						
Male	*197*	*106*	*47*	*25*	*8*	*11*
Female	*310*	*199*	*51*	*32*	*13*	*15*
Age (χ2 = 70.22, df = 4, p = .00)						
30-49	*68*	*32*	*14*	*9*	*3*	*10*
50-59	*124*	*88*	*21*	*6*	*6*	*3*
More than 60	*315*	*185*	*63*	*42*	*12*	*13*
Income (χ2 = 62.16, df = 4, p = .05)						
US $0-$9,999	*116*	*43*	*31*	*24*	*13*	*5*
US $10,000-$ 39,999	*307*	*202*	*59*	*31*	*6*	*9*
US $ 40,000 and above	*84*	*60*	*8*	*2*	*2*	*12*
Marital Status (χ2 = 63.60, df = 2, p = .00)						
Single	*212*	*116*	*46*	*37*	*18*	*5*
Married	*295*	*189*	*52*	*20*	*3*	*21*
Employment status (χ2 = 81.48, df = 2, p = .00)						
Unemp-loyed	*281*	*164*	*55*	*31*	*4*	*22*
Emplo-yed	*226*	*141*	*43*	*26*	*17*	*4*
Severity of disability (χ2 = 64.38, df = 4, p = .05)						
Mild	*48*	*17*	*12*	*7*	*8*	*4*
Mode-rate	*353*	*206*	*75*	*46*	*10*	*16*
Severe	*106*	*82*	*11*	*4*	*3*	*6*

The second part of the analysis proceeded with the experiences and preferences of the respondents towards travel by types of disability. In this context the following areas were explored: travel dependence, frequency of taking a holiday, mode of transport, desired accommodation type, purpose of holiday and reason for staying in particular hotel.

Table 3 summarizes the results experiences and preferences of the respondents for the across the five disability groups. Travel dependence refers to the person's ability to travel independently without the need for assistance by an attendant, caregiver or family member, for the tasks of daily living. Of the 507 respondents, 478 (94,2%) either preferred or required the assistance of an attendant. On the other hand, the rest (29) were able to travel independently (5,7%). The need to travel with an attendant greatly complicated the travel process because of the extra planning and financial resources required. Especially, results show us, the respondents with mental disability were not able to travel independently.

A large number of respondents travel more than 2 times during a year. Analysis shows that there is no significant difference between the groups in terms of the number of trips taken. It means that those people in different disability groups don't differ in their travel behavior regarding the frequency of taking a holiday.

Transport is a crucial factor in the travel of people with disabilities. Although advances in public transport access have been made, much of the transport system remains largely inaccessible to the different kinds of disability. Accessible, affordable, and reliable transportation is a critical component to community inclusion. Having access to the community is the key to many aspects of independence and self-sufficiency. Florida's transportation delivery system is very complex. Multiple funding streams from various federal, state, and local agencies; differences in provider service hours, coverage, and the type of transportation services available; issues related to provider jurisdiction; and limited transportation options are just a few of the things that make it difficult for people with disabilities to access and utilize available transportation services within their communities. The frequencies analysis shows that the main methods of transport used to reach holiday destinations were plane (64,6%) and bus-coach (20,90%). Other forms of transport used, to a lesser degree, were private vehicles or private modified vehicles (14,3%). A cross-tabulation analysis was made to understand each group of the disabled people's travel behaviors in terms of mode of transport when they are taking a holiday. Especially, the respondents with sensory disability preferred plane as a transport vehicle. Private vehicles or private modified vehicles were preferred by the respondents with mental disability. People with mental disability are not able to drive but also they need some special care when they are travelling so this result can be explained by someone drives the vehicles as a companion for make their travel more comfortable than the other modes of transportation.

The frequencies analysis shows that the most commonly used accommodation type was 4-5 stars hotel (60.7%); the second was 2-3 stars hotel (23%), followed by private hotel-guest house (16.1%). A cross-tabulation analysis was made to be better aware of each group of the disabled people's travel behaviors in terms of desired accommodation type when they are taking a holiday. The analysis by respondents' disability types indicated that the desired accommodation type was irrelevant to people's types of disability. Although hotel is the most stated accommodation type for a holiday for all types of disability, respondents' preferences differed in other items. For example, private hotel-guest house is the first preferred item for the people with mental disability. On the other hand, according to the result it can be indicated that the 4-5 stars hotels can make all types of disability groups satisfied with their services and products that are served.

The frequencies analysis shows that the main reasons stated for holidays were recreation (81.2%), followed by business reason (15.9%), and were, to a lesser extent, medical reason (2.7%). A cross-tabulation analysis was made to understand better the disabled people's travel behaviors in terms of reason for holiday. The analysis by respondents' types of disability indicated there is not a difference between reason for a holiday and the disabled people's disability types. This result shows us, people with disabilities have same desire for travelling with the other people and furthermore disability type has not a crucial role. At the end of the cross-tabulation analysis, it can be indicated that these all patterns are parallel with the tourism and disable literature and also characteristics of the people with disabilities who are residents of the USA.

Table 3: Travel Decision Behavior Of The The Five Disability Types

Travel Decision Behavior	**Total**	**mobility**	**sensory**	**communication**	**mental**	**other**
Sample size	507	305	98	57	21	26
Travel dependence ($\chi2$ = 173.13, df = 6, p ≤ .000)						
Self	29	16	5	4	0	4
Couple	207	124	53	21	5	4
Parents &Children	116	66	21	8	10	11
Relatives &Friends	128	94	12	16	3	3
Other	27	5	7	8	3	4

How often do you travel? (χ2 = 64.18, df = 4, p = .05)						
Once a year or less	125	48	37	23	13	4
2-4 times a year	331	232	54	31	6	8
5 or more times a year	51	25	7	3	2	14
Mode of transportation used most (χ2 = 72.22, df = 4, p = .00)						
Plane	328	225	71	22	8	2
Bus-Coach	106	61	12	20	2	11
Private Vehicle	46	11	3	10	10	12
Modified (private\ rented) vehicle	27	8	12	5	1	1
Main type of accommodation (χ2 = 68.12, df = 4, p = .05)						
Hotel-motel(4-5 star)	308	204	60	29	5	10
Hotel-motel(2-3 star)	117	49	31	22	11	4
Private hotel-guest house	82	52	7	6	5	12
Primary reason for travel (χ2 = 51.44, df = 4, p = .00)						
Business	81	50	9	5	6	11
Recreation	412	253	88	51	11	9
Medical	14	2	1	1	4	6

Each disability type was the major determining factor of the analysis so the differences might exist between the opinions for holiday in Florida and the five disability types could be indicated more clearly with a detailed analysis than the others. In this context, Kruskal-Wallis test was chosen for assessing the differences between them. Table 4 summarizes the results opinions for holidays in Florida of the respondents for the across the five disability groups. The Kruskal-Wallis statistical analysis indicated that, there were no differences between the types of disabilities in terms of “Thinking about visiting Florida for another holiday” (sig. 693), “Recommend Florida as a holiday destination” (sig.770) and “Satisfaction level of holiday in Florida" (sig.395). These results indicated that the people with different disabilities had same thinking about Florida as a holiday destination. According to the analyses result, there were only significant differences between types of disabilities in terms of "Recommend Florida as an accessible holiday destination" (sig.0,42). As the nation's top travel destination, Florida has extensive resources for travelers with special need. This difference could arise from different needs of the people with different disabilities and the other reasons should be examined , within the next researches for understanding why this difference happened.

Table 4: Opinions For Holiday In Florida Of The Five Disability Types

Disability Type	Kruskal-Wallis	Sig.
Thinking about visiting Florida for another holiday	2,232	,693
Recommend Florida as a holiday destination	1,815	,770
Recommend Florida as an accessible holiday destination	**9,405**	**,042**
Satisfaction level of holiday in Florida	4,083	,395

The main results of the research were given in table 5 and 6. Major purpose of the research is assessing the tourism product related behaviors of the five disability types and depend on this purpose, at first, factor analyses was done. After the factor analysis, four factors belong to the tourism product levels were defined and One-way ANOVA analyses was chosen for assessing the differences between the disability types in terms of the factors. In Table 5, One-way ANOVA shows that there are significant differences between all groups in terms of core product factor and facilitating product factor and supporting product factor. On the other hand, there are no significant differences between all groups in terms of augmented product factor. Core, supporting and facilitating product define what tourists really buy and the enterprises and the destination what really present to the tourists. They also may call as main products of a destination. Distinctively these products, augmented product consists of accessibility, atmosphere, customer interaction with the service organization, customer participation, and customers' interaction with each other. So, according to the ANOVA results, it can be indicated that ,conversely the superficial ideas, needs, desires and also tourism product requires are same of the people with disabilities for making holiday with the other people

Table 5: Tourism Product Related Behaviors Of The Five Disability Types

	Disability types						
Factors	**Mobility**	**Sensory**	**Communication**	**Mental**	**Other**	**F**	**p**
Core	4,05	3,97	4,15	4,11	4,17	**3,26**	**0,01**
Facilitating	4,27	4,28	4,39	4,42	4,50	**4,30**	**0,00**
Supporting	4,24	4,03	4,07	4,12	4,22	**1,13**	**0,34**
Augmented	4,33	4,33	4,37	4,40	4,40	**0,47**	**0,75**

$p<0,05$

For gaining better understanding about the relations between the factors and the travel decision behaviors, correlation analyses was done. Table 6 summarizes the results of the relations between these variables. According to the correlation analyses results, core and facilitating factors produced four statistically significant ($p < .05$) relationships: “Thinking about visiting Florida for another holiday”, “Recommend Florida as a holiday destination”, “and Recommend Florida as an accessible holiday destination ”and“ Satisfied with my holiday in Florida” variables. In each case, the relationship was in a positive direction. As indicated before, core product is the major and the first part of the tourism product levels and facilitating products are the most important supporter of the core. So, depend on this significant and positive relationship which existed between the variables, it can be stressed that core and facilitating factors are the main determining elements for a holiday destination for the tourists beyond the disabilities that they have. On the other hand, according to the results, supporting factor produced three statistically significant ($p < .05$) relationships: Thinking about visiting Florida for another holiday”, “Recommend Florida as a holiday destination”, “Recommend Florida as an accessible holiday destination” and no significant relationship existed between supporting factor and “Satisfied with my holiday in Florida” variable. Supporting product is the extra products offered to add value to the core product and help to differentiate it from the competition. So, it can be stressed that it has less effect than the core and facilitating products during the holiday period for the respondents. The last but the most important factor of the research was Augmented product factor. This factor produced two statistically significant relationships: “Thinking about visiting Florida for another holiday”, “Recommend Florida as a holiday destination”. And there is no significant relationship existed between Augmented factor and “Recommend Florida as an accessible holiday destination" and "Satisfied with my holiday in Florida" variables. The augmented product includes accessibility, atmosphere, customer interaction with the service organization, customer participation, and customers' interaction with each other. Depend on this definition, all accessible tourism products of the scale were gathered under this level. So, according to the result, it can be indicated that contrary to mainstream about the people with disabilities, augmented products aren't the most important and the primary products for the people with disabilities. They give primacy to the products as same as the other people do, for example, shopping opportunities of a destination or affordable price could have more importance than accessible attractions of a destination and furthermore this result also stressed that augmented product has less importance regardless of the disability types that the respondents have.

Table 6: Statistical Results Of The Effect Of Tourism Product Related Behaviors On Destination Decision Criteria

Factors	Thinking about visiting Florida for another holiday	Recommend Florida as a holiday destination	Recommend Florida as an accessible holiday destination	Sattissfied with my holiday in Florida
Core	,423**	,192**	,151**	,210**
Facilating	,464**	,324**	,398**	,268**
Supporting	,172**	,615**	,309*	-,052
Augumented	,228**	,341*	,016	,023

*p < .05. **p < .01.

3. Conclusion and Comments

The major purpose of this study was to investigate the tourism product-based requirement of the tourists with different types of disability. A substantial amount of prior research support, some from the marketing literature but most from the tourism literature, provided a basis for predicting that types of disability would be significantly related to the importance consumers place on tourism product decision criteria.

As a result of a factor analysis of the tourism product related behaviors, tourism products gathered under four tourism product levels as same as defined in the tourism and marketing literatures. Obtained result from factor analysis followed by cross tabulation analysis for examining H1 hypothesis. As a developed hypothesis "There is a statistically significant difference between demographic variables in terms of the types of disability" was tried to examine. Obtained result from the analysis revealed that there is not a statistically significant difference between demographic variables in terms of the types. This result could derive from the scarcity of the adequate responses for each type of disability. It could be indicated that is the most important limitation of the research. If we had could reach the sufficient numbers for each type of disability, the result could be different than now. Especially, people with communication and mental disabilities were not enough to compare to people with mobility disability. So it can be suggested that the future research can enrich both variety and also numbers of the responses.

For examining the H2 hypothesis to be proceeded another cross tabulation analysis. The second part of the analysis proceeded with the experiences and preferences of the respondents towards travel by types of disability. According to the results; the majority of the responses either prefer or require the assistance of an attendant, they travel more than 2 times during a year, the main methods of transport used to reach holiday destinations were plane, the most commonly used accommodation type was 4-5 stars hotel and the main reasons stated for holidays were recreation. Obtained result showed us that the people with disabilities have same desire for travelling without take into account their disability types and furthermore disability type has not a crucial role for travelling.

H3 hypothesis was examined by Kruskal-Wallis Test. The third research question was "there was a statistically significant difference between opinions for the holiday in Florida in terms of the types of disability". According to the Kruskal-Wallis test result, only one difference between types of disabilities in terms of "Recommend Florida as an accessible holiday destination" was stated. This difference could derive from different needs of the people with different disabilities and the other reasons should be examined within the next researches for understanding why this difference happened. Especially this result gives the tourism enterprises a new vision for using the new facilities and marketing strategies for helping to reach this crucial market segment and it shows us the variety of disabilities have an important role in this segment.

For examining the H4 hypothesis, one-way ANOVA analyses was chosen for assessing the differences between the disability types in terms of the factors. According to the ANOVA test result, there are significant differences between all groups in terms of core product factor and facilitating product factor and supporting product factor. On the other hand, there are no significant differences between all groups in terms of augmented product factor. . A significant result was gained by this analysis for explaining the main purpose of the research. it can be indicated that , besides the superficial ideas, needs, desires and also tourism product requires of the people with disabilities are as same as the others have.

For analyzing the last hypothesis of the research, correlation analyses were chosen for examining the relations between the factors and the travel decision behaviors. H5 hypothesis was asked for understanding the positive relationship which may exist between tourism product levels and opinions for the holiday in Florida. According to the result, it can be indicated that contrary to mainstream about the people with disabilities, augmented products are not the most important and the primary products for the people with disabilities. They give primacy to the products as same as the other people do, for example, shopping opportunities of a destination or affordable price could have more importance than the accessible attractions of a destination and furthermore this result also stressed that augmented product has less importance regardless of the disability types that the respondents have.

Nonetheless, the results do provide some tentative conclusions about the people with different disabilities and their attitudes and behaviors related to tourism product. These results point to possible implications regarding the development of tourist strategies for the studied group. The findings suggest that the disabled market can be divided into five segments based on types of disability .Those in the communication and the mental categories appear to have different tourism product-related behavior than those in the mobility disability group.

The results have the following implications for those engaged in the management of tourism product-related institutions and activities:

1. The disabled market may be a profitable segment for the travel industry to target, if properly positioned. These consumers, while not wealthy, have adequate resources to travel several times per year, especially for the purpose of recreation.

2. There are five sub-segments that deserve special attention. Beside that the mobility disability is the most important sub-segment among the all other sub segments. However all segments are seeking a quiet and peaceful destination that allows them to be independent and that provides easy access, the results show us the tourism products which are classified under the core product level are the most important holiday requirement for the all sub segments. So, depend on this result, primarily tourism enterprises should focus on the core product level for improving this niche market segment.

3. Destination locations, including hotels and motels should market

to the people with disabilities . Consumers in this market are very loyal to destination institutions that are sensitive to their needs while not being patronizing. This includes not only compliance to ADA, for example, ramps and disability-friendly rooms, but also training employees to serve the disabled and anticipating the needs of those attending the disabled. Clearly, the disabled would travel a great deal more often if they could find more disability- friendly destinations.

4. Pricing decisions are important to the all sub segments. Knowing that the majority of the disabled are economy minded should assist marketers in developing a price for the experience. This segment's need for economy should not be confused with the notion that lower-quality services are acceptable.

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Chapter 9

IN-SERVICE TRAINING IN HEALTH ORGANIZATIONS

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INTRODUCTION

While the world is developing rapidly, information and ways of access to information change rapidly both qualitatively and quantitatively. Training is a process teaching the behavioral changes necessary for people to utilize their potential in harmony with their interests and abilities at the highest level throughout their lives, and to adapt to the physical and social environment that they live.

From the moment of birth, training of a person starts with planned or unplanned activities within the family, society and school in order to exist first and then to learn social behaviors. With entering the working life, a person continues his/her training by participating in individual and institutional trainings in order to improve personally, to learn the functioning of the institution that he/she works for and the requirements of his/her job (Hacıoğlu, 2019).

Training comes first among the issues in organizations that managers and entrepreneurs attach importance. The importance given to training is increasing day by day in the business environment especially for ensuring the sustainability of competing institutions, increase their success and keep up with the continuous changes (Akgül, 2008). The nature of jobs performed in the fields of activity of the organizations is related to the training of employees. Due to effect of conditions within the organization and external environment, it is seen that training issue ranks first among business functions gaining importance ever-increasingly in our country. Training of employees constitutes a very important factor for an organization to manage changes both in the internal and external environment (Bayar, 2009).

1. IN-SERVICE TRAINING CONCEPT

In-service training comprises all trainings that enable individuals and communities to perform duties that they have undertaken or will undertake in their institutions more effectively, efficiently and successfully; will enhance their professional knowledge levels; will provide positive development in their knowledge, habits and understanding, perspective, decision-making skills and attitudes, and thus provide total improvement in the individual's cognitive, affective and behavioral skills (Şenviren, 2014).

All activities designed by businesses to minimize errors and accidents; maximizing profitability, customer satisfaction and savings; achieve efficient, high quality production and service; and planned to directly affect the knowledge, skills and behavioral patterns of employees can be evaluated within the scope of in-service training (Aytaç, 2000).

The necessity of in-service training arises when individuals, who have started working life by completing a certain program in educational institutions, do not gain enough knowledge, attitudes and skills determined by the institution, and when it is required to train upper-level employees or to adapt to the innovations needed in the production process. In-service training enables an individual to increase his/her potential related to work and for new achievements in order to perform the requirements of the job or profession more efficiently and to follow innovations, from the moment he/she started job until end of the job (Bayar, 2009).

It is important for employees to follow and learn about developments related to their job or profession. This is achieved by continuing education programs covering in-service training (Hacıoğlu, 2019). By in-service training, the deficiencies in the performance of staff working in institutions can be defeated and employees can be equipped with the expected job skills (Schuler, Huber, 1990; Pehlivan, 1993). The aim of in-service training is not only to enhance the general culture of an employee, but also equip him/her as expected by the enterprise (Gül, 2000).

In-service training is a process that starts when employees join the institution and continue until the time that they retire or leave by resigning. It is possible to ensure a high quality in-service training in this long process by implementing various strategies, methods and techniques through a systematic plan and program (Tan, Koç, 2014).

Setting goals is a mandatory starting point for planned activities. It is difficult to decide on the scope, functioning and evaluation processes of in-service training without clarifying the objectives to be achieved, and the reliability of outcomes will be low.

1. 1. Advantages of In-Service Training

In-service trainings directly contribute to institutional and individual productivity. For achieving the expected productivity by in-service trainings, it is necessary to evaluate the factors decreasing the productivity in the institution impartially (Hacıalioğlu, 2019). The ways for using in-service training to eliminate situations that decrease productivity should be organized in a planned and programmed way (Özpulat, 2006). Planning and sustainability of this planning will contribute to gaining various benefits for the organization and employees (Baykal and Türkmen, 2018). In-service training contributes to productivity in two ways, with advantages for the individual and the organization.

1.1.1. Individual Advantages

The vast majority of in-service trainings organized in institutions aim to provide to an individual the knowledge, skills and attitudes related to the work responsibility. In this respect, in-service training has the nature of vocational training (Öztürk and Sancak, 2007).

Individual advantages of the in-service training are as follows (Pehlivan, 1993; Howard, 1998; Zahoor, Muhammad, Mohammad, 2018; Hacıalioğlu, 2019);

- Ensures development of professional decision making, effective problem solving and creative thinking skills,
- Continuous improvement and progress lead the employees to adopt the idea of taking responsibility for success,
- Increases motivation and productivity by improving self-confidence,
- Increases ability of employees to cope with tension, conflict and stress,
- Increases awareness and job satisfaction by enabling the employee to work by knowingly and correctly.
- Supports employees to develop a positive attitude towards themselves by increasing the communication and social interaction skills,
- Ensures employee satisfaction and provides both individual satisfaction and institutional loyalty.
- Provides an environment for determining a career path and continuous development and prepares the individual for a upper level job,
- Improves the ability to adapt to change,
- Ensures institutional adaptation of newly recruited staff.

1.1.2. İnstitutional Advantages

In-service trainings seem to be a cost item for the employer in the short term, while the benefits to be obtained as a result of training will be more determinative for the institutions in the medium and long term.

İnstitutional advantages of the in-service training are as follows (Clardy, 2005; Baykal and Türkmen, 2018; Hacıalioğlu, 2019);

- Facilitates the institution to adapt to innovations and changes,
- Ensures that the tasks are planned and implemented in a shorter time,
- Reduces errors and consequent costs,
- Helps to increase the institutional reputation and ensures a good image of the institution,

- Saves time and energy by reducing the control burden,
- Helps to resolve conflicts by reducing stress and tension,
- Supports institutional development by ensuring better service and high quality products,
- By increasing job satisfaction of the employee, decreases employee turnover rates,
- Ensures understanding and obeying to institutional policy,
- Improves the superior - subordinate relationship in the institution,
- Increases employee satisfaction and ensures institutional development by building trust within the organization,
- Prevents loss of time, increases productivity,
- Helps the corporation gain competitive edge by ensuring understanding and obeying to institutional policy.

1. 2. Objectives of In-Service Training

Since it will be difficult to try to meet requirements of the rapidly changing society and professions by the education received in schools, it becomes a necessity to train employees by in-service training. Institutions should provide in-service training for their employees, give them the opportunity to learn and succeed, enhance their work experience, review the efficiency of the training provided and encourage the employee through trainings (Hacıalioğlu, 2019). It is important to organize these trainings by using internal resources with low costs in terms of allowing employees to develop their professional competencies quickly and economically in line with the needs of the time being.

In-service trainings should cover all staff working in the institution. Trainings should be planned and implemented in accordance with and to cover from the lowest level employees to the highest level employees. Institutional interests should not be observed (Şenviren, 2014; Hacıalioğlu, 2019). Ensuring the continuity in in-service training is critical. Planning of the training programs should be made in accordance with the needs and democratic participation of the staff. The staff will be more enthusiastic about the training programs which are determined and prepared with their own contribution (Selimoğlu and Yılmaz, 2009). The training to be organized should comply with socio-demographic characteristics of the staff, their vocational education and the requirements of the job they perform. Otherwise, it may cause the staff to feel inadequate and this will decrease their motivation and productivity. An encouraging training environment should be prepared for in-service trainings. The environment should be arranged so as to attract and not to distract the attention of the staff.

It is possible to list objectives of in-service training as follows: (Selimoğlu and Yılmaz, 2009; Şenviren, 2014; Hacıalioğlu, 2019);

- To ensure the institutional adaptation of the newly recruited staff and to support their professional commitment,
- To increase the motivation of the employee, to adopt the institutional culture,
- To gain and develop the professional skills required by the job,
- To provide employees with the necessary competencies to adopt the goals, objectives and policies of the institution,
- While enhancing the professional skills required by the job, determining and perfecting deficiencies of the training,
- To bring the staff working in and outside the institution together in order to meet and communicate effectively,
- To prepare employees in line with their capacities and abilities for jobs requiring higher responsibility,
- To plan supplementary trainings to allow employees to take charge in different units,
- To ensure adaptation of the employee to the changing and developing science, technology, economy and business life,
- To increase the productivity of the service provided by the institution,
- To reduce errors in service delivery,
- To prevent occupational accidents and increase employee safety,
- To provide awareness for time management for ensuring working of employees without need for overtime,
- To develop competencies of the staff for multitasking definitions.

1.3. Limitations of In-Service Training

Individual and institutional benefits are expected via in-service training programs planned and implemented to increase the efficiency of labor force that is an important piece of service delivery. It is possible to express the limitations that prevent achievement of the objectives of in-service training as follows: (Taymaz, 1992; Bayar, 2019);

- Preparation of a program in which needs and goals cannot be determined,

- Lack of the balance between goals and needs of the individual and the institution,
- A training program which is not convenient to basic knowledge and skill level of the employee,
- Reluctant employee who does not believe in the training program,
- In planning of the training program, choosing non proper environment, date, location, duration and method,
- Insufficiency of the staff, who can provide training, in the trainings,
- In-service training content which is not covering the entire employees, and which is planned for a single area or level,
- Wrong institutional policies,
- Not working in positions suitable for competencies of the employee,
- Not evaluating results of the training programs, not determining the problems that may arise in advance and not producing solutions.

1.4. Types of In-Service Training

In-service trainings can be listed according to the purpose as given below:

1. Orientation Trainings
2. Basic Training
3. Development Trainings
4. Supplementary Trainings
5. Trainings for Specific Fields
6. Promotion Trainings

1.4.1. Orientation Trainings

These are the trainings for a newly recruited employee to know the institutional goals and policies, job descriptions, powers, rights and responsibilities (Hacıalioğlu, 2019). Implementation of orientation training will shorten the adaptation process of an employee to the institution and the job, and thereby it contributes to increase of the productivity. If the orientation training is planned and implemented as it should be, adaptation of the employee with to the job and institution will be ensured (Tiyek, 2014). Introducing to the newly-started employee the institution, the job and the colleagues within a program to be determined, teaching the job that he/she will be responsible for and having him/her to get accustomed to the job will be an important beginning and training activity (Bayar, 2019). If the contributions expected from orientation trainings are summarized briefly (Sabuncuoğlu, 2005);

- To give basic information about the institution to the newly recruited employee; to enlighten employees on matters such as the institutional policies, organizational structure, production areas and processes, social rights and responsibilities,
- To enable the employee to perform the best in his/her job or show his/her talent by making an adjustment between his/her job and competencies,
- To ensure social cohesion by preventing institutional and work alienation of the individual.

1.4.2. Basic Training

This is the training for equipping the newly recruited personnel in the institutions with basic professional skills, attitudes and knowledge related to requirements of the job to be performed. The basic training can be given either in the workplace of the employee and in the department he/she works, either personally or in groups, as theoretical or practical, but also in another workplace or in inter-institutional training centers (Bağdu, 2014; Hacıalioğlu, 2019). With the help of this training, the employee recruited as a trainee gains the skills and experiences required for the relevant position within a certain period of time, becomes able to benefit from the tools and other facilities that he/she will utilize while performing the job, and starts to display positive organizational behaviors. Evaluations made as a result of these trainings also help the process of deciding whether or not the employees started to work as trainees will be recruited or not (Yüksel, 2000).

1.4.3. Development Trainings

These are the trainings to improve the skills of employees in an institution by training them about developments and innovations in their fields (Hacıalioğlu, 2019). Based on the factors such as age, education, staffing and promotion, departments or positions of the employees may be changed within the organization. In such cases, supplementary training should be given so that the employees do not experience adaptation difficulties in the institution. In supplementary trainings, it is aimed to relay information to employees about duties, powers and responsibilities required in the new department or job in cases where a department or job change is made for the employees (Bağdu, 2014). In many industries, technological developments have an impact on the ways of work. Therefore, this change means that the methods, tools and equipment in the jobs performed may change over time. Development training programs should be planned and implemented to prevent employees from becoming distanced to such new information and to update their knowledge (Kocatürk, 2016).

1.4.4. Supplementary Trainings

Supplementary trainings are programs developed according to nature and qualifications of the new job required by the employees, who have been assigned to any position at home and abroad or whose position is changed. These are organized by the country and central organizational units in order to equip the employee who is assigned to a different position at the same location or the employee who is appointed to a different location at home or abroad with the qualifications and qualities required by such position or new job (Sarıbaş & Babadağ, 2015; Hacıalioğlu, 2019). The goal of these supplementary trainings is to meet the need for specialized staff for different areas of the institution within a short time, to improve the employee skills and abilities in different areas, and to increase both material and moral satisfaction of the employee (Bayar, 2019).

1.4.5. Trainings for Specific Fields

These are the trainings which are implemented to train and develop employees of the institution in different fields for private services (Demirtaş, 2010). These trainings consist of three steps: specific field basic training, specific field development training and specific field specialization training. The condition for participating in s specific field development training and specific field specialization training is to complete the specific field basic training.

1. Specific field basic training: is organized in order to give the skills and knowledge required by a private service.

2. Specific field development training: is organized in order to learn the innovations and developments arisen in the said field by the employee who has completed the specific field basic training.

3. Specific field specialization training: is the training in which the skills, knowledge and application skills required by a private service are crowned at the expertise level (Bayar, 2019).

1.4.6. Promotion Trainings

These are the trainings given to meet the staffing and promotion needs of the employees. The aim is to prepare and train the employee for the upper level positions in the institution. Employees of the institution should be evaluated at the end of the duration determined for the training, they should gain competencies of the position they will be promoted and show success. Promotion trainings include an academic type in-service training for formation of the senior staff needed by the institution. It is considered as a training which is highly effective in motivation of employees and which also plays an important role to increase productivity. (Sarıbaş and Babadağ, 2015; Bayar, 2019).

2. ANALYSIS OF THE NEED FOR IN-SERVICE TRAINING

The needs analysis is a critical step for an in-service training, which is suitable for institutional goals with clarified implementation principles. If the training need cannot be determined correctly, the training will be an unnecessary financial burden for the institution. By embracing the continuity of education in principle, the time, staff, scope and teaching methods should be planned and implemented correctly. For achieving an effective result, correct analysis of the training need has priority and is very important (Bağdu, 2014).

Determining the needs is one of the important steps of the program development process (Sabuncuoğlu, 2005; Bağdu, 2014). Determining training needs is a data collection process (Hacıalioğlu, 2019).

Analyzes that institutions can use in the process of determining their training needs are given below (Yüksel, 2000):

- “Organizational Analysis” having the purpose of identifying the points where the organizational structure needs to be supported and the factors that may affect education in this context,
- “Job Analysis” having the purpose of proving what is the job that needs to be accomplished to an acceptable extent by the employees,
- “Person Analysis” having the purpose of revealing the quality of employees who will undertake the necessary tasks to accomplish a particular job.

In addition to these analyzes, techniques like questionnaire, interview, group discussion, observation, consultancy, focus group and nominal group techniques are also used in determining the training needs (Yüksel, 2000).

There are four interrelated stages for determining the training programs.

These are (Hacıalioğlu, 2019);

1- Determining goals of training programs: During determination of the goals, the opinions of the employees should be taken, they should be measurable and improvable, they should be understood and adopted by the executives and employees of the institution, and they should have internal consistency.

2- Development of in-service training program: The subject matters of the training to be organized, who will be trained by whom, and the place of training and when will it take place are chosen and determined in this stage.

3- Implementation of in-service training programs: This is the stage where the subject matters prepared by using various teaching tools and materials are relayed to the target audience. While implementing the program, the presentation, discovery and research strategies, together with all teaching methods and techniques convenient to the strategy can be used by considering characteristics of the target audience. Direct instruction, cooperative group work, discussion, case study, problem solving, illustration, demonstration, symposium, role play, brainstorming are some of these methods.

4- Evaluation of in-service trainings: The purpose of this stage is to determine at what degree the training has reached its objective.

The points to consider in determining the training need are as follows (Hacıalioğlu, 2019);

- The developments occurring in the structure and functioning of the institution should be followed closely,
- Training needs of the employees should be determined at least once a year by qualitative and or quantitative research methods which are decided as suitable,
- Annual training plans should be prepared according to the training needs of the institution,
- Training budget of the institution should be taken into account in determining the training needs,
- Employees should take active roles in determining the training need,
- If necessary, employee demands should be taken into consideration according to the confidentiality principle.

3. EVALUATION OF IN-SERVICE TRAINING

For determining the efficiency of in-service training activities, first of all, effective measurement and evaluation are required. Failure to go through a multifaceted and impartial evaluation process of training activities organized in institutions, and inability to determine the degree of achievement of training practices causes to overlook the problems and deficiencies arisen in the practice. Proper evaluation of the in-service training program is as important as planning and implementation of it. Evaluation; is a process that shows the satisfaction of the trainees, how much of the relayed things are learned and how much of the learned is put into practice (Bağdu, 2014; Hacıalioğlu, 2019).

Evaluation can be performed in different stages of education by using various methods. In these evaluations, the levels of objectives to be achieved or anticipated are determined. In-service trainings, many benefits other than certain outcomes intended are achieved. Some evaluations are made to use for increasing the efficiency of in-service training programs implemented, determining their effectiveness and enhancing the programs (Dağlı, 2010):

- Preliminary Evaluation: This is the evaluation performed to determine the starting level of people who will participate in in-service training programs. By preliminary evaluation, the people who will attend the training are grouped. Therefore, the tools, materials and methods to be used in the training can be determined.
- Interim Evaluation: This is the evaluation based on the practices made during the delivery of in-service training programs.
- Final Evaluation: This is the evaluation conducted at the end of the in-service training program to determine the level reached by the individual or the training group.

In the evaluation of training; reaction evaluations, learning evaluation, behavioral evaluations and outcome evaluations are carried out. Reactions of the training participants are very important for the continuity of the training, and for enabling changes in the training process. In learning, the changes in attitudes and increase in knowledge and skills achieved by the trainees after the training are observed. If there is change, then the training is succeeded. Certain behavioral changes are expected in the trainees to occur at the end of the training. Demonstrating expected behavior is also considered as an indicator of success (Hacıalioğlu, 2019).

The main measurement means that can be used to evaluate the success of in-service training are (Bağdu, 2014);

- Written tests,
- Oral tests,
- Interviews,
- Work - performance tests.

Evaluation of the process and use of various measurement means during this process are important in terms of activities, and enable the determination of positive and negative outcomes of the activities.

4. LAWS AND PRACTICES RELATED TO IN-SERVICE TRAINING

Training of institutional employees and executive training are becoming more important ever-increasingly all over the world. It is observed that especially developed countries attach much more importance to these trainings in order to train senior managers, and establish some central training institutions for continuation of in-service training activities (Subaşı, 2019). The rapidly increasing and diversified services and formation of numerous units undertaking such services lead to a complex structuring, and requires specialization of the staff to perform these duties (Kocatürk, 2016).

Pre-service and in-service training in our country is regulated by the Civil Servants Law No. 657, which was adopted in 1965. In articles 214-225 in the seventh chapter of the said law, under the title of "training civil servants", the principles for institutions to train their civil servants in service are specified. According to article 214 of the Law, in-service training is implemented for training civil servants, increasing their productivity and preparing them for further duties; this is carried out within the scope of the regulation to be prepared by the State Personnel Administration together with the relevant institutions. According to this article, the main responsibility for training the civil servants belongs to the related institutions. Articles 215 and 216 of the Law relate to the fact that public institutions may give in-service training by establishing a "training unit" and a "training center" within their body. Article 215 explicitly states that a "training unit" will be established in each institution, having the duties of organizing, carrying out and evaluating the training activities. It is stated that one of the units in institutions, which have more than one unit related to training, will operate as the "Central Training Unit". Discretion for opening a training center to meet their needs has been granted to the institutions with Article 216 (Peker, 2010; Uyer ve Kocaman, 2016).

5. IN-SERVICE TRAINING PRACTICES IN HEALTH INSTITUTIONS

Members of the profession can ensure continuity of their professional existence by having the business practicum in line with the necessities of the time, and by reflecting rapid changes and developments to their professional practices. Training of such members of the profession having this vision will be possible by continuity of trainings in this context (Göçmen, 2004). The knowledge, skills and attitudes gained by in-service training allow employees to be more productive, more successful and happier in their profession (Atay et al., 2009).

It is critical to train the employees in health institutions in line with the changes of the time. Forgetting the knowledge learned during the vocational education period by time, or inadequacy or loss of importance of the existing information with the technological developments or changing of necessary competencies require the healthcare professionals to update their professional knowledge continuously. Within this framework, in-service training programs aiming to benefit from new researches and studies periodically, to improve professional standards and to increase productivity are an important development opportunity for healthcare professionals (Koç, 2004; Atay et al. 2009).

In-service training affects, directly and indirectly, the quality of service in health institutions. By the help of these trainings, the staff working in the health services field has the opportunity to learn and succeed, besides enhancing their work experience. By review of the trainings conducted through professional processes and supply of feedback over he outputs, continuing training and development are encouraged. In-service training programs organized within the facilities of institutions by taking into consideration interests and needs of the staff, and with participation and cooperation of the institution executives; improve individual and institutional productivity. They prevent work accidents and errors, and improve the professional confidence of employees. They also strengthen the in-house relations (Serbest and Ulupınar, 2010).

Training provided by health institutions is offered to employees, patients and their relatives as a service. Institutions are aware that in order to keep up with recent conditions, it is necessary to make efforts in accordance with the changes and relay them to their employees.

By in-service trainings, the newly recruited employee is equipped with the business practicum necessary for the job, while on the other hand, current procedures regarding the job are provided. The employee is developed at professional dimension in this way. With the help of the consultancy to be provided to patients and their relatives before, during and after the treatment, it is aimed to allow relatives of patients to participate in the care given, to provide information to them and to increase the service quality in this way (Serbest and Ulupınar, 2010; Buğdaylı and Akyürek, 2017).

Regulations made within the scope of the Health Transformation Program of the Ministry of Health in our country are as follows (Uyer and Kocaman, 2016);

- In-Service Training Regulation: In the regulation issued on

11.12.2009, the objectives, principles, planning, implementation-evaluation procedures and principles of in-service training to be conducted for employees working in the Ministry of Health are defined.

- Hospital Training Committees: As of 2009, the Ministry of Health has prepared the "Health Service Quality Standards" which covers private and university hospitals, and since then these standards have been used in the evaluation of service quality standards.

- Staff Compliance and In-Service Training: After the amendments made in 2011 with the Decree Law No. 663 on the Organization and Duties of the Ministry of Health and Affiliated Institutions, the orientation and in-service trainings of the staff of the Ministry of Health are being carried out under the responsibility of the Directorate General of Health Services, Department of Education and Certification Services. According to the Directive on the Duties and Working Procedures and Principles for the Headquarters issued by the Turkey's Public Hospitals Authority dated 19.03.2014; the responsibility of orientation and in-service trainings of the personnel working in institutions under the Ministry of Health is planned to belong to the "Health Care and Services Department" at provincial level.

- Regulation on Certified Trainings: This is the "Ministry of Health's Regulation on Certified Trainings" issued on February 4, 2014. In this regulation, the procedures and principles for the certificates to be registered by the Ministry of Health are regulated.

In the literature, the recommended duration for orientation programs is given as six weeks to twelve months depending on the departments to work (Beecroft, Kuzman and Krozek, 2001). Although there is no specific duration determined in Turkey for orientation programs for new graduates, it is known that the duration of orientation programs are not sufficient. Due to the insufficient number of staff working in institutions, newly recruited employees are included to the patient care processes without completing their orientation processes (Uyer and Kocaman, 2016). This process not only has an impact on the motivation and performance of the employee but also poses a risk for patient safety. Additionally, orientation programs which are not planned with right time management will not be successful. It is extremely important that departments responsible for successful execution of orientation programs should work in coordination and in compliance with the objectives (Uçkun and Kılınç, 2007).

Planning the orientation programs to be organized for newly recruited employees in health institutions by dividing them into three groups will be helpful. These are (Baykal and Türkmen, 2018);

- General Hospital Orientation Training / İnstitutional Orientation Training: This is the training program in which all hospital employees are included and informed. While planning this program, it should be noted that each employee should feel himself/herself as a part of the institution and consider themselves as an important key in the success of the institution.

- General Orientation Training: This covers the arrangements to facilitate newly recruited employees to work in their field of work. This should be planned to include the basic principles, skills and critical thinking process for patient care and follow-up process.
- Clinical Field Orientation Training: This is a training program addressing special training and evaluations related to the department to work.

Some remarkable results have been reached in some researches made on in-service training programs carried out in health institutions (Peker, 1992; Yüksel, 2000; Gürlek and Kanber, 2010; Buğdaylı and Akyürek, 2017; Zahoor, Muhammad, Mohammad, 2018):

In-service training has a direct effect on the performance and motivation of healthcare professionals. It stands out in the researches aiming to evaluate in-service trainings that the target audience is mainly nurses. According to the results obtained in researches made on nurses, it is seen that orientation trainings are generally exist on paper and not realized, the trainings carried out by training departments are generally unplanned and not regular, the trainings received are often on issues not needed or do not fully comply with their job duties. On the other hand, according to results of the same studies; the majority of participants also stated that they wanted to follow the developments related to their profession through training programs, and they did not find themselves enough in terms of professional knowledge. Also in another study conducted on nurses, the participation of nurses in in-service training was analyzed. Accordingly, a significant number of nurses stated that they did not attend any training in the last year, and stated that the time chosen for the training was not suitable as the reason, and a larger group stated that they needed in-service training.

It has been observed that these and similar researches, which have been carried out recently regarding in-service training, are frequently performed on nurses, and that other health workers are not covered in the studies. Increasing the researches on this matter to cover all health staff is important in terms of improving and enhancing in-service training programs. Considering the results obtained with the researches;

- For increasing the efficiency of in-service training programs, orientation training programs should be prepared for all employees and participation should be ensured.
- Opinions of the employees should be taken into consideration in preparation of in-service training programs.

- Training topics should be determined based on the trainings requested by the employees or on the deficiencies and problems detected in functioning of the institution, and the program should be designed by creating a team of expert trainers.

- In-service training programs to be realized should be prepared in certain order and these programs should become continuous by organizing in regular periods.

Managers in the institution have great responsibilities in the processes of training and development. It is expected that an appropriate institutional structure will be created to help intensive learning of employees, and enable them to put into practice the learned knowledge, skills and principles. In order to achieve institutional goals, a separate training and development department is formed in some institutions. The size of departments formed and the number of employees working there may vary institution to institution (Baykal and Türkmen, 2018). The trust and support of institution managers in these processes will be important criteria in achieving success. Within this framework, it is important for managers to approach the employees as their facilitators and mentors who will help them to progress, by developing and succeeding together, and not as their employers or bosses (Uçkun and Kılınç, 2007).

6. CONCLUSION

In order to respond to the constantly changing and renewed expectations of the society served, the most important asset of healthcare organizations should be knowledgeable and competent employees. Responsibilities for training and development of employees are increasing gradually. Therefore, each institution should plan and implement training activities in line with the establishment goals, structure and future objectives. These will contribute to the success of the institution (Baykal and Türkmen, 2018).

In-service training programs reduce work-related errors, prevent occupational accidents, increase individual and institutional productivity and play an effective role in increasing the satisfaction rates of employees as well as patients. Institutions should plan and implement in-service training programs for their employees, ensure their efficiency by providing their employees with opportunities to learn and achieve, increase participation by giving information to all employees about training, and support the process.

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Chapter 10

MIGRATION AND INTERSECTIONALITY: POOR SYRIAN MIGRANTS

Hıdır APAK[1]

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INTRODUCTION

"We escape the battle, but we are dragged into poverty."[2]

Millions of people had to leave their homes and emigrate out of border because of the events and internal turmoil in Syria in 2011. Turkey is among the countries that are the most preferred by individuals who migrate from Syria. According to data for 2020 of Ministry of Interior General Directorate of Migration Administration[3] there are 3 million 600 thousand Syrians under temporary protection in Turkey. This revealed immigration highlights many problems such as social and economic problems especially, people coming from different cultures living together, coping with differences, communicating and adaptation.

These problems arise in the process of the migration of Syrians as seen in all the forced migration events in the world. One of the most important problems is the protection of vulnerable groups such as elderly, children, women, poor or disabled. This is even more important when considered that a significant proportion of Syrian migrants are disadvantaged / vulnerable / sensitive individuals in need of special protection. Migration experts highlight the increasing complexity of migration and migration situations in modern society, which Vertovec (2007) describes as it as super-diversity". Super-diversity also appears to be among socio-economic and legally differentiated immigrants.

Immigrants are often in vulnerable groups because they are exposed to many inequalities and suffer from many problems such as education, health, employment, economic and social exclusion. However, it can be stated that immigrants are diversified within themselves and not all are similarly disadvantaged. Age, socio-economic level, gender, ethnic / cultural background; It directly affects how an immigrant experiences his / her life, disadvantage situations and how to deal with them. Immigration experience may vary according to more risky and more vulnerable/ fragile /disadvantageous situations such as children, women, disabled, poor, elderly.

In this context, the term "disadvantaged migrants" refers to a group of migrants who live together with various disadvantages such as poor, children, women, the elderly or disability. This situation, which can be expressed as double, dual, multiple or intersectional, is an important point to be examined in the phenomenon of migration.

The concept of intersectionality was first used by Crenshaw to describe the combination of racial and gender disadvantages in the experience of being a black woman. The concept of intersectionality, which takes place in the social sciences, has a practical benefit in explaining the existence of different discrimination bases together and at the same time (Kahraman-Güloğlu, 2019), intersecting categories produce social positions that cannot be clearly separated into their separate elements. These elements simply represent more than the sum of the parts (Giddens & Sutton, 2018).

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[2] It is quoted from an interview between a researcher and a Syrian immigrant in Turkey.

[3] https://www.goc.gov.tr/gecici-koruma5638

In a general framework, the beginning of intersectional studies focused on how race, class and gender intertwine and intersect, and how and with each other, and with which relationships. They centred on how race has become sexist, how gender has become racialized, and how the relationship of both ensures that the social class is maintained and transformed (Davis, 2008). Intersectionality attempts to make visible the different "discrimination" and "disadvantages that arise in multidimensionality (Erez, Adelman & Gregory, 2009).

In order to fully understand the forced migration, it is important that such studies can be evaluated among those who experience disadvantage among immigrants. However, this situation is generally ignored in migration studies. In general, one of the most neglected points in migration studies is the disadvantage of migration and poverty. It is necessary to discuss the disadvantage together. In the context of Syrian migrants, the literature on disadvantaged groups is also insufficient (Yalim & Kim, 2018). Migration studies are generally handled with an approach that does not include disadvantage immigration and disadvantage studies do not include immigration.

In fact, each group is experiencing many negativities in itself. However, if multiple or intersectional disadvantage perspectives are used, the situations of "immigrant and poor" individuals with a different cross-sectional and different disadvantage than both disadvantaged groups will be indicated and the presence of even more disadvantaged individuals will become clearer. In this study, it will be tried to put forward why the negativity experienced by the individuals who have double or intersectional disadvantage is more than other immigrant individuals and how to deal with this situation. Understanding intersectivity is important not only for migrants, but also for the different aspects of the situation of migrants who experience different disadvantages and whose migration experiences differ.

If various issues such as integration and integration in the context of migration are to be discussed, attention must be paid to intersectionality and new social positions emerging in the context of intersectionality. Therefore, in this section, we will try to explain the situation of the Syrian immigrants who experience poverty and what problems they are experiencing. The main purpose of this study is to examine the hypothetical link between poverty and immigrant status.

RELATION OF MIGRATION AND POVERTY

Poverty is one of the most important social problems that every society has experienced in different ways from past to present. What is poverty? There are many answers to the question. However, despite all the answers, it is pointed out that poverty is difficult to define because of its multifaceted and complex structure. Since poverty affects heterogeneous groups, the concept of poverty is relative to different interest groups and individuals living in poverty (Kotler, Roberto, & Leisner, 2006).

Therefore, when making a definition of poverty, several opinions should be given together. Şenses (2014) briefly described poverty as not having sufficient resources to meet the necessary requirements; Gül and Şen (2018) stated the concept of poverty as the lack of the most basic resources, opportunities and chances for people to lead a long, healthy and creative life in accordance with human dignity.'' Poverty means having to live in many problems and constraints that are not only limited to economic income or nutrition. Poor; In addition to access to facilities such as schools, health, electricity, food, clean water, shelter are the groups that are at risk to meet basic needs or meet these needs at the lowest level (Şen, 2018). Many poverty studies use monetary poverty indicators, while others use talent or social exclusion findings for poverty indicators (Kwadzo, 2015). When all these definitions are considered in general; Poverty can be defined as the inability of individuals to meet their physiological and social needs and the lack of income to live humanely.

One of the tools developed by poor individuals as a strategy to combat poverty is to emigrate to prosperous regions and countries. There are many reasons for the phenomenon of migration, and one of the most important reasons for migration is economic, although no single reason can satisfactorily explain why people have decided to leave their home country and settle in another country (Castles & Miller, 2009). With the expansion of the neoliberal market economy, unemployment and poverty are the most important of the traditional problems in many regions, which are disappearing, reducing the social assistance of the state and the social problems it brings with it. Making the injustice between prosperity and living standards visible in different parts of the world with developing communication technologies accelerates the migration process (Danış, 2004).

With globalization, people flock to developed countries with the dream of achieving better living standards. Thus, many people from many countries of the world, especially highly educated and skilled people, go to developed countries. With globalization, not only capital mobility but also human mobility is increasing. However, although the mobility of capital is from North to South and from West to East, human mobility and the mobility of low-skilled migrants operate in the opposite direction (Atasü-Topçuoğlu, 2012). The reasons for migration are inseparable from social, economic, cultural and religious reasons that force people to migrate. People migrate for different reasons and have to change their settlements; they want to live in settlements with better social, economic and cultural opportunities.

Poverty, which is one of the important reasons of migration, emerges as an important result even after the migration event. If migrants and families do not have sufficient qualifications to work in the places they migrate, they are excluded from employment opportunities, cannot access basic services and cannot meet their basic needs. Thus, poverty is also a cause and result of migration.

Studies on migration and poverty show that poverty is a positive and important determinant of migration, and that migration can have a significant impact on helping poor people to get away from poverty. However, the option of forced migration can cause people to fall into poverty and increase household poverty. Therefore, the relationship between poverty and migration is unlikely to be unidirectional, since poverty is multifaceted and migration is not a homogeneous livelihood strategy (Awumbila, & Ardayfio-Schandorf, 2008). A study attempting to understand the causes of migration from Mexico to the United States revealed that poverty affects migration from Mexico to the United States, but poverty alone cannot fully explain why individuals and families choose to migrate from Mexico to the United States. Researchers have explained this in terms of the fact that the highest poverty rates in Mexico have the lowest immigration rates to the United States (Becerra et al., 2010). Migration may be caused by poverty, but migrants are not always the poorest because of the costs and opportunities involved.

In a globalizing world, poverty can lead to migration and migration can lead to poverty. Migrants migrate from their own countries due to poverty, and in the countries where they emigrate, they experience social exclusion due to the poverty brought by immigration and fall into another form of poverty (Karadağ, 2018). At the same time, it can be stated that individuals who do not live in poverty in their own countries and who migrate on their own can become impoverished with migration. Trying to get along in difficult conditions, lack of social security and being seen as cheap labor can often impoverish immigrant individuals in the new order they come from.

If the relationship between migration and poverty recovers, it can be said that this relationship is multifaceted. Migration can be both a cause of poverty and a result of poverty. In addition, the immigration process can turn into an advantage for some immigrants to end their poverty, and vice versa for some immigrants, it can turn into a means of impoverishment. In this way, some of the immigrants may be able to rebuild their livelihoods, but some may experience poverty. In the next section, the relationship between migration and poverty will be discussed through the relationship between Syrian migrants.

INTERSECTION OF SYRIAN MIGRATION AND POVERTY

Effects of Poverty; it is more intensely and destructively reflected to vulnerable groups such as migrants (Sheafor, & Horejsi, 2014). Poverty is one of the major problems affecting Syrian migrants. The war in Syria affected millions of people regardless of whether they were women, men, rich or poor. Considering the reasons for the migration of Syrians, a migrant profile emerges from the war, not as a normal immigrant. In this sense, the migration processes of Syrian migrants can reveal the possibility of poverty. In addition, it can be stated that the Syrian migrants who have gone through the process of forced migration can become impoverished with the migration when they think that they do not have the opportunity and time to plan the migration process in a way that makes it possible to move the money and assets that can meet their basic human needs. Syrian migrants are generally poor in the regions they migrate. When migrating, they can pick up a small amount of valuable goods, money or goods that take light, little space with them. They also spend a significant portion of their assets in their first settlements to the places they migrated. However, where Syrian migrants leave, they have to leave their own assets and cannot benefit from them. In addition, they leave behind their existing professions, titles and jobs. In Syria, as a result of immigration due to compulsory reasons such as war, illnesses, traumas, disability or disability, mourning and loss, disintegration of families, loss of children or unaccompanied minors, may lead to impoverishment or poverty of immigrant individuals. In the pre-migration period, middle-class families suddenly lose most of their economic income with forced migration. Thus, the migration process experienced by economic losses such as loss of assets and income leads individuals to poverty (Hanmer, Arango, Rubiano, Santamaria, & Viollaz, 2018).

Syrian immigrants that left their country were forced to migrate to different countries, like Turkey, Lebanon including Jordan. Studies with Syrian migrants provide important clues to poverty. Studies and reports indicate that the majority of Syrians live below the poverty line. Despite the support provided by host governments and humanitarian actors, migrants in the region are becoming increasingly vulnerable.

The majority of Syrian migrants live below the poverty line and have difficulty in accessing food, shelter, health and other basic needs (FAO, 2018). According to the United Nations High Commissioner for Refugees (UNHCR), more than 85% of Syrian immigrants in Jordan (UNHCR, 2019a) and more than 70% of Syrian immigrants in Lebanon (UNHCR, 2019b) have been found to live below the poverty line. According to a report by UNHCR, the United Nations Children's Fund (UNICEF) and the United Nations World Food Program (WFP), 88% of Syrian migrants in Lebanon are in debt, 75% do not have access to basic food and shelter, and 58% of them live in extreme poverty, who do not reach the basic needs for survival (World Food Programme, 2019). A study of the living and working conditions of Syrian children in Lebanon was investigated in 1902 households. It was found that households where women bear the economic burden are poorer than men whose households are the head of the household. In addition, the average age of employment among children working from poverty is 10.9 years, 74.8% of whom work in agriculture (Habib et al., 2019).

This is also observed a similar process in Turkey. According to the assessments made in 2017 in Turkey, Approximately 67% of Syrian immigrants live below the limit of the poverty, and it also shows that many of them do not have sufficient water, cleaning and hygiene facilities and they are not protected against insufficient weather conditions (Rohwerder, 2018; UNICEF, 2018). Syrian refugees living in Turkey between poverty and lack of access to a regular income because of the high cost of living is a common problem area (Bellamy, Haysom, Wake, & Barbelet, 2017).

The intersection of poverty and migration in the area of research done on Syrian refugees in Turkey has been demonstrated clearly. In a field study conducted in Mardin in 2014, 45.5% of immigrants stated that they had no income and 64.4% stated that they were unemployed (Apak, 2014). In a field study conducted in Şanlıurfa in 2015, it was found that 30.4% of the Syrian migrants had a monthly income of 501-1000 TL (Karasu, 2016). In a field study conducted in Istanbul in 2016, 30.4% of migrants regard unemployment and 13% poverty as a problem (Kaya & Kıraç, 2016). In a study on the representation of Syrian migrant children on social media, it was found that more than half of the news about Syrian migrant children were related to negative conditions such as poverty, hunger, violence, abuse, child labor, beggar, and inaccessibility to education (Yurtman, 2016). In another study on the problems and needs of Syrian women living in Konya, it was found out from the income status statements of the women participating in the research that they live below the hunger and poverty line and that they are trying to live below the "hunger and poverty" line. In this study, participants stated that they could not reach basic needs and that they became unemployed and poor due to the war (Afyonoğlu, 2019).

Syrian immigrants face many problems in the intersection of poverty and immigration. In this sense, poverty caused by economic problems; inability to adapt to society, exclusion, ghettoization, child labor, human trafficking, informal employment and cheap labor, access to basic human needs, and so on, it is a much bigger problem in terms of causing problems. Although all migrant individuals are likely to face these problems, it is thought that those who maintain their lives in poverty may experience these problems more deeply. In addition to the traumas involving migration, post-migration poverty; social exclusion, lack of social support mechanisms make migrants more fragile. Immigrants, who face many violations of rights, have to deal with poverty at the same time.

Each individual, group or category experiencing cross-sectional disadvantages has unique needs. It is very important that these needs are fully met and supported. The risks faced by defenseless and vulnerable groups of Syrian migrants (elderly people, people with disabilities, migrants with special needs due to poverty, injury or chronic illness, etc.) and discrimination, increase their stress and reinforce their feelings of weakness. It is necessary to draw more attention to the needs of vulnerable and marginalized migrants and help them regain control over their lives (Al-Qdah & Lacroix, 2017). As shown in many studies on Syrian migrants, it can be stated that Syrians are subject to some degree of exclusion (Kaya, 2017). With the phenomenon of immigration, immigrants may face exclusion due to financial inadequacies. Being financially poor can also lead to social and spatial exclusion and exclusion from public relations. On the one hand, the rights violations brought by immigration, on the other hand, poverty, reinforces the exclusion and thus the vulnerability of Syrian migrants (Deniz, Ekinci, & Hülür, 2016).

Intersection issues in the context of poverty can also be seen in the sample of Syrian refugees in Turkey. Poverty among Syrian migrants; it leads to the neglect and abuse of women and children, and the transformation of women into sex workers as a result of economic pressures. In addition, poverty causes Syrian migrants to be victims of trafficking, stigma, and insufficient access to basic services. About 40% of Syrian children are out of school due to poverty. These children are taken out of school by their parents for child labor and child marriage on the basis of poverty. The prevalence of child marriage has increased primarily due to poverty (Habib et al., 2019).

Due to poverty, many Syrian families resort to negative coping mechanisms such as living in poor housing, reducing the quality and quantity of food products, and reducing health and education expenditures. These negative coping strategies have a detrimental effect on the well-being of all immigrants, particularly vulnerable children, the elderly and women (FAO, 2018).

The problems faced by poor Syrian migrants in the countries they migrate may also change in the context of the camp and urban life in which they live. Living outside the camps can be more challenging for poor migrants in general. This compelling situation may be more likely to meet basic needs such as housing, accommodation and social assistance. In addition, it is easier to identify poor migrants systematically in camp life and better services provided by camp support professionals and charities shows that camp life is more compatible for poor people. The biggest obstacle of the camp life for the poor migrants is the difficulty to be included in the fields of work and labor. Those who maintain their lives in the camp having more difficulty with finding work.

Poverty affects labor, labor and employment issues for many Syrian migrants. In the post-migration period, Syrian migrants face great difficulties in finding housing and jobs or have to work for low wages under very poor working conditions (Çelebi, Verkuyten, & Bağcı, 2017). Syrians, mostly working in the informal sector and with low income, are trying to earn income in begging, peddling and similar fields. Some Syrians have to consider alternatives such as construction labor, seasonal agricultural work, sex work, labor in small workshops or various jobs in the service sector (Ördek, 2017). According to the results of quantitative and qualitative field research conducted by Tümtaş (2018) with the Syrian migrants, migrants are determined in the labor market mainly in terms of wages, working time, working conditions and so on. As a result of encountering unequal practices in terms of issues, they experience the problem of poverty more deeply.

Seasonal agricultural labor is one of the areas where Syrian migrants work most intensively. They work as seasonal migrant in Turkey and "the weak negotiating position against the employers and workers mediator" is available in the group. Because Syrian migrants are among the seasonal agricultural labor groups; they represent the most defenseless and vulnerable group due to poverty and deprivation, fear of deportation, dependence on labor mediators, language problems, marginalization among different groups of workers, fear of death and violence (Pelek, 2019). Syrian migrants are exposed to economic exploitation by business owners without any security in the seasonal agricultural work. This means that poverty, precariousness, and economic abuse are victims of many Syrians in a vicious circle (Ördek, 2017).

Another of the problems that the Syrian migrant and seasonal agricultural employment in seasonal agricultural work led to the livelihoods of the poorest sections of the population, considering the fact that in Turkey "competition between the poor" is that there may bellows. The competition of the poor can also involve encounters and conflicts of different ethnic, religious and cultural groups. This is a kind pointing to a new stage in the study of poverty in Turkey that is called "from poverty seizure to Competition of poor" a phenomenon (Dedeoğlu, 2018). This may lead to a negative perception or xenophobia (fear, hate) of Syrian migrants. In one study of ethno-cultural differences and also because immigrants are not cheap labor in Turkey were found to be exposed to discrimination and exclusion by the majority groups (Tümtaş, 2018).

Thus, the desires of Syrian migrants to be included in the work and labor areas due to poverty also affect the local poor. The vast majority of the Syrian migrants are poor and they mix among the poor stratas of the cities where they migrate. This group, which is defined as external poor, causes declines / collapses in the economic and social indicators of the poor defined as local poor. In this concept "collapse of poverty" shows the change that local poor included (Koçancı, 2016). It can be stated that the local poor are exposed to poverty collapse with the start of the work of Syrian migrants. In a qualitative study with the poor in Turkey has been observed that job opportunities decreased in the marginal sector with the arrival of Syrian migrants to the city, which reduced the current income of the domestic poor, which increases the risk of dismissal, an increase of goods and services, housing / shelter due to an increased problem that decreased the level of welfare owned by the local poor (Koçancı, 2016). In addition, although Syrians are more likely to be displaced by the poor in the labor market, Syrians add vitality to the economy as consumers and tenants. They also opened businesses and created jobs to help local citizens benefit as employers and sellers. In some border cities, trade balance improved as exports to the Middle East increased (Azevedo, Yang, & Inan, 2016). It is clear that the debate will continue because of the presence of migrants in the host countries, their positive and negative economic consequences, and the immigrants' burden or potential benefit to the host country's economy.

As the Syrian migration approaches the end of its eighth year, it is important to consider and meet the physical, psychological, spiritual and social needs of poor immigrants. In order to reduce the effects of the problems experienced by poor migrants during the migration process, it is necessary to evaluate the phenomenon of immigration and poverty as multiple. In this respect, it is necessary to support the return of the poor migrants to their normal life as soon as possible.

CONCLUSIONS

In this study which sheds light on the relationship between migration and poverty; a brief overview of some of the main challenges arising from the intersection of poverty and forced migration. In the context of this study, this intersection is tried to be discussed over Syrian migrants.

Those who are vulnerable from immigrant groups face different problems than other immigrant groups before, during and after migration. When the pre-migration process is examined, it is seen that the poor suffer from many problems caused by poverty. Conversely, some of the immigrants living in poverty in the post-migration process may have a more prosperous life than the pre-migration process. For some immigrants, the migration process can be the continuation of poverty or the end of poverty, and for some immigrants it can be the zero point where poverty begins. There is no detailed data on the experiences of Syrian migrants experiencing vulnerability and immigration at the same time. The Syrian poor migrant face more problems not only because of their migration but also because they are poor. The real issue is that they experience both problems at the same time and intertwined. For this reason, the problems of individuals with intersectional disadvantage, including both of these groups, can be shaped according to both the impact of migration and disadvantageous situations. The result of this study is that the majority of the Syrian migrants live in poverty. The fact that Syrians live below the limit of hunger and poverty shows that they need in-kind and cash services. At this point, governments and local associations can play an important role in meeting the basic needs of Syrian migrants. The fact that Syrian migrants have refugee status can also trigger more poverty or be the main cause of poverty. With the clarification of the status of individuals, it can be stated that they have the assurance of UNHCR and that the problems of poverty can be solved more quickly. In this respect, the fact that Syrian immigrants are deeply affected by the poverty problem is statelessness and the uncertainties that come with it. The situation of Syrian migrants is left to the conscience of the countries where they take refuge. That cross-sectional disadvantage over Syrian migrants can be made more visible; there is a need for field research in which the situation of poor migrants can be more clearly identified. More local efforts should be made to make the needs of these groups more visible. In addition, legal and social improvements are needed for poor migrants. The social assistance and solidarity fund should primarily provide assistance to children, the elderly and the disabled who are from vulnerable groups. For example, if children do not benefit from this fund, poverty will be exacerbated with the effect of intersectional disadvantage and increase the risk of poverty shifting to generation. Otherwise, if children are given priority, an opportunity channel will be opened for children in the fight against poverty. It is clear that education, health and so on primary and vital assistance will provide children with a way out.

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Chapter 11

SMART-DARK FACTORIES AND LEAN ACCOUNTING

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1. INTRODUCTION

Industrial developments, increase in production quality, equipment efficiency and minimum level of work accidents have brought smart and dark factories to the agenda. Robots are much safer to work in jobs where people who have trouble at working, such as toxic work environments, high temperatures, deadly gases (https://www.automationworld.com/factory/robotics/article/13316849/turning-out-the-lights-on-the-factory-floor). Because the production process and consumer profile have brought the need for technology-intensive companies in the current business circumstances. Along with changing production methods in businesses; management styles and workforce features differ and labor force preferences using advanced technology will increase. By concentrating on system design and control, the error rate will be greatly reduced and productivity will be increased. Smart companies will increase their market share, management of supply chains and processes will be easier to follow. More intensive information technology will be used in smart businesses. Major breakthroughs in information technologies in recent years have included smart machines and smart businesses that can communicate with each other. Citizens tend to be e-communities with applications such as e-government, e-tax, e-commerce. With the birth of a baby, families opening an e-mail address and social media accounts to the baby is an example emphasizing the importance of how people adopt to information technologies. In the first stage of an information-intensive world, there are concepts of Internet of Things and Machine-to-Machine communication.

2. LEAN THINKING CONCEPT

The concept of lean in the industry was first introduced in 1990 in order to summarize the working approaches and production approach in the automotive industry in Japan (Womack, Jones and Ross 1990, p.47). “Muda” in Japanese language is used to describe any human activity that does not create value, waste and waste resources. Muda corresponds to “waste” in Turkish language. When the word Muda is adapted to the production area, it can be defined as the production processes that need to be corrected, the stocks that cannot be used in production or sold, and the production that increases the level of unnecessary stocks, the business processes that are actually unnecessary, the movements and transportation of workers and stocks that do not create added value, and the next business process due to the inability to complete the previous business process, or goods and services that remain far from meeting customer needs (Womack and Jones 2003, p.15). Muda’s basic solution is to think lean. Lean thinking can be defined as stopping waste, inefficient processes, all business activities that do not offer economic benefits and adding all activities that offer added value to the production process by providing benefits (Hicks 2007, p. 236). Womack and Jones (2003, p.29-90) summarized the five basic principles and stages of lean thinking as the definition of the value, determination of the value stream, ensuring continuous flow, the pull system application, and excellence.

Defining the value is the starting point of lean thinking. The concept of value exists at every stage of lean manufacturing. The value is defined by the customer. Everything that does not create value in customer definition is waste. The party that can define the value in a most realistic way is the end customer. The product that meets the customer's needs at the right time and at the right price is meaningful in defining the value. Although the value is created by the manufacturer (Womack and Jones 2003, p.29), it can only be defined by the customer. Value is a combination of the properties of the product that the customer is willing to pay (McNair 2006, p.12). It is a waste to produce the right goods and services in an earlier stage before they are ordered as well as to produce the wrong goods or services. In another definition, the value is defined by the customer as the quantity of a particular good (Balcı, 2011). The process of determining the value flow can be defined as the steps to actually create value as perceived by the customer. It is important to plan the value flow process that is created from the beginning of the process to the end until the product reaches the end consumer. At this stage, enterprises rarely focus, it turned out that there was almost always a large amount of waste (Womack and Jones 2003, p.15). The value stream can be defined as the process from the point of sale of the product or service to the realization of the purchase transaction. The flow of value is the sum of all the processes and activities necessary for the goods to reach the final consumer, starting from the customer demand, from the firm's first order, to the completion of production and delivery to the consumer (Duque and Cadavid 2007, p.72). The purpose of the continuous flow of value flow is to reorganize it in a row that allows the product to flow towards the customer, by keeping the value-added steps (Womack and Jones 2003, p.19). It is necessary to create a continuous flow and move the finished and/or semi-finished products from one processing step to the next step by balancing the production and the quantity of production (Rother and Harris 2001). The increase in the speed of the process that turns from raw materials to product is an indication that the "flow" rate of the system is so high.

The success of realizing the value flow occurs by keeping the process speed under control during the pull system application phase. The control of the process speed is possible by defining and removing the waste in the production process. In the lean system, every business process is the internal customer of the previous business process with the aim to produce the product that meets the needs of the end consumer. Perfection, which is the last principle of the process, emphasizes the necessity of an auto control and analysis process by providing the continuous flow of the defined value in line with the needs of the end consumer Perfection, the last principle of the process, emphasizes the necessity of an auto control and analysis process by not providing the continuous flow of the defined value in line with the wishes of the end consumer. The goal of perfection can only be achieved by continuous learning activities and technological developments (Womack and Jones 2003, p.95).

3. LEAN PRODUCTION AND LEAN ACCOUNTING

Lean production system in lean factories aims to achieve simplicity in all functions of the enterprise. Accounting needs to adopt a lean accounting approach by differentiating from traditional accounting. The basis of lean manufacturing philosophy is to prevent waste at every step in the business. Every process of the production phase should be examined and the unnecessary steps as well as waste should be reduced to a minimum level. Lean production is defined as a philosophical approach that ensures the satisfaction of the consumers to the highest level by producing quality products in the shortest time possible according to the demands of the end consumer by minimizing the raw material, labor and production overhead costs (Mckellen, 2004). The adoption of the lean manufacturing system offers a different approach where the traditional business approach is turned upside down. Okur (1997) stated that the concept of lean production has emerged as a result of a skeptical understanding that questions the generally accepted principles and rules, and does not characterized by any established belief recognized as an absolute truth.; Lean production can be explained by two important factors according to another view. The first is that each employee carries duties and responsibilities for activities that create value within the business, and the second is to investigate the root cause of this system, which reveals errors more transparently (Cesur, 1997, p.211). Lean accounting can be defined as providing accurate and reliable information in a simple manner that information users will understand in the most accurate way. The necessity of lean accounting is stated by Balcı (2011) that there is a contradiction between lean production based on the principle of continuous value adding and the traditional accounting process which is based on the audit approach rather than improving. The way in which traditional accounting is compatible with the new production philosophy is through the change in the understanding of accounting in a business that uses the lean manufacturing approach (Kennedy and Widener 2008, p.302). There are two important goals in lean accounting which are the application of the lean thinking to the internal accounting processes and the support of the lean business management system (Köse, 2018). In order to make sense of lean thinking philosophy, business managers and employees will desire to see the results of the applied lean approach in the financial perspective. The economical results of these improvement efforts may not be observed in the short term, and can often result in financial costs. The reason for this contradiction consists of different priorities of commercial activities and financial processes. In addition, in restructuring periods, financial expenses increase and the income generation spreads over time. The customer satisfaction and measurement criteria of the employees and finance employees differ in this regard. Operating staff measure customer satisfaction and department success based on shortening delivery time to customers, quality improvement, timely and accurate delivery, optimization in the workplace and increased stock turnover rate. According to the financial perspective, productivity comes to the fore. A positive change will emerge in the financial statements by reducing costs and, if possible, at the same time raising revenues. While the income level has remained constant in the companies that have gone through lean thinking, some low-income operations continue. Employee overtime expenses are not under full control and overall production overhead costs will continue in a similar manner, although waste costs have decreased. Operating profits due to the decrease in stocks may decrease and cash flow may be created from the activities due to the decrease in stocks, but no significant change is made in the remaining financial indicators (Köse, 2018). What lean thinking does differently needs to be accurately measured. In order to make this measurement, the works that are considered to have no added value, which lean manufacturing philosophy calls waste (Ohno 1988), can be categorized as waste types such as *inventories (*raw material, semi-finished, finished goods), *transportation (*raw material, semi-finished), operations do not add value, *idle times (*operator, workbench, material), *unnecessary movements (*bending, incline extension, turning), *faulty poor quality production (*scrap, reprocessing), and *excessive production (*production in excess of demand, high volume batch).

Stocks, which are the mainstay of production, also cause waste in case of excessive stock level. Inadequate inventories cause loss of production and sales, while excessive stock level causes waste and does not create added value due to the storage costs and resources allocated to the inventories. Especially during an economic environment where prices do not increase, having high level of inventory increase carrying costs and reduces business efficiency. Reactive quality controls occurring after the product is completed are also described as waste. The product is valuable as it has high quality. For this reason, the production of the desired goods must be obtained without error in the first production. Since the transportation of the product in the production process does not contribute to the production, the transportation process is a waste. Unnecessary transport of equipment, raw materials, semi-finished and finished products from one place to another is waste. For this reason, the production area should be designed from the beginning and the transportation processes should be done naturally within the production systematic and unnecessary repetitions should be eliminated.

Works that do not create added value in the process and steps that do not create value for the customer are considered as waste. Unnecessary check points, approvals and certification are examples of this type of waste. Idle production period due to errors in workflow or idle time due to wrong production planning and preparation phase for production is a waste. The unnecessary bending, getting up and turning movements of the operators and employees, which are the result of a poor layout of the enterprise is a waste. Due to these unnecessary movements, workers' health problems arise ergonomically. Faulty and poor-quality production of the product is also a waste, as it will end up with no sale or mandatory repair expenses. Failure to produce the product at the appropriate quality, as a result of which it is scrapped and reworked, creates waste. Businesses suffer in terms of time and cost. Early stock production despite there is no demand, and production before the time customer desire to receive the goods are another example of wastes. Excess production will cause inventory carrying costs as well as idle inventory. The basis of lean production is to avoid waste. Avoiding waste will save cost for the business in the long run. Lean accounting is an accounting approach that aims to produce information that supports lean manufacturing processes (Cunningham 2003, p.85). It is important to create a lean organization and simplify processes in the early stages of lean accounting. Improvements across the business are important. Simplification should also be applied in accounting transactions. For example, processes such as month-end closings, monthly payments, receivables, payrolls, cost calculations and expense reports can be improved. There are important reasons to apply lean improvement methods to accounting transactions: the company's operations become more efficient with the improvement of the processes, achievements to be gained by accounting and finance employees learning lean methods and their application in lean accounting, diminishing waste and unnecessary business processes will save time for finance officers who will adopt in an easier way in transition to lean accounting practices.

It is not always possible to see the results of this application in the short term. But over time, there will be a considerable improvement in terms of this whole workforce and resource utilization. The new change in the production system with Industry 4.0 has further simplified the production, which surrounds the world, called the new industrial revolution, and it has become possible to achieve the simplification envisaged in accounting with online accounting records.

4. CHANGING THE PRODUCTION SYSTEM: SMART AND DARK FACTORIES

Smart and Dark Factories are factories (from the entry of the raw material to the factory the exit of the product) that require little or no human intervention especially at the production stage. These factories where the workforce is minimized are called digital (smart) factories. Smart factory is defined as a business consisting of smart machines and equipment use humanoid machines which solve the problems that occur during the process. Smart factories are systems that aim to ensure the perfect flow of data between the physical world and the virtual world. Smart factory that combines product, information and communication technologies integrates into production and supply processes; significantly increases resource utilization; reduces the storage and distribution cycle of customized products and ensures (Wan & Zhou, 2015). Smart factories, also called Learning Factories as they are in continuous development and learning, are also known as Dark Factories because they require little human labor, ensure that the ever-increasing complexity in production processes which is managed is attractive, sustainable and profitable (Yıldız, 2018).

Dark factories are factories equipped with fully automatic systems that do not need light nor people. These factories can work 24 hours a day through robots. These factories were also safe against work accidents because humans are replaced by robots in the jobs that have risk for danger. The production system, called the dark factories, is an impressive and thought-provoking process. There is no need for light, for social needs such as employees' needs for lunch, compensation, excuse leave, and job security problems in the dark factories. This system, called as dark-out (lights-out) production, offers a constant production output to the user and does this without the help of any human power. There are no people actively working in dark factories. In these factories, production is carried out entirely with robotic systems. For example; when high temperature, high weights, poisonous gases or all other dangerous working conditions are included during a function to be performed, it will also ensure smooth operation in occupational safety by using robots instead of humans to perform these functions (https://www.endustri40.com/karanlik-fabrikalar-ile-insansiz-uretim/).

5. INDUSTRY 4.0, LEAN ACCOUNTING AND SMART ACCOUNTING SYSTEM

Industry 4.0 brings an approach that produces instant and fast solutions that emphasize more individual features. The main feature that distinguishes Industry 4.0 is real-time and mass data generation, and it is possible to create them with a real-time recording system. Lean accounting principles are explained in Table-1. With Industry 4.0, it will be easier to achieve lean accounting goals with smart machines and online recording system.

Table-1: *Lean Accounting and Smart Accounting**

Lean Accounting Principles	Smart Accounting Principles
Timely information that everyone will understand and use	Producing clear information on-line
Better data and better decision will supply better income and profit	Simultaneous recording with production and accurate information at all times, zero error and sustainable profit
Strict financial and operational control	Automatic control, system improvement and smart financial systems
Continuous lean improvement improves motivation and benefit	System improvement, uninterrupted production and benefit with smart systems
Less workload for finance and operation	Intelligent systems that work 24 hours a day in finance and operations
All reporting and audits are done in accordance with International Accounting Standards (IAS).	All reporting and audits are done in accordance with IAS and smart systems

*: The principles are formed through this study.

Industry 4.0 brought up the necessity of making smart, dark businesses production system by smart machines and reorganizing the accounting record system. In Table-2, traditional production system, lean production system, Industry 4.0 were compared with smart production, and also traditional accounting, lean accounting (Kennedy and Brewer 2006, p.70) and smart accounting system were compared.

Lean production has adopted minimizing waste that may occur in production and working with zero errors if possible. Lean production is focused on increasing productivity. Both the production system and the accounting systems must complement each other and support the company in a way that increases its efficiency, by reducing waste.

Table-2: *Comparison of Smart Production and Smart Accounting Systems*

Production			Accounting		
Traditional Production System	Lean Production System	Industry 4.0 Smart Production	Traditional Accounting	Lean Accounting	Smart Accounting
Work with inventory	Work without inventory	Work without inventory	Inventory is an asset	Profit is obtained through the sales	Works without stock. Profit depends on customer loyalty and satisfaction, and customized production
Customer demands are produced with an error rate	Aim to produce customer demands with zero error in time and quantity	Customer demands are produced per specific order and the aim is to supply the good immediately or as early as possible.	Optimum customer value is fulfilled by each manager optimizing his/her department performance	Value flows mean customer satisfaction	If the desired product is delivered immediately or in a short time, it means customer satisfaction
Goods are standardized	Product diversification and flexibility	Private and individual production	Accountants follow developments TO help management, and try to explain the deviations	Operational data help the to job process be managed	Smart machines and recording system help the perfect operation of the system
Demand is planned with forecast	Demand is planned according to the customer order	Demand is designed specifically for the consumer	Monthly financial accounting cycle is important for decision makers	Process improvements need real-time data	Continuous improvement occurs in the process and the smart system manages
Customer contribution is low in design	Customer requests are taken into ACCOUNT during design phase	The carriage is made for the individual. The consumer can make his own design	Idle time means inefficiency	Idle time does not create a major problem in the absence of customer demand	Production is customer order-oriented and idle time is an opportunity for fixing errors of the system

Employee is low skilled	Skilled employees work	Expert operators at their fields and smart systems work	Businesses evaluate their success according to the performance indicators	Businesses assess real performance according how fast they are compared to their competitors	Fast, error-free and full-time production and individual production are at the forefront. Performance is determined by a special customer portfolio
An employee is targeted for every machine.	Employees who look at several machines are targeted	A few operators who can supervise all the machines in the factory is targeted. Machines will communicate with each other.	Profit can only be increased by decreasing the cost and expenses.	Critical employees are skillful	Profit increase in the extent pf production is individual

Intelligent production systems have brought a new dimension to businesses with Industry 4.0. The physical world moves into a virtual (cloud environment, mirror environment) world with the help of new generation factories, cyber physical systems (SFS), sensors and actuators.

With these new systems and Industry 4.0, traditional factories and production systems are replaced by smart factories (Lee, Bagheri and Kao 2015, p.19) and smart production systems. The essence of smart production systems is based on lean production and lean recording system. Smart factories will communicate with each other over a network and the system will manage itself by providing auto control as a whole. Cloud system will be used to store the data produced in smart factories. The operation of this site is possible with high speed internet access. The smart businesses of the future and the smart accounting system are compared and presented in the Table-3 (Erturan and Ergin 2018, p.159). They have defined full-time working system of smart businesses and smart accounting system.

Table-3: *Smart Business and Smart Accounting System of Future*

Smart Businesses	Smart Accounting System
All the system, computer, machine, work terminal, device and tools in the company have the ability to communicate with each other.	With the entry of stocks into the warehouse, they are automatically recorded, and the inventories placed on the shelves by the robots are processed into the stock cards.

Sensors, drones, smart racks and the like used in activities of a company in the corporate planning, production management, manufacturing and inspection.	The processing of raw materials, which will go into production through smart warehouses, by reading the product barcodes to the accounting inventory cards. Reading of product barcodes information (invoices) by the system to the accounting system will be done automatically
Product customization studies; The most ideal system and intelligent compilation can be achieved through logistics, security, reliability, time costs and sustainability factors. Businesses will go to a special product design that is shaped according to customer requests without having stock.	As a result of product customization, the orders of the desired product will be taken from the virtual environment, the payment will be made in the virtual environment (even with virtual currency) and the registrations will be made upon receipt of the order. In case the customer buys products from the store, they can still pay without waiting time at the cash.
Machines can plan their own production resources. Lean and full-time production can take place.	Upon receipt of the order, material and time planning will be done by smart machines. The intelligent production system will request for the required material and the accounting records of this material request will be made automatically in the system (raw material request slip, stock cards will be formed or filled).
In smart factories, all orders (customer and supplier) and payments will be made from the virtual environment.	Money, promissory notes and checks will not be used as new financial instruments will generated in the business world. Virtual currencies can be in the form of payments directly from the bank account with the approval of the customer. Virtual futures will begin to be traded to provide trade mobility (for instance, Bitcoin plans to start futures).

Source: Erturan and Ergin (2018, p.1)

2. GENERAL EVALUATION AND CONCLUSION

Intelligent systems, known as dark (lights-out) factories, entered into the business world with Industry 4.0. The most important feature of dark factories, which can be considered as one of the major production revolutions that will affect the 21st century is muscle strength is no more needed while producing. In these factories, which are defined as unmanned factories, unmanned smart systems are used in these processes, from market research to order, from order to production. These systems make accounting records simultaneously with the system.

The idea of lean production, which has spread from Japan to increase production and reduce the cost, will enable to reach its targets much easier with the help of dark and smart factories. Lean production philosophy is a successful method that has been tried to be applied for many years. It is not possible to immediately see the results of lean applications in the financial statements. It will take time for accountants to observe the reflections of this system. This is a hard-to-define concept for accountants working with concrete data and expecting a value in the financial statements. Lean work in a business focuses on three things: offering value to customers, improve business processes, and eliminate waste. Value and value flow, customer satisfaction, customer perception are abstract concepts that are difficult to define as monetary value and to be capitalized in the balance sheet. Although this situation will return to the business as a value in the long term, the results obtained in terms of operation do not make sense. Inability to observe the reflection of lean work on financial results may evoke the perception to top management that the lean system is not working. It would be a better approach to combine operational and financial perspectives in order to continue lean operations in the company and convince senior management. With this understanding, the accounting system should be designed in accordance with the new structuring of the production system and to provide useful information in the company that have adopted a simple philosophy.

Implementation of the lean manufacturing system will accelerate with industry 4.0. Technologies used in Industry 4.0 facilitate the applicability of lean production and lean accounting. Systems such as data analytics, robotic systems (Sensor and RFID infrastructure), industrial internet where machines and systems are communicating with each other, cloud systems, simulation, additive production supported by three-dimensional printers (Conner et al., 2014, p.74), cyber security, sensors are started to be implemented with Industry 4.0.

Smart-dark factories will maximize savings while maximizing production. Smart-dark factories help increase efficiency and provide cost advantage in a competitive market condition. It may be possible to implement lean manufacturing processes with zero errors in smart-dark factories that are seen with the rise of the Industry 4.0 business world. Thus, it will be possible to achieve cost advantage.

These systems will make lean production much easier and more applicable. The production systems of factories will differ and this differentiation will have an effect on the accounting system which will support the achievement of lean accounting by recording the produced products in an online manner.

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Chapter 12

SOCIAL MEDIA ADDICTION AND CONTROLLING SOCIAL MEDIA USE: AN EXTENSIVE STUDY

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1. INTRODUCTION

Immediate communication has changed the life of people with sending verbal messages, videos or images by a click. Virtual contacts and meeting even live videos have made people's lives easier. (Guedes et al., 2016: 43–48).Virtual worlds such as online games, chat rooms, web rings such as home pages, electronic bulletin boards and social networking tools are ways of people interacting in online platforms. (Vannucci et al., 2017: 163–166).Facebook, YouTube, Instagram, Twitter, Wechat, QQ and Sina Weibo, TikTok, QQ, QZone, Sina Weibo, Reddit, Snapchat, Twitter, Flickr, Bebo, DeviantArt, Hi5, Friendster, Tagged, Badoo, Xing, Orkut, Pinterest, WhatsApp, Viber, Snapchat, LINE, Pinterest, YY, LinkedIn, Telegram, VKontakte, Blackberry Messenger, and KakaoTalkare are popular social media networks in 2020. (Liu &Jianling, 2018; Medya, 2020; Vannucci et al., 2017: 163–166) Facebook, YouTube, Instagram, TikTok, QQ, QZone, Sina Weibo, Reddit, Snapchat, Twitter and Pinterest are found to be the most popular social media networks in 2020. (Medya, 2020)

Social capital defined as *"the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" can be formed in Social Network Sites (SNSs) . (*Kuss&Griffiths, 2011).More than 73% of worldwide internet users are active on social media. (Kemp, 2017) and the ten most popular SNSs with their properties and services are shown in Table 1. It is estimated that there will be around 3.09 billion social media users around the globe by the end of 2021. (Statista, 2020) Among existing social media networks, Facebook the most popular of the SNSs has over 2.3- 2.41 billion members,monthly active users with more than 1.5 billion people using it daily in 2019. (Andreassen et al., 2013: 90–99; Marengo, Poletti, Settanni, 2020)) Instagram has recently surpassed 1 billion monthly active users, the vast majority of whom are using it on daily basis. (Casale & Banchi, 2020) It was found in the study of Aslan &Yaşar(2019) carried out on Bingöl University students in the city of Bingöl, in Turkey, that the most widely used network among social media applications is Instagram, with 85.2%. This application is followed by YouTube and Facebook. As the most ten popular SNSs market are analyzed the USA and China are the pioneers at creating innovative SNSs, while the most popular two SNSs were invented by USA. People in China use mainly their SNSs while USA invented SNSs are more popular around the world. Sharing and communication with friends or surroundings are the main dimensions of these SNSs.

5-10% of Americans are social media addictive. (Hilliard &Parisi, 2020). The prevalence of Facebook addiction is estimated to be between

8.6% and 41.9%. (Guedes et al., 2016: 43–48) It is estimated that there are more addiction rates among younger and female users. (Andreassen, 2015). It is found that most users spend a minimum of three hours on social media, causing poor mental health. (Sampasa-Kanyinga& Lewis, 2015). Young users in the European Union (EU) spend more than 2 hours per day on social Networks. (Mander, 2017) It is found in the study of Aslan &Yaşar(2019) that 72.4% of students have been using social media for more than four years, and 41.6% of them use social media for more than 4 hours at Bingöl University, Turkey that it can be said that they have a medium level of internet addiction. Students access social media mostly through mobile phones. (Aslan &Yaşar, 2019: 346-355)

Table 1: Ten Most Popular Social Network Sites (SNSs)(Spencer, 2020)

Social Media Network	Properties	Services
1. Facebook	-Established in 2004/USA -Approximately 1.59 billion active users per month	- Networking with friends and relatives - Online selling - Marketing or promoting business, brand and products - Live videos
2. WhatsApp	- Established in 2009/USA -Approximately 1 billion active users per month	- Communicating and sharing instantly with individuals and groups -Sharing status update with photos
3. QQ	- Established in 2009/China -Active in more than 80 countries -Approximately853 million active users per month	-Staying in touch with friends by texts, video calls and voice chats -Having translator option of chats
4. WeChat	- Established in 2011/China -Approximately 697 million active users per month	- Similar to WhatsApp - Connecting with the people based on choice -Being able to work with QQ
5.QZone	- Established in 2005/China -Approximately 640 million active users per month	- Sharing photos, watching videos, listening to songs, writing blogs etc. - Choosing the accessories - Customizing the look

6. Tumblr	- Established in 2007/USA -Owned by Yahoo since 2013 -Approximately 555 million active users per month	- Micro blogging platform as a short-form blog - Finding and following things - Customizing almost everything
7. Instagram	- Established in 2010/USA -Owned by Facebook -Approximately 400 million active users per month	-Sharing photos and videos -Applying multiple filters to photos -Posting at the same time to other popular social networks(Facebook and Twitter) - Live videos and talks
8.Twitter	- Established in 2006/USA -Approximately 320 million active users per month	-Posting short text messages called tweets up to 280 characters -Promoting businesses by tweets
9.Baidu Tieba	- Established in 2003/China - A search engine company, - Approximately 300 million active users per month	- Creating a social network group for a specific topic - Joining an existing online social group
10 Skype	- Established in 2006/USA -Owned by Microsoft -Approximately 300 million active users per month	-Connecting with people by voice calls, video calls and text messaging -Conducting group conference

Social Network Sites (SNSs) aim at users to spend more time on their sites to increase their users and familiarity. Hence, new adds and applications have been added to them. For example, friends' suggestions in Facebook and music sharing in Instagram are two new applications taking the attention of more users, resulting in spending more time. Furthermore, Facebook and Instagram belong to the same company that users are pushed to use both together by allowing shares in both platforms at the same time. Moreover, Farmville and poker games can be carried out on Facebook for users spending more time than going other games on SNSs.

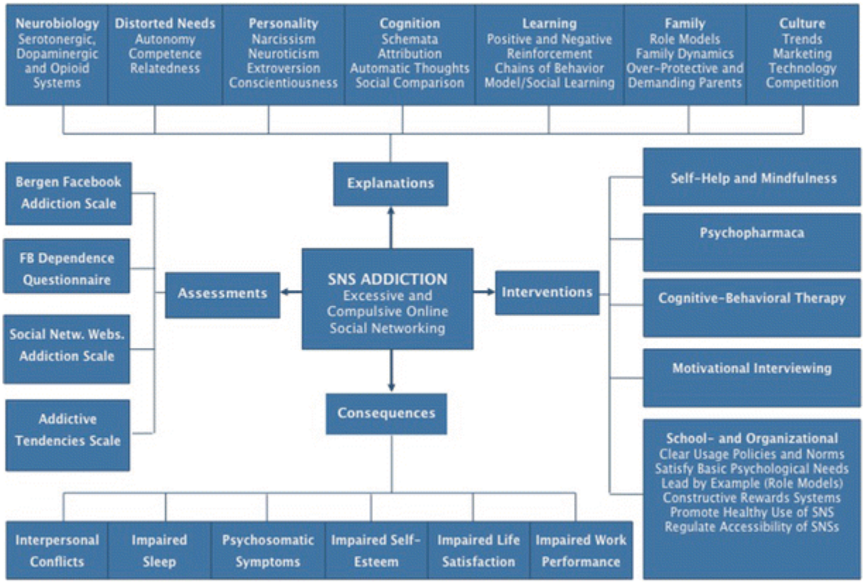

Neurobiology
Serotonergic, Dopaminergic and Opioid Systems
Distorted Needs
Autonomy
Competence
Relatedness
Personality
Narcissism
Neuroticism
Extroversion
Conscientiousness
Cognition
Schemata
Attribution
Automatic Thoughts
Social Comparison
Learning
Positive and Negative Reinforcement
Chains of Behavior
Model/Social Learning
Family
Role Models
Family Dynamics
Over-Protective and Demanding Parents
Culture
Trends
Marketing
Technology
Competition
Explanations
Bergen Facebook Addiction Scale
FB Dependence Questionnaire
Social Netw. Webs. Addiction Scale
Addictive Tendencies Scale
Assessments
SNS ADDICTION
Excessive and Compulsive Online Social Networking
Interventions
Self-Help and Mindfulness
Psychopharmaca
Cognitive-Behavioral Therapy
Motivational Interviewing
School- and Organizational
Clear Usage Policies and Norms
Satisfy Basic Psychological Needs
Lead by Example (Role Models)
Constructive Rewards Systems
Promote Healthy Use of SNS
Regulate Accessibility of SNSs
Consequences
Interpersonal Conflicts
Impaired Sleep
Psychosomatic Symptoms
Impaired Self-Esteem
Impaired Life Satisfaction
Impaired Work Performance

Figure 1: Schematic overview of the SNS addiction field(Andreassen, 2015)

In figure 1 above, excessive and compulsive SNS addiction have negative and positive consequences, and there are some methods that can be used to deal with it. In this chapter, this overview will be explained in detail with most recent literature and development that SNSs addiction can be grasped more deeply. Usage purposes, personal traits, consequences, assessment methods, interventions are to be explained and categorized in order to understand the SNSs addiction.

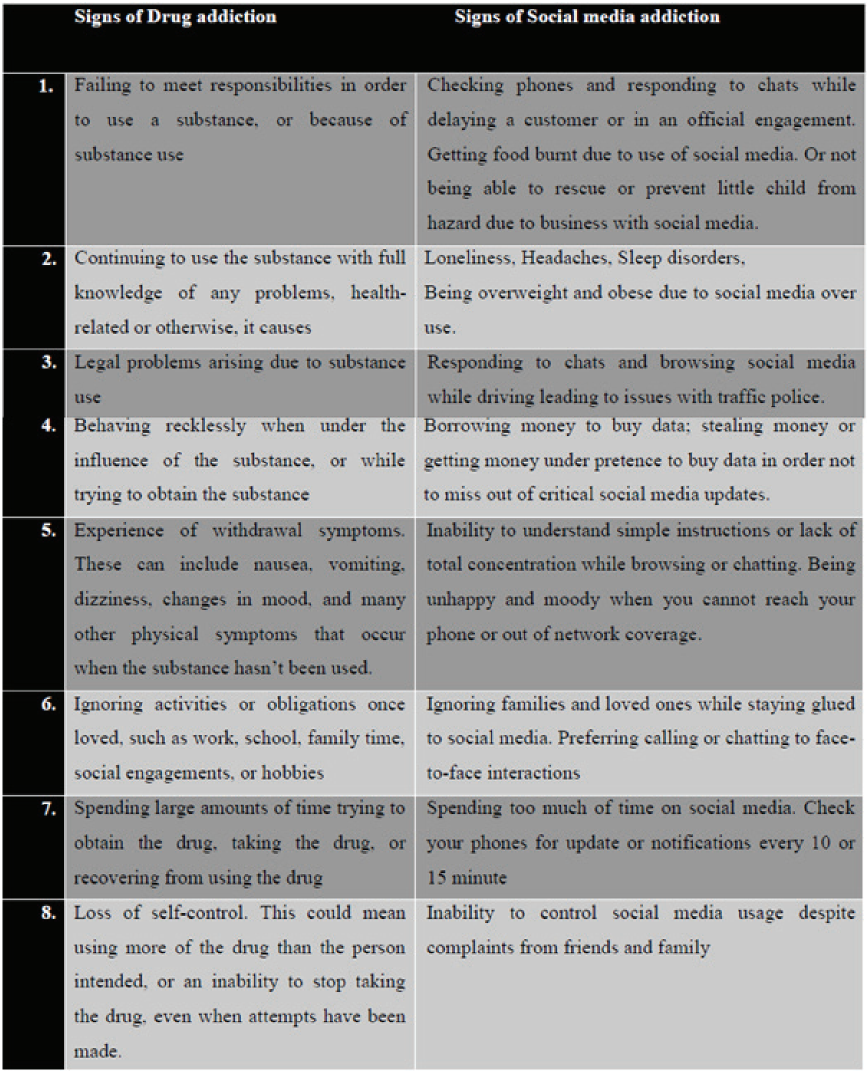
2. SOCIAL MEDIA ADDICTION

Addiction is *"a dependence, on a behaviour or substance that a person is powerless to stop*"(Olendorff, Jeryan, Boyden, 1999) and SNS addiction is defined by Andreassen and Pallesen (2014) as *"being overly concerned about SNSs, to be driven by a strong motivation to log on to or use SNSs, and to devote so much time and effort to SNSs that it impairs other social activities, studies/job, interpersonal relationships, and/or psychological health and well-being".* Psychological dependency on social media increases as users relieve undesirable moods with social media use. Dependence on social media starting mainly with a habit distorting into psychological dependence in the next stages over time can lead to a magnitude of mood alternations, negative outcomes, and excessive expenditure of time. Users may face loss of productivity and feelings of isolation. Maladaptive cognition was positively affected by habit, and a perceived ease of use has strong effects on perceived enjoyment, and perceived usefulness. Perceived irreplaceability has a strong effect on negative affect anticipation affecting the level of dependence with deficient self-regulation. Hence, negative affect anticipation is the most important factor of dependence. (Wang, Lee, Hua, 2015: 40–49).

Excessive use and lack of control are found to be the main reasons of social media addiction. (Guedes et al., 2016: 43–48) Excessive use of social media is behavioural addiction disorder similar to excessive exercising, compulsive buying behaviours. (Settanni et al., 2018) Cognitive time passes less slowly under deprivation or in stressful situation. Underestimating the time intervals in social media is an addictive behaviour. (Turel, Brevers, Bechara, 2018: 84-88).Addictive social media use shows the same behaviours of substance disorder use. According to Diagnostic and Statistical Manual of Mental Disorders IV addiction criteria, no differences are found between '*chemical addictions*'(drug dependence) and '*behavioural*' addiction in the study of Yücens & Üzer (2018). It produces the same neural circuitry as created by gambling and recreational drugs. (Hilliard & Parisi , 2020; Yücens & Üzer , 2018) It is found from the study of Arshad et al., (2018) that social network addiction is as harmful as smoking based on cognitive skills like concentration, increment of anxiety and blood pressure based on a group compared to Bergen Addiction Scale (BAS) and blood pressure measurement. Social media addiction has pernicious results on cognitive skills as substance usage. (Arshad et al., 2018:38-46).Symptoms of alcohol, cigarette and drug addicts were seen in social media addicts. Dopamine critical for thinking, sleeping, mood, attention, motivation etc. is responsible for pleasure. (Macit, Macit, Güngör, 2018: 882-897).Retweets, likes, and shares affect the brain's reward area as the same kind of chemical reaction created by drugs as stated by Harvard University. The reward area in the brain affects decisions and sensations. When the reward area is activated, neurons in the principal dopamine-producing areas produce more dopamine, causing to feel pleasure such as when getting a like. Gratification upon talking about oneself creates pleasant experiences, natural rewards such as sex or food. "*People dedicate close to 40% of their time talking about themselves. This number reaches 80% in social networks with the possibility of feedback and immediate rewards*" creates dependence life style for social networks excessive use. (Hilliard &Parisi, 2020; Guedes et al., 2016: 43–48).It is found that talking about themselves like accomplishments as an intrinsic drive for self-exposure makes people happier and after getting positive social feedbacks for a photo or video, more dopamine is released, leading to a behaviour and social media habit. (Hilliard &Parisi, 2020). Furthermore, a social networking addict can be associated with substance dependence such as drug addiction, meaning having both a behavioural and chemical addiction at the same time. (Guedes et al., 2016: 43–48).Drinking behaviour(alcohol dependence) was found as a risk factor for SNSs addiction. (Kuss&Grif-

fiths, 2011).Posts about drinking-related content meaning adhering to drinking norms are shared on SNSs. There is a moderate correlation between alcohol-related SNS engagement and drinking alcohol, increased alcohol consumption with positive attitudes as a normative behaviour especially among college students in the group in order to be approved by others. (Lee, Seok, and Sohn, 2019:397-403).Eight signs of drug addiction and social media addictions are shown in Table1 that there are many similarities such as not meeting responsibilities, health problems like anxiety, legal problems, withdrawal symptoms, spending too much time, ignoring activities and loss of self-control.

Table 2: Comparison between drug addiction and social media addiction (Ayeni, 2019:19-42)



	Signs of Drug addiction	**Signs of Social media addiction**
1.	Failing to meet responsibilities in order to use a substance, or because of substance use	Checking phones and responding to chats while delaying a customer or in an official engagement. Getting food burnt due to use of social media. Or not being able to rescue or prevent little child from hazard due to business with social media.
2.	Continuing to use the substance with full knowledge of any problems, health-related or otherwise, it causes	Loneliness, Headaches, Sleep disorders, Being overweight and obese due to social media over use.
3.	Legal problems arising due to substance use	Responding to chats and browsing social media while driving leading to issues with traffic police.
4.	Behaving recklessly when under the influence of the substance, or while trying to obtain the substance	Borrowing money to buy data; stealing money or getting money under pretence to buy data in order not to miss out of critical social media updates.
5.	Experience of withdrawal symptoms. These can include nausea, vomiting, dizziness, changes in mood, and many other physical symptoms that occur when the substance hasn't been used.	Inability to understand simple instructions or lack of total concentration while browsing or chatting. Being unhappy and moody when you cannot reach your phone or out of network coverage.
6.	Ignoring activities or obligations once loved, such as work, school, family time, social engagements, or hobbies	Ignoring families and loved ones while staying glued to social media. Preferring calling or chatting to face-to-face interactions
7.	Spending large amounts of time trying to obtain the drug, taking the drug, or recovering from using the drug	Spending too much of time on social media. Check your phones for update or notifications every 10 or 15 minute
8.	Loss of self-control. This could mean using more of the drug than the person intended, or an inability to stop taking the drug, even when attempts have been made.	Inability to control social media usage despite complaints from friends and family

Interactions on SNS can turn into behavioural addiction called as SNSs addiction causing social overload, envy and anxiety. Deficient self-regulation, neglect of personal life, cognitive preoccupation, mood modifying experiences, tolerance, concealment of addictive behaviours, and escapism are symptoms of that addiction with some abuse cases such as euphoria, withdrawal, relapse, and reinstatement.(Abbasi, 2019: 277-280)Social self-regulation is defined as "*user's ability to resist the automatic stimuli to use SNS generated from social situations (or actions) in both online and offline environments*." Users controlling their behaviour in the presence of social pressure from their social network show low addiction symptoms. (Osatuyi&2018*). An a*ddicted personality has a sense of loss of control, and a sense of failure known as self-distrust. (Yücens & Üzer*, 2018: 313–318)*. Seeing the social media as the only place to be cared for, thinking they are not valuable when not using social media, not doing without social media and strong desire and necessity of using it are signs of addictive people. (Wang, Lee, Hua, 2015: 40–49).Avoidant and anxious attachment orientation, identity styles, impulsivity are common risk factors of using social media. Unsatisfied psychological needs can be met by social media. The fear of missing-out "*the desire to stay continually connected with what others are doing*" has direct effect problematic social media use with fear of being negatively evaluated and perception of low self-presentational skills. (Casale, Rugai, Fioravanti,2018: 83–87).In addition, when students feel lonely, they prefer to spend time on social media. During the day, the students stated that they were curious about what was happening on social media from the study of Aslan &Yaşar (2019: 346-355).

2.1 Dimensions Addiction

Cognitive-behavioural model using social media in unfamiliar environments, social skill model preferring virtual communication than face to face communication, and socio-cognitive model love the feeling of getting likes and comments are models leading to social media addiction. (Ofir& Alexander, 2020) Salience, tolerance or craving, mood modifications, withdrawal,relapse or loss of control and conflict are six addiction symptoms, or six core components of social media addiction. (Andreassen, Pallesen, Griffiths, 2017: 287-293; Bechara, 2018: 84-88; Liu&Jianling, 2018: 55–59;Settanni et al., 2018: 165–170; Turel, Brevers). Neglecting of personal life, mental preoccupation, escapism, (for forgetting about the real problems of life), mood modifying experiences, tolerance and concealing the addictive behaviour are criteria that people fulfilling these six criteria are considered to be addicted.(Guedes et al., 2016: 43–48).Behavioural salience, withdrawal, relapse, and conflict core criteria of addiction have negative results on users, while cognitive salience, tolerance, and mood modification are related to high engagement peripheral criteria. (Andreassen et al., 2013: 90–99).

If the answers to three or more questions below are "*yes*", then one can be considered as addicted.

- Spending a lot of time thinking about social media or planning to use social media?
- Feeling urges to use social media more and more?
- Using social media to forget about personal problems?
- Often trying to reduce use of social media without success?
- Becoming restless or troubled if unable to use social media?
- Using social media so much that it has had a negative impact on job or studies? (Hilliard &Parisi, 2020).

Students declared that they spent a long time on things like games, chat, looking at photos, etc. It can be said that there is a medium level of dependency among students who state that their minds are busy when they do not enter social media. Using social media to escape from negative thoughts in life, they often came out as though they wanted to cut the connection from what thought was happening in social media recently, and checked social media before doing a job, and they thought about entering social media when not connected to the internet. (Aslan &Yaşar, 2019: 346-355). Cooking to share on Instagram, sharing everything, knowing everything about people not known well, being unhappy due to comparing with social network people and being unhappy when one cannot reach their phone can make users worry about social media use. (Ayeni, 2019:19-42).

Table 3: Six Dimensions Addiction(Guedes et al., 2016; Karaca, Yıldırım, & Kulaksız, 2019:337−360;Simsek, Elciyar, Kizilhan, 2019: 106-119;)

Dimension	**Definition**	**Using Examples**
Salience	Preoccupation with the behaviour: thinking too much about social media	-Needing often to enter social networks during the day -A life without social networks is boring to me and-meaningless -Seeing technological tools such as mobile phones, tablets and computers brings firstly social networks to mind -Firstly, before sleeping at night and waking up in the morning, checking social network accounts - Quitting the job in case of needing to look at SNS accounts, -Needing to check SNS accounts before starting any business
Tolerance	Increasing engagement: spending more time on social media for getting more pleasure	- Increasing amounts of social networking activity - Often updating pictures or posting comments more - Losing control of the situation slowly - Starting to substitute daily activities for more time navigating.
Mood modifications	Performing the behaviour for relieving: Using more social media to decrease depression or to forget problems for reducing negative feelings,	-Using to forget personal problems. - Spending time on social media when feeling alone -Using SNSs when feel stressed and anxious, good using it. - Preferring to browse social media to get rid of negative thoughts - In case of being overwhelmed by problems, the best place is social media. - Forgetting everything during the time using of social media.
Withdrawal	Experiencing psychological and physical discomfort: Feeling uncomfortable or stress when not using social media	- Feeling frustrated if prevented from using social networks -Feeling anxious when cannot follow the current posts on SNSs - In case of not accessing social network accounts for a while, feeling that the connection with World broken - Not being able to enter social networks thinking annoys me.

Relapse	Unsuccessfully decreasing or controlling the behaviour: Failing of reducing social media time without success	- Failing at stopping the use of social media - Having a strong desire to control the use of social media - Making ineffective efforts to stop using social media - Not giving up SNSs even though SNSs affect daily life negatively - Making ineffective efforts to control the use of social media - Failing at reducing the time spent on social media
Conflict	Neglecting social, recreational, work etc. things: ignoring works, studies, sports,recreational activities, family , friends etc. harming other important life areas	- Using social media more even having a negative impact on work - Giving less priority to hobbies, leisure and recreation activities due to social media - Neglecting spouse or family members, friends due to social media - Not being able to finish the started activities on time due to social media - Neglecting school or business work due to spending more time on social media - Preferring spending time on social media than spending time with friends or going out with friends - School or work is interrupted due to social media usage - Decreased productivity because of social media. - Being criticized about the amount of time spent on social media -Trying to hide how long being on social media - Forgetting to eat because of social media - Spending less time on personal care - Changes / disturbances in sleep patterns due to the use of SNS - Experiencing physical problems (back, head, eye pain, etc.). - Having problems in relationships and life - Even having more tasks, more use of SNS

2.2 Scales Used for Measuring Dimension

Many studies are carried out to find the effects of social media addiction on users. Mental problem research is the core of these researches to find the symptoms and correlations. Social media disorder, depression, stress screening, suicidal ideation,Attention Deficit Hyperactivity Disorder(ADHD), anxiety, impulsivity, fear and fear of missing out,and psychological resilience are main research areas related to illness and effects on well-being. Infidelity, self-esteem, narcissistic personality, sadistic personality, self-control and internet use habits are other main research fields mainly related to personal traits as shown in Table 4.

Table 4: SNS addiction measures

Scale	**Usage Purpose**	**Used By**
Facebook Addiction Disorder (FAD) Scale Facebook Addiction Symptoms Scale Social Network Addiction Questionnaire Social Media Disorder Scale Internet Addiction Test	Measuring Social Media – Facebook/internetaddiction and addiction disorder	(Brailovskaia, Schillack, Margraf, 2018; Casale, Rugai, Fioravanti, 2018; Jasso-Medrano, Lopez-Rosales , 2018; Settanni et al., 2018; Liu, Jianling, 2018 ;Turel, Brevers, Bechara, 2018)
Facebook Dependence Questionnaire (FDQ)	-Measuring Facebook dependence such as control, satisfaction, efforts for reducing etc.	(Andreassen, 2015)
Bergen Facebook /Social Media Addiction Scale (BFAS)	Measuring social media addiction according to salience, mood modification, conflict, withdrawal, tolerance, and relapse.	(Andreassen, 2015)
Facebook Intensity Scale (FIS)	Measuring Facebook usage and emotional connectedness to Facebook	(Brailovskaia, Schillack, Margraf, 2018; Ellison, 2020)
Modified Facebook intrusion questionnaire	Emphasizing consequences of intrusion	(Abbasi , 2019)
Social Networking Website Addiction Scale	Measuring SNS addiction	(Andreassen, 2015)
Addictive Tendencies Scale (ATS)	Measuring addiction salience, loss of control, and withdrawal criteria	(Andreassen, 2015)
Brief Daily Stressor Screening (BDSS)	Assessing routine stressful experiences across 9 items rated on a 5-point Likert scale	(Brailovskaia, Schillack, Margraf, 2018)
Social Support Questionnaire (F-SozUK-14)	Measuring social support and satisfaction	(Brailovskaia,Schillack, Margraf, 2018)
The Positive and Negative Suicidal Ideation Inventory	Evaluating suicide-related vulnerability and protective factors	(Jasso-Medrano, Lopez-Rosales , 2018)
Center for Epidemiologic Studies Depression Scale (CES-D)	A screening test for depression and depressive disorder	(Jasso-Medrano, Lopez-Rosales , 2018; Cesd-r, 2020)
Brief Fear of Negative Evaluation II scale	Measuring social anxiety	(Casale, Rugai, Fioravanti, 2018)
Social Control subscale of the Social Skill	Measuring self-perceived skills	(Casale, Rugai, Fioravanti, 2018)
Social Media Infidelity-Related Behaviors (SMIRB)	Measuring infidelity-related behaviours on social media	(McDaniel, Drouin, and Cravens , 2017; Abbasi , 2019)

Strength and Difficulties Questionnaire – ADHD subscale, Strengths and Difficulties Questionnaire (SDQ)	- Screening measures for ADHD - Emotional symptoms, hyperactivity, peer problems and prosocial behaviour	(Settanni et al., 2018; Shek& Ma, 2014)
Zimbardo Time Perspective Inventory (ZTPI)	measuring fundamental experiential dimensions of time(past, present and future)	(Settanni et al., 2018)
The Liebowitz Social Anxiety Scale (LSAS) Beck Anxiety Inventory (BAI)	Measuring fear or anxiety	(Yücens&Üzer , 2018; Casale, Rugai, Fioravanti, 2018)
Beck Depression Inventory (BDI)	Measuring the severity of anxiety	(Yücens&Üzer , 2018
Barratt Impulsivity Scale-11 (BIS-11)	Determining intentional impulsiveness, motor impulsiveness and non-planning impulsiveness	(Yücens&Üzer , 2018)
Rosenberg Self-Esteem Scale (RSES)	Measuring self-worth or self-acceptance	(Yücens&Üzer,2018; Li &Jianling, 2018)
Smartphone Addiction Scale	Determine the smart phone addiction	(Liu &Jianling , 2018)
Internet Gaming Disorder Scale	Assessing symptoms and prevalence of gaming	(Liu &Jianling , 2018)
Narcissistic Personality Questionnaire	Measuring of narcissism in the social-personality	(Liu &Jianling , 2018)
Assessment of Sadistic Personality (ASP) tool	Predicting apparently sadistic behaviours tolerated by most people	(Chung et al., 2019; Buckels, 2018; Paulhus&Jones, 2011)
Fear of Missing Out Scale	Measuring fear of missing developments in social environments	(Casale, Rugai, Fioravanti, 2018)
NEO Personality Inventory (NEO-FFI Self-Esteem Inventory (SEI	Assessing personality factors	(Kuss& Griffiths, 2011)
Generalized Problematic Internet Use Scale 2	Assessing Internet addiction based on a cognitive behavioural model	(Laconi et al., 2018)
Internet Use Habits Scale (IUHS)	Obtaining internet usage habits	(Korkmaz& Kiran-Esen, 2017)
Psychological Resilience Scale	Measuring one' ability to get over from stress	(Bilgin&Taş , 2018:751-758)
Short Dark Triad Scale (D3-Short)	Measuring Machiavellianism, Narcissism and Psychopath (lack of empathy)	(Chung et al.,2019; Paulhus&Jones, 2011)

3. Social Media Usage Reasons

Keeping in touch with friends, chats, sharing interesting things, gathering useful information, decreasing emotional stress, spreading information, gaining more contacts, making groups, selling or buying products, increasing fame etc. are main motivation factors of using social media. (Aslan &Yaşar, 2019; Wang, Lee, Hua, 2015: 40–49).Expression of opinions and relaxation are reasons of usage. (Dalvi-Esfahani et al., 2019). Many firms in the EU use social media for marketing, public relations, customer service, product development, personnel decision-making etc. (Baccarellaet al., 2018: 431-438).

Virtual life can be a way for users to escape from stress and life problems. (Vannucci et al., 2017: 163–166) Pleasure seeking and withdrawal-pain avoidance, the habituation, automaticity and lack of prefrontal oversight of the addictive behaviour, incentive sensitization, and cognitive deregulation terms have a relation to social media usage. (Bechara et al., 2019 Microblog pages are used for new tweets and followings, comments and retweets can make users happy. Microblogs can meet information-seeking and social connection of users. Gaining pleasant feelings and avoiding unpleasant feelings as a kind of intrinsic need like perceived enjoyment motivate users for social media while users do not focus on extrinsic utility (perceived usefulness), making perceived enjoyment a more crucial determinant of social media addiction, although both factors are used to explainadoption of technology. From utility maximization to desired emotional states happens during that transition phase ending in irrational and emotional behaviour. (Wang, Lee, Hua, 2015: 40–49) Mathematical analysis of experts on social networks shows that the probability of a person to be happy increases by 15% when a person distant is somewhat happy. Accordingly, the effect of happiness is 10% for a friend of a friend, and about 6% for people from three degrees and at four degrees away, the effect disappears.(Tutgun-Ünal, 2015). Compulsive users lose track of time while they are online and cannot complete their necessary tasks, causing them to feel guilty, finding social media as a way of escape. Social media use starts with a rational decision as soft addiction and it can end with an irrational behavioural outcome. Academic, family, and work lives can be ignored by the user in long term that they over-rely on the utility and pleasure of microblogging meeting their internal needs that they are incapable of finding substitutes, resulting in anxiety and agitation in the long term. (Wang, Lee, Hua, 2015: 40–49).

Loneliness and depression can be decreased by social media from some studies. (Miloševic-Dordevic, Zezelj, 2014: 229–234).Social media can be problematic after people use it for relieving stress, loneliness, or depression as continuous rewards that cannot be got in real life. (Hilliard &Parisi, 2020).People with neuroticism anxiety, depression, and fear can use social media platforms as away of relieving.Uncontrollability of thoughtsand thinking what friends are doing online can cause negative emotional states forcing engagement of social media in a maladaptive way to regulate their states. (Casale, Rugai, Fioravanti,2018: 83–87)Fear Of Missing Out (FOMO) can cause compulsive checking of social media platforms that they do not miss anything as a party or a photo. It is found that social media has a positive effect on the well-being of chronic users and their lives while affecting real life and academic performance negatively. (Hilliard &Parisi, 2020).A negative self-concept as ("*I'm not good enough*" or "*I lack social skills*" can inspire more social media usage. Moreover, parents, siblings and peers social media usage can be a model. Furthermore, pressure of parents can also induce children to use more social media as way of running from stress.(Andreassen, 2015) One can be categorized as obsolete if not using social media in current time and social media has become a powerful way for voter enlightenment and political activism as the fastest way of information dissemination for particular voters and encouraging people. Involving citizens in decision making, identifying criminals and finding missing kids/people, marketing, promoting goods and services products, increasing website traffic for driving traffic to a specific web site by Social media posts and ads and increasing of brand awareness are other reasons for using social media. (Ayeni, 2019:19-42)

Table 5: Usage Reasons of SNSs

Usage Reason	**Supported By**
Searching information and gathering useful information	(Wang, Lee, Hua, 2015: 40–49)
Keeping in touch with friends, sharing interesting things, spreading information, gaining more contacts, making groups, increasing fame	(Wang, Lee , Hua, 2015: 40–49)
Gaining pleasant feelings: decreasing emotional stress Playfulness: enjoyment and pleasure	(Kuss& Griffiths, 2011; Wang, Lee, Hua, 2015: 40–49)
Online games	(Kurniasih and Amriwijaya, 2018 :37-45)
Entertainment	(Kurniasih and Amriwijaya, 2018 :37-45)
Expression of opinions, relaxation	(Dalvi-Esfahani et al., 2019)
Voter enlightenment, political activism	(Ayeni, 2019:19-42)
Perceived ease of use, and perceived usefulness	*(*Kuss&Griffiths, 2011)
Trust in the site	*(*Kuss&Griffiths, 2011)

Selling or buying products	(Baccarella et al., 2018: 431-438 ; Wang, Lee, Hua, 2015: 40–49)
Thinking what friends are doing/ Uncontrollability of thoughts	(Casale, Rugai, Fioravanti,2018: 83–87)
Fear of Missing Out	(Hilliard&Parisi,2020; Kuss&Griffiths, 2011)
Loneliness, depression, neuroticism anxiety, fear	(Aslan &Yaşar, 2019: 346-355; Casale, Rugai, Fioravanti,2018; Hilliard &Parisi, 2020; Miloševic´ -Dordevic, Zezelj, 2014)
A negative self-concept	(Andreassen, 2015)
Family and friends pressure	(Andreassen, 2015)
For decreasing ad mood or a mental condition: negative psychological condition	(Kurniasih and Amriwijaya, 2018 :37-45)
Web Therapy - self-healing: Getting help from network Self-caring illnesses: chronic cases by videos, asking experts questions	(Aslan, 2018:123-139; Kurniasih and Amriwijaya, 2018 :37-45)
Marketing, promoting goods and services, increasing of brand awareness	(Ayeni, 2019:19-42)

4. Effects of Social Media Addiction on Health and Well-Being

Conversations, sharing, presence, relationships, reputation, and identity have some bright sides and dark sides. The conversations with bright sides(like, reply, comment, and direct message) and the dark sides(excessive, aggressive, and inaccurate engagement), sharing bright sides (exchange, distribute, and receive content) and dark sides(inappropriate and undesirable contents, such as violent or pornographic content, fake news) , presence with bright side (accessible like location information of mobile phones) and dark side (tracking people without consent as geolocation information, causing privacy and safety problems), relationships with bright sides(connecting to other users) and dark sides (cyber bullying, stalking, and online harassment), reputation with bright sides (showing social reputation like number of followers of someone) and dark sides(harming reputations by inappropriate and offensive content) , groups with bright sides(creating circles of friends or communities) and dark sides(ingroup-outgroup bias like excluding others from conversations, and racial and gender inequality) and identity with bright sides (expressing their identity) and dark sides (privacy and safety risks) are found seven buildings of blocks of social media as honeycomb framework developed by

Baccarella et al.(2018) as shown below.

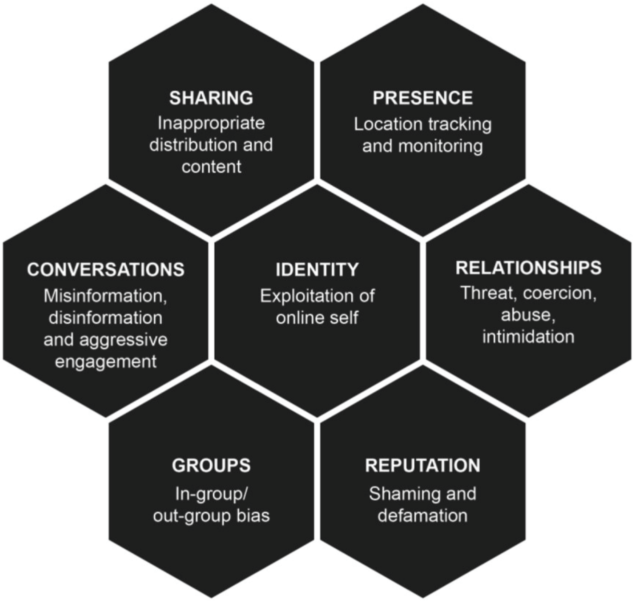

SHARING
Inappropriate distribution and content
PRESENCE
Location tracking and monitoring
CONVERSATIONS
Misinformation, disinformation and aggressive engagement
IDENTITY
Exploitation of online self
RELATIONSHIPS
Threat, coercion, abuse, intimidation
GROUPS
In-group/ out-group bias
REPUTATION
Shaming and defamation

Figure 2:Dark side of social media functionality theory (Baccarella et al., 2018).

Although new technology generally increases the quality of human life, it also comes to the fore with psychiatrists' case studies and related addiction preventing studies that also cause new problems in excessive usage. Spending three or more hours can lead to poor mental health and disordered eating in young adults. Impulse control disorders may be due to excessive internet and virtual world usage. Work, academic productivity, and mental health can be affected by addictive use of social media. Individual mental health can be affected by lack of social support, resulting in depression and anxiety symptoms that people use SNSs for preventing loneliness and satisfying their social interaction needs to change their social mood as away of running from daily life problems. (Andreassen et al., 2013: 90–99; Chung et al., 2019: 62-67; Hilliard &Parisi, 2020; Settanni et al., 2018; Vannucci et al., 2017: 163–166). Wellbeing, social functioning, sleep, academic and work performance and health can be affected by social media addiction and impulse control disorder. (Turel, Brevers, Bechara, 2018: 84-88).Addicted people can feel guilt or anxiety, impacting deleteriously on individual's lives, through introversion and social isolation. (Vannucci et al., 2017: 163–166). Envy, depression, sleep loss, and anxiety developments were found to be due to excessive social media usage. (Chung et al., 2019: 62-67; Baccarella et al., 2018: 431-438). Anxiety disorders are accompanied with significant psychiatric and chronic diseases. (Vannucci et al., 2017: 163–166). The Beck Anxiety Inventory and The Overall Anxiety Severity and Impairment Scale are used for measuring anxiety with bothering home, school and working life. It was found that about 17% of U.S. undergraduate participants using Facebook have anxiety problems, meaning higher daily social media use resulting in greater dispositional anxiety symptoms with depressive symptoms. Validating their self-worth or decreasing intolerable worry may be done by posting more on social media sites in order to get more '*likes*'. Users may use social media sites for avoiding real-world stressors by cyber-stalking harassing or frightening someone or posting about their problems, as a maladaptive coping strategy. (Vannucci et al., 2017: 163–166) Furthermore, Facebook have caused people to be dismissed from work with excessive usage for at least five hours a day instead of working. (Kuss&Griffiths, 2011).

The term continued use is used for users still using social media even knowing negative consequences while compulsive use is defined as using social media without awareness of the negative outcomes. (Chung et al., 2019: 62-67) Impulse control disorders may be due to excessive internet and virtual world usage. Virtual life can be a way for users to escape. (Vannucci et al., 2017: 163–166)Problematic internet use is predicted by past negative and present fatalistic usage that users try to use more to avoid thinking about personal problems.(Settanni et al., 2018) Excessive gambling or pornography viewing are problematicactions of addicts. (Vannucci et al., 2017: 163–166) Pathological internet use was firstly defined by Young (1996) by evaluation of more than sixty hours internet usage weekly by users. Lonelier, less satisfied with life, depressive moods and lower self-esteem are properties of compulsive internet users. (Yücens&Üzer, 2018: 313–318).Problematic use for children and young adults can take them away from the real world like unrealistic beauty standards through social networking sites causing body image concerns. Risky social media challenges and engaging in negative behaviour can be another danger as they want to get more likes.(Hilliard &Parisi, 2020). Intensive playing of online games is another serious problem of SNSs. (Andreassen et al., 2013: 90–99)

Spending large amount of time on Facebook, always thinking about social platforms events, and having psychological unease when not using social media have more tendency to Facebook Addiction Disorder (FAD). People may not be able to complete their offline dutiesdue to excessive usage which causes extra stress.(Brailovskaia et al., 2019:167-174)FAD has positive correlation with depression, anxiety symptoms and insomnia. The use of text messages and instant messaging services, use of mobile phones and use of mobile phones for users have higher scores in the FAD survey. Intensive Facebook use has a "*dark side*" that user becomes dependent on SNSs creating development of an emotional bond to these sites, causing to an obsessive need to permanently stay online. (Andreassen et al., 2013: 90–99). Higher stress associated with higher tendencies of Facebook addiction. It is concluded that offline and online social support cannot be equally categorized. With hope of finding relief, people not having enough sufficient social support in the real world use social media. Having more social media friends means that users may get more positive comments such as likes for photos and congratulations for achievements, creating a psychological dependence on the online platforms with fear of having less support when leaving Facebook supported by the study of Brailovskaia, Schillack, Margraf (2018: 450–456). Admiration, self-presentation, personality traits are also to be considered to find real results behind FAD.

Decision Making Trial and Evaluation Laboratory (DEMATEL) was used by Dalvi-Esfahani (2019) to determine predictors of social media addiction. Openness to experience from personality dimension, loneliness from psychosocial, and depression from comorbid are three most important dimensions explaining social media addiction. (Dalvi-Esfahani et al., 2019).Internet addiction relationship with social anxiety, impulsivity, self-esteem, and depression including 392 undergraduate medical students in Afyon Kocatepe University was measured by Yücens & Üzer (2018) by the Internet Addiction Test (IAT) measuring psychological dependence. The study results showed that students with higher internet addiction exhibit higher social anxiety, lower self-esteem and were more depressed when compared with users not having internet addiction (Yücens & Üzer, 2018: 313–318).Adult attention deficit hyperactivity disorder, depression, schizophrenia and obsessive-compulsive disorder can accompany internet addiction as psychiatric comorbidity. Depression with internet addiction was found the most common comorbid disorder as well as a positive correlation with depression and anxiety scores. It was found that after treatment of internet addiction, aggressive behaviours had decreased among users. Internet addicted students can be on the internet instead of sleeping or engaging with others, or listening in class. More socially avoidant people have higher Internet Addiction Test. (Yücens & Üzer, 2018: 313-318).

Attention Deficit Hyperactivity Disorder (ADHD) shows symptoms of lack of attention and hyperactivity affecting social life, work and school contexts and has a high relationship with anxiety and mood disorders, and obsessive-compulsive disorder. In many studies, high correlations were found between ADHD and internet-related addiction in literature and there are signs of addiction to video gaming with ADHD patients who have a more hedonistic, fatalistic view of the present, are less optimistic and less future-oriented more caring about the present and have negative thoughts about the past. Present hedonistic orientation is defined as a pursuit of pleasure in the present, and past negative orientation a negative vision of the past because of current traumatic situations, future orientation an orientation towards the future present fatalistic orientation that the future is determined and will not be changed are other orientations which explain social media addiction in the study of Settanni et al.(2018). Addictive Facebook use, past negative and present fatalistic orientation, and negatively predicted future orientation are positively correlated to ADHD symptoms related to a worsening in the perception of past and present experiences from that study and hence, addictive Facebook use can be a significant positive predictor of ADHD symptoms from regression analysis. Students show higher ADHD symptoms with high usage Facebook addiction, accompanying with negative past personal experiences, more fatalistic and not much future oriented.(Settanni et al., 2018).

Primary romantic relationships can be negatively affected, leading to the quality of the primary romantic relationship, physical and emotional infidelity, relationship dissatisfaction, romantic disengagement, and a higher risk of divorce. Social media users flirt with each other rather than meeting face to face in which most intimate thoughts and desires are shared, causing conflict, loss of trust, and breakup. Viewing pornography, emotional disclosure, cybersex, emotional involvement, hot chatting, and online dating are problematic SNSs behaviour. The time spent online can be spent with other significant people or work. (Abbasi, 2019: 277-280).

Suicide is explained as thought, planning or desire for death. Social media addiction and mobile device usage can cause depression and suicidal ideation related to depression and emotional stress among university students. There is a relationship between suicidal ideation and the problematic use of internet. Cyber-victimization can be a cause of suicide. Social media may be used to decrease the stress for preventing suicidal ideation if used properly. Young people presenting suicidal ideation are risk groups using social media, and they use social media as a way of help.A study was carried out by Jasso-Medrano &Lopez-Rosales (2018) that in the last two weeks, 36.1% of students have had the idea of suicide. Suicidal ideation is related more with addiction behaviour rather than excessive usage. Just reducing online time may not be effective to reduce depression since there are relationships between hours of social media use and the frequency of mobile and addictive behaviour. (Jasso-Medrano& Lopez-Rosales, 2018: 183-191).Users' abuse and manipulations, cyber-stalking and cyberbullying are negative sides of virtual worlds. Undesirable feedback known as cyberbullying or negative social comparisons as others having happier and better lives can cause stress on social media users. (Vannucci et al., 2017: 163–166). Online bullying, cyberbullying, expliciting images of them without their consent, name-calling, rumor-spreading, and harassment among adolescents can occur more, resulting in high suicide rates. (Hilliard &Parisi, 2020). Curated content – advertisements as "*a great job*", "*excellent partner*", or "*beautiful home*" seen on social media can cause jealousy, depression, or even feel suicidal because their life is not good as others.(Hilliard &Parisi, 2020).Cyber-bullying, sexting, and disseminating information about self-harm techniques and pro-suicide can lead to suicide among adolescents. Harmful messages, pictures, and videos about targeted person can be threat and cause anger. It is found that female youths are perpetrators that for example, one was blackmailed as a cyberbullying action after the lady showed her breasts on a live webcam to an unknown person and later her body screenshots were shown on social media lead to the suicide of that lady after many classmates saw her photos. Cyberbullying by recording private lives secretly and sharing this content online was another reason for suicide. Sharing private photos and sexting information can cause to shame, humiliation, depression, and harassment. Abusive relationships, breakups, and suicidal ideation can be due to tracking ex-partners' new partnerships on social media. Self-harm techniques as self-harm videos by some people showing suicidal intentions on social media and pro-suicide content can also encourage young people to commit suicide. (Intahchomphoo, 2019).

Homicide rate dividing the number of reported homicides by the total population has increased around the World and it has been researched whether conflicts, crimes, violence and homicide have any relationship with social media or not. Social media can cause or mitigate homicide for different purposes and in different ways. Positive and negative uses between Facebook and homicide can be seen from past studies. In the study of Asongua at al.(2019), access to weapons, violent crime, conflict intensity, political instability and security officers and police control are variables for measuring crimes, conflicts and homicide. Negative Facebook penetration and homicide from a cross section of 148 countries for the year 2012 data can be explained by solving conflicts and better informed people. However, these results can change across income levels and regions of the world. Adoption of common polices for countries with similar characteristics can help these countries to adopt a legal framework. Deleting unhealthy content from social media and improving tracking system for identifying information causingthe occurrence of homicide can be beneficial for decreasing homicide. (Asongua, Udujib, Okolo-Obasic,2019). Furthermore, it was found from the study of Ereviket al.(2018) that 96.7% of users were exposed to alcohol-related posts with mainly positive posts rather than focusing on negative sides of alcohol use. (Erevik et al., 2018: 131–137).

Table 5: Effects of SNSs

Effects	Studied By
Work and academic productivity decrease Low level work performance resulting in dismissing from work and college drop-outs	(Andreassen, 2015; Barnes &Pressey, 2014:93–109;Kuss& Griffiths, 2011;Settanni et al., 2018)
Mental health problems : depression and anxiety symptoms, insomnia	(Andreassen et al., 2013: 90–99 ;Chung et al., 2019: 62-67; Hilliard &Parisi , 2020Vannucci et al., 2017: 163–166)
Facebook Addiction Disorder (FAD)	(Brailovskaia et al., , 2019:167–174)
Creating development of an emotional bond to SNSs	(Andreassen et al., 2013: 90–99)
Sleep loss	(Baccarella et al., 2018: 431-438)
Impulse control disorders	(Vannucci et al., 2017: 163–166)
Physical and emotional infidelity, relationship dissatisfaction, romantic disengagement, and a higher risk of divorce	(Abbasi, 2019: 277-280)
Viewing pornography, emotional disclosure, cybersex, emotional involvement, hot chatting, and online dating	(Abbasi. 2019: 277-280)
Attention deficit disorder	(Dalvi-Esfahani et al., 2019;Settanni et al., 2018)
Online gaming addiction	(Andreassen et al., 2013: 90–99; Barnes &Pressey, 2014:93–109)
Users' abuse and manipulations, cyber-stalking and cyberbullying	(Hilliard &Parisi, 2020;Intahchomphoo, 2019; Vannucci et al., 2017: 163–166)
Homicide, feeling suicidal on other that their life is not good as others	(Asongua, Udujib, Okolo-Obasic,2019; Hilliard &Parisi, 2020)
Causing jealousy, envy	(Hilliard &Parisi, 2020; Liu &Jianling M., 2018 55–59)
Loss of friends and dissatisfaction in the relationships	(Andreassen, 2015)
Users' abuse and manipulations	(Vannucci et al., 2017: 163–166)
Exposing alcohol-drug related posts	(Erevik et al., 2018: 131–137)
Homicide, access to weapons, violent crime, conflict intensity	(Asongua, Udujib, Okolo-Obasic,2019)
Using more alcohol	(Erevik et al., 2018: 131–137)

5. Social Media Users' Traits and Predictors of Social Media Addiction

The dark tetrad personality traits (psychopath, narcissism, machiavellianism, sadism), impulsivity, and social media addiction are measured in the study of (Chung et al., 2019: 62-67) that psychopath(lack of empathy): impulsive and reckless and engaging in unsolicited internet pornography, narcissism: need for approval and admiration, machiavellianism: employing more self-presentation tactics, and sadism: pleasure from others' suffering can cause pathological online use. Individuals having psychopath, narcissism, and machiavellianism properties have increased substance use and problematic gambling behaviour and also cocaine-addicted individuals have a higher machiavellianism characteristic. Bergen Social Media Addiction Scale, the Short Dark Triad, and the Assessment of sadistic personality are used in that study that average daily screen-time and psychopath have a positive correlation with social media addiction. Females spending more time over social media have higher levels of addiction on the psychopath scale of that study. It is also found that there is a positive correlation between spending time looking at a computer screen and internet addiction. From the dark tetrad personality, only psychopath is related to impulsivity, lack of self-control and having a lack of empathy and irresponsibility that parasitic lifestyle traits have a positive relationship with social media addiction. (Chung et al., 2019: 62-67). Trait impulsivity can be used for explaining non-substance-dependent addictive behaviours like pathological gambling, overeating and online gaming. It was found that psychopath and narcissism have positive correlation with impulsivity apart from machiavellianism.(Chung et al.,2019: 62-67)

Personality traits, demographics and needs can have effects on internet usage. Personality traits and trans-diagnostic constructs of cognitive distortions can also be the cause of internet addiction, social anxiety and depression. (Yücens& Ahmet Üzer, 2018: 313–318). Fear of missing out; compulsive use behaviour abnormality in controlling; self-esteem depending on reflected appraisals, social comparisons, and self-attributions; sttention deficit disorder; impulsivity without forethought; personality traits as agreeableness, conscientiousness, and neuroticism; narcissism; life satisfaction that lower level of life satisfaction means more internet addiction; depression and empathy that low level of empathy leads to internet and smartphone use disorders are predictors of social media usage. (Dalvi-Esfahani et al., 2019) Introvert, low self-esteem and anxiety high on neuroticism are risk groups of social media addiction.(Miloševic-Dordevic,Zezelj,2014) Impulsivity and low self-esteem as personal traits, loneliness, depression, and specific motives like gambling are main determinants of internet addiction. (Brand et al., 2016) It is found that less self-efficient, with lower self-esteem and more introverted have more tendency of social media addiction. (Alwagait, Shahzad, Alim, 2015).Online communication reduces social anxiety in short term and increases confidence to communicate with others. Internet is a good platform for people having low self-esteem, low motivation, fear of rejection, and need for approval as a compensation of some deficiencies. (Yücens& Ahmet Üzer, 2018: 313–318). People with low self-esteem find social media platform as a safer place to express themselves than high self-esteem people. (Andreassen, Pallesen, Griffiths, 2017: 287-293; Liu & Jianling, 2018).Low self-esteem or high interaction anxiousness is defined as feeling worry and being anxious and in social encounters users find social media as a relief, and affordable means point. It was found that compulsive social media in which self-esteem has a negative effect and interaction anxiousness has a positive significant effect with a negative effect on problematic learning outcomes among university students. Thoughtful engagement with social media is necessary for students with more self-awareness to prevent problematic usage.(Aladwani&Almarzouq, 2016: 575-581) Lack of confidence in their strategic self-presentation can also be another reason of using SNSs. (Casale, Rugai, Fioravanti,2018: 83–87)It was found that there is a negative correlation between social media addiction and smartphone addiction, pathological internet use, and narcissism while negative correlation with self-esteem. (Chung et al., 2019: 62-67)Moreover, it was found from that study that self-esteem and narcissism are correlated with social media addiction. (Chung et al., 2019: 62-67).

Narcissistic people have low self-esteem and they have high problematic use of social media. (Liu &Jianling, 2018). Self-importance, fantasies of unlimited success, feeling special and unique, lack of empathy, envy, and arrogance are characteristics of narcissism. (Andreassen, Pallesen, Griffiths, 2017: 287-293).Vulnerable narcissism is explained as hypersensitivity in the opinions of others, an intense desire for approval, and defensiveness. Sense of entitlement, grandiose fantasies and admiration desires are characteristics of narcissist users. Grandiose narcissism explained with grandiosity, aggression, and dominance can be found in problematic social media use. Facebook may be a better platform for narcissists that users can show themselves for self-promotion with status updated and photos while Twitter is restricted to 140 characters which doesn't make it a good way for self-promotion.The presence of a self-reinforcement with more selfies may increase the level of n narcissism over time. (Casale&Banchi,2020) The Bergen Social Media Addiction Scale (BSMAS), the Narcissistic Personality Inventory-16, and the Rosenberg Self-Esteem Scale are used to measure the relationship between narcissism, self-esteem and social media addiction of a sample of 23,532 Norwegians. According to study results, lower age, being a woman, current relationship, being a student, low level education, low income, lower self-esteem, and narcissism parameters are risks for high addiction. (Andreassen, Pallesen, Griffiths, 2017: 287-293)

Individuals with a high degree of neuroticism use social media more, and neuroticism in which users seeking social support with increased posting activities has a positive relationship with problematic social media use. (Dalvi-Esfahani et al., 2019).Extraversion with which users have more posting activity, bigger online networks, and more likes counts and neuroticism play an important role in the use of social media. Bergen Social Media Addiction Scale and Ten-Item Personality Inventory questionnaire are used to measure between extraversion and neuroticism, and social media addiction. Neuroticism has a positive correlation with social media addiction while extraversion was not significant from study of Settanni et al.(2018).A number of status updates correlated with neuroticism and extraversion to get higher levels of positive feedback and received likes have a positive effect on social media addiction.Social media addiction prevention programs can be developed by considering these personal traits.(Settanni et al., 2018).

Table 6: Personality traits of social media addiction

Personality traits	Definition
Machiavellianism	Make sure your plans benefit you, not others (Chung et al., 2019)
Narcissism	People see me as a natural leader (Chung et al., 2019)
Psychopath	Out of control (Chung et al., 2019)
Sadism	Watching people get into fights excites me (Chung et al., 2019)
Introvert	Focusing on internal feelings rather than on external sources (Miloševic-Dordevic,Zezelj,2014)
Extraversion	With which, users have more posting activity, bigger online networks, and more likes counts(Settanni et al., 2018)
Egocentrism	Allowing users presenting them positively to increase their mood *(*Kuss& Griffiths, 2011)
Neuroticism, anxiety high on neuroticism	Neuroticism has a positive relationship with problematic social media use Expressing themselves on social media and more women with neurotic traits.(Dalvi-Esfahani et al., 2019; Kuss& Griffiths, 2011; Miloševic-Dordevic,Zezelj, 2014)

Low self-esteem, low self-worth	Feeling worried and anxious in social encounters. (Aladwani, &Almarzouq, 2016; 575-581 ; Guedes et al., 2016: 43–48 , Miloševic-Dordevic,Zezelj, 2014)
Low self-presentation	Lack of confidence in their strategic self-presentation (Casale, Rugai, Fioravanti,2018: 83–87)
Psychopath impulsivity	Explaining non-substance-dependent addictive behaviour like pathological gambling, overeating and online gaming. (Chung et al., 2019: 62-67; Brand et al., 2016)
Low empathy	Not sensing other people's emotions (Dalvi-Esfahani et al., 2019)

6. Overcoming Internet and Social Media Addiction

Snapchat, Facebook, YouTube, Instagram, Fortnite, Twitter, Internet pornography etc. are named as new drugs making users addictive. Finding triggering, the most addictive activities or elements on internet as using Facebook, YouTube,Instagram etc. at work even against company policy, sharing photos or videos; blocking the most addictive website on some devices such as Facebook app; scheduling the time on internet using social media 30 minutes at night and one hour before sleep; finding new ways of socializing as being a member of an organization or a suitable substitute for attention like a new hobby for filling the spare time instead of mindlessly scrolling through newsfeed; turning off notifications to concentrate on daily tasks; spending more time with friends' and family members in real life; thinking of social media as athreat, and using it for a while after first doing something productive;avoid posting everything - enjoy the moments; having a holiday from social media through informing friends and telling them how they can reach through installing cold Turkey program deactivating or blocking various addicting sites; and getting help form an addiction counselor can be some ways of overcoming internet addiction. (Avison, 2020; Ayeni, 2019:19-42; Perspecti Counseling, 2020).Deleting extra people, limiting memberships, deleting some SNSs, giving account passwords to family members that they just know the passwords and they give it or open when required, avoiding posting photographs or posts every day, and enjoying surroundings and environment, meditating, getting out of the house to have some entertainment by going swimming, running, shopping etc., calling somebody if needed to be reached instead of sending social media messages, planning a new career change or learning something new and indulging in regular activities like listening to music and going to some physical activities are some otherways of defeating social media addiction. (Heston, 2019).After stopping social media addiction, more time and attention for other things, better focusing, better social connections and not much need for external validation can be beneficial results. (Campbell, 2019)

Table 7: Preventing social media addiction (Ayeni, 2019:19-42; Castello, 2020;Brevers and Turel, 2019:554–563; Heston, 2019; Hilliard &Parisi, 2020; Melina et al., 2019:507-525).

Method	Definition
Deleting all social media accounts	Not using any social media network and deleting all accounts.
Setting realistic goals	Users may slowly decrease the usage times on social media like 10 -60 minutes social media spending in a day. Just checking phone during morning coffee break to make it a habit.
Being careful about time spent on social media	Not losing all sense of time that an actual timer can be used to control the time.
Closing notifications	Closing every sound, flash from the notifications light that starting a greedy urge for checking updates
Stay away from trolls	Negative influencers and stress triggers can cause mental health problems.
Deleting friends and followers	Deleting people not known in real life and not adding positive value in life and they can be a trigger causing health and well-being problems.
Creating physical distance between you and your devices	Not sleeping with phones to have a good sleep or the phone can be kept in an inconvenient location like the trunk of a car
Digital detox time	Completely disconnect from social media for a while like a month
Refocusing onpriorities	Focusing on real life connections to avoid the fear of missing out. Yoga can be a method to practice mindfulness
Making plans for real-timeconnections	Searching for friends by face-to-face method rather than searching in social media.
Having new hobbies	Spending more time on hobbies
Learning new things	Keeping the mind occupied with new learning
Taking medicines	Doctor can give medicines to decrease symptoms
Applying self-control strategies	Decreasing access and reaching possibilities to social media,
Teacher and parent training	Increasing awareness

6.1 Therapeutic Interventions for SNS Addiction Self-Help Interventions:

Self-control is the inhibition of maladaptive impulses that proactive self-control strategies can be developed to fight against social media addiction. ColdTurkey, SelfControl and Freedom applications can be used by the user to block addictive sites. Turning mobile phone off, setting it on flightmode when not wanting to be disturbed or silent mode can also be self-controlled interventions. Not logging on to SNSs while busy at work or school, leaving the smartphone at home, giving adequate breaks for visiting SNSs, modifying thought patterns, setting limits and reasonable goals, and committing to offline activities can be other self-help ways to decrease SNSs addiction. (Andreassen, 2015; Brevers and Turel, 2019:554–563). From the study of Brevers and Turel (2019), 751 undergraduate students were surveyed and self-control strategies were developed. Preventing full access (e.g., "*Spend two days in an area with no service and limited Wi-Fi*"), preventing partial access (e.g., "*I put my phone to charge 15 ft away from me*"), modifying a feature on the device (e.g., "*I put my phone on airplane mode*"), delimiting a specific time of use (e.g., "*I plan to stop using social media after 11 pm*"), self-talk (e.g., "*tell myself that there is an important test coming up*") and straightforward self-control (e.g., "*finish important tasks before checking my phone.*") were ways found to help prevent social media addiction. In addition, short-term and pleasure-oriented impulse generation (i.e., "*trying to be proactive and prevent tempting situations*") method was found to be more effective than intervening later. (Brevers and Turel, 2019:554–563).

Web Therapy"*the employment of web resources, e-books and e-journals and the reading of them in the treatment of mental and nervous diseases and disorders*" is a self-help treatment method. The self-healing method can be used to overcome problems. When a problem cannot be discussed with friends and family, people can talk with others through social media for relaxing and refreshing. Laughable materials such as humorous stories can be read to decrease the stress rate. Moreover, sad and happy stories can be shared online to solve problems. Laughable reading materials, watching shows, entertaining songs and movies or videos, references for solving one's problems, sarcasms, and online games with multiple players, interaction or communication through chatting are types of information used by internet addicts for self-healing. (Kurniasih and Amriwijaya, 2018:37-45)

Therapeutic Interventions: Cognitive-Behavioural Therapy is used in that method with exploring mental processes, and focusing on how the addict perceives, thinks and solves problems. Alternative thoughts and strategies are created to deal with discomfort and detachment from social media addiction by making dysfunctional cognitions zero. Behavioural rehearsal, modeling, recovery and self-instruction techniques are used for behaviour management. Motivational interviewing treatment engaging intrinsic motivation is used to change behaviour of discrepancy between current and desired state. Clients can discover the negative sides of the behaviour with an intrinsic motivation to change it. (Andreassen, 2015).

Pharmacological Interventions: Certain medications are used to treat addictive people. (Andreassen, 2015)

Other Interventions: Focusing on norms and policies for promoting health, ensuring satisfaction of people's basic needs with fewer challenges and demands at work, policies prohibiting personal use, being an example as teachers and parents, awarding people etc. are other intervention methods. (Andreassen, 2015). Teacher and parent training and student education can raise awareness of social media addiction that users can reinforce for positive behaviour to reduce the likelihood of negative occurrences. High risk adolescents can be treated with digitally supported workshops, peer to peer training, media literacy intervention, multi-behaviour health promotion programs by internet use and gaming, which is a skill-based, competency enhancement strategy(encouraging critical thinking, self-monitoring, self-reflection, critical perception); reduction of comorbid symptoms and negative psychosocial consequences such as anxiety and depression with help from psychologists or doctors and cognitive behavioural group intervention protocols, and health education methods. The evaluation of interventions can be measured by usage outcomes, knowledge and attitude shifting-outcomes-awareness change, skill enhancement outcomes- better problem-solving, self-control, critical thinking, symptom reduction outcomes- comorbid symptoms and negative school-related outcomes, process evaluation outcomes- attitude change, multiple-risk behaviour outcomes- substance abuse and alcohol use. (Melina et al., 2019:507-525).

7. CONCLUSION

It is beneficial if social media is used for panned and beneficial purposes, but as a result of excessive use, psychological and physical disorders may arise, especially as a result of getting away from real social life, serious diseases such as depression occur. Hence, it is necessary to raise awareness of individuals and families about the harm of social media, and to establish a control mechanism especially for children and teenagers. Fathers and mothers can be a model for their children and in the case they use more social media, their children may follow them without knowing the dangers. As the usage of technology and online shopping increases, there is more need to use social media and hence individuals try to do everything on online platforms, hence old traditional methods such as visiting a shop to buy products, talking outside with friends and family members, searching for real friends rather than online friends etc. are methods which can help to prevent excessive usage.

From the study of Aslan &Yaşar (2019: 346-355) carried out at Bingöl University, it was found that the highest average is given to the proposition "*I cannot understand how time passes while using social media*". Therefore, it turns out that time control in social media is not planned and more time is spent than intended. (Aslan &Yaşar, 2019: 346-355). Social media can affect the life of students negatively resulting in a decrease in academic performance and many mental problems such as anxiety through not controlling the time duration. Thus, new methods and rules are to be applied at universities to reduce social media usage like banning switching on cell phones in class or not allowing cell phones in university.

Cyberbullying can be a big threat for young people that some young people try to solve cyberbullying by themselves instead of informing parents or teachers. Deleting or blocking abusive social media users can be done in Facebook and teachers have to educate and be careful about cyberbullying of their students in both online and offline platforms. Legislators, parents, and schools must work together to prevent cyberbullying. Attempts are made to prevent hate speeches leading to teenage suicide in Yelp, Facebook, and YouTube social media platforms with anti-cyberbullying polices. Non-consensual youth sexting can be severely punished by governments and suicide interventions to youth via social media are to be developed. (Intahchomphoo, 2019). Lots of fake news and trolls are on social media platforms, affecting young people negatively. The dangers of social media are to be taught to students in the class. Moreover, an independent control system without a political intervention can be created by governments to create necessary filters.

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Chapter 13

CHINESE SOCIAL MEDIA PLATFORMS AS AN ALTERNATIVE SOCIAL MEDIA TO THE NEW WORLD

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Introduction and Historical Background

Owing to a tremendous growth of internet and technology, social media has gained immense importance and popularity around the globe. Due to interactive, transparent, and participative features on social media, a significant proportion of the population loves spending time on it. It has literally modified the way we collaborate and interact with each other. According to statistics of December 2015, 649 Million internet users were reported that included 249 Million micro-blog users (Fei, 2016). The number of users of Chinese social media like Weibo and We Chat has increased substantially since 2009 (Zhou & Wang, 2014).

Social media have pronounced impact on various fields of life including Tourism. Most of the young people utilize social media to stay connected with their loved ones and for seeking help in various matters for travel decision making. They can find tourist destinations, modes of travelling, food options, and much more. Many tourism sites use social media for their advantage to attract attention of foreigners visiting their country.

Chinese social media are quite different from that of Western countries due to restrictions imposed by the Chinese government. Only a few foreign participants are involved in Chinese social media marketing. These restrictions are likely to continue in the long run and people in China would be able to interact through selected forums only. Most of the global social media forums like Facebook, Twitter, and Google are strictly forbidden in China Moreover, the Chinese social media like Wechat and Weibo was in the beginning providing only Chinese language content that is quite difficult for foreigners to utilize for their tourism. But after a few years Wechat start to be localized in different languages, which this made the platform international.

The historical background of Social media censorship in China stems from the riots in western province Xinjiang in 2010. In April 2010, the Chinese government revised the existing laws on Guarding State Secrets that restricted the global media access (Xu & Albert, 2014). This amendment required telecommunication and other IT companies to collaborate with the Chinese government to restrict global media and help minimization of leaking out of national secrets. However, the definition of the Chinese secrets remains vague that would facilitate the purpose of integrity of the state through social media restrictions. Keeping the door closed to the international media and staying inside a confined information space, prohibits any kind of rebellion against national interests.

The Chinese government has been blocking the foreign content so that any kind of right-threatening and uncensored information couldn't be accessed by Chinese citizens. Censorship of foreign content was an important step in promoting the local regime and school of thought. Through local news and social media, the Chinese government aims to prevent minimization of their authority. The Google also criticized the internet censorship in China. As the economy of China is rapidly growing, access to the foreign world is becoming quite important and social media provide the required resources for achieving this task.

Due to the differences in Chinese social media platforms as compared to the western world, only a few research studies have been reported in the former field. This area requires special attention considering the fact that China is now becoming a global leader in economy and technology, and it has to provide forums for global interaction through social media. This report will shed light on social media of China with respect to its role in marketing, tourism industry, differences from western social media, the number of users, and their limitations in facilitating the people for their required purpose.

The History of Chinese Social Media Restrictions

China is a giant in terms of the internet and social media users. As per statistics from 2012, 513 Million users in China were compared with 245 Million users in the USA, with more than 300 Million people using social media from blogs to social media, microblogs, and other media content (Chiu, Ip, & Silverman, 2012). The number of subscribers of internet grew to 800 Million in 2019 and social media users more than 500 Million. This population is more than the combined population of Spain, France, Italy, UK and Germany. Moreover, the usage of social media is also growing and reported to be 40% of overall time of the day (Chiu et al., 2012).

The Chinese market is quite unique in the sense that the economic corridors are open through localized social media marketing only. Government is taking strict actions to ban any kind of foreign media content to shape native strategy for marketing of products and services. It is important to understand the nuances, restrictions, content, and information about various Chinese social media platforms.

Chinese social media users are quite active in searching and exploring the native content through multiple accounts. Almost 80% Chinese social media users utilize different forums for collaboration and interaction as compared to just 39% in Japan (Chiu et al., 2012). The number of mobile social media users is also increasing drastically. Most of the Chinese are skeptical about the formal institutions and their school of thought, so they prefer taking opinion from friends and family for important decisions.

Chinese social media have fierce competition for content marketing and attracting consumers. Many marketing companies hire bloggers and social media content writers to advertise their products in an attractive manner and also downgrade the products of other companies in competition. Most of the negative news become viral and gain people's attention to make them against a particular brand or company. Businesses have to manage social media forums to avoid any kind of negative marketing against them. When comparing the brand value with other competitors, the companies must develop strong social media consumer insights.

The Chinese social media are quite local and fragmented as their content is restricted to native interests. In a broader spectrum, Chinese social media have services in the e-commerce and digital media. In the former, the services of microblogging like Sina Weibo and Tencent Weibo are quite familiar and interesting, while the latter category of social media includes Renren and Kaixin001 (Chiu et al., 2012). These forums have their own focus, areas of strength, advantages, and also the geographical properties. Due to diverse social media forums, this kind of fragmentation requires quite complex marketing structure in terms of planning and resources. They must have a network of operators and partners in different fields to guide social media marketing campaigns. The competition is increasing in this regard to gather players in this field and seek attention through the available social media.

The challenging social media marketing strategy doesn't put marketers away from using the forums of microblogging and e-commerce for selling their products and services. The unique market features require some intelligent methods to thrive. Firstly, the content should be unique and latest to serve the requirement of customers. Products that appeal customers through their functionality and originality must be advertised appropriately to initiate a successful campaign. Secondly, the test and learn approach is attractive in adapting to the changing marketing requirements. Trends evolve into different shapes and consumers expect companies to follow the innovative standards. Thirdly, social media marketing must focus on quality, sustainability, and corporate social responsibility factors along with brand goals. Sheer number of Chinese social media users require a lot of effort to win their confidence.

In China, the social media are considered as the vital force, leading to prosperity and welfare of the state. Den Xiaoping, a reformist leader, pioneered the socialist market economy to China for achieving broad economic goals. Technology is always perceived as a source for achieving the desired goals of socialism. However, technology associated with social media is never value free, especially when it is diffused from another culture and system. Considering the post-modern technical genre of China, it is a gigantic task to isolate the international media from the Chinese internet and promote only native platforms for sharing ideas and digital content.

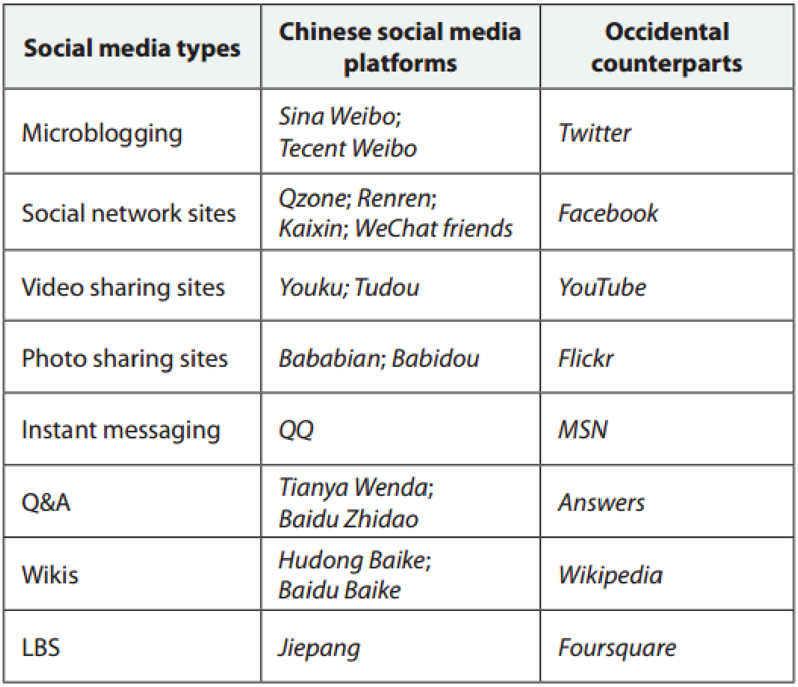
The Overall Social Media Landscape of China vs Western Social Media

The social media platforms of the West, including Facebook, WhatsApp, and YouTube have great influence in the western region including Asian countries. Most of them are inaccessible to Chinese due to restrictions imposed by the Chinese Government as explained earlier. It is important to consider the historical background of Chinese social media to cover the aspects of their comparison in terms of the strengths and weaknesses with western media.

The real internet growth began in China in 1999 with the introduction of QQ by Tencent. Millions of youngsters utilized this forum to stay connected with their loved ones and enjoy unique features of enjoyment. Blog-China also emerged as an innovative forum in 2002 by Fangxingdong. In addition to the instant messaging services provided by QQ, Chinese users were also interested in audio, video content, microblogging, and payment services. Sina Weibo provided the microblogging platform, Kaixinwang and Jiepang offered social media services in their own specialized manner, and Wechat cultivated an altogether new social life with everything included on this forum.

Nowadays, the Chinese people would have social media accounts on a variety of forums and integrate them for linking their contacts, information, and media. This trend of integrating the social media is also used by the websites for their marketing purposes. They would know the target markets through social media trends and interests of the people. Moreover, the companies could make their online presence by gathering attention of people through social media Ads. The landscape of Chinese social media is changing at a rapid rate and has become quite rich in terms of features and options.

Innovation in Chinese social media comes from behaviors, requirements, trends, political aspects, and cultural norms of China instead of just copying the features of western counterparts. The Chinese social media are creating an innovative landscape for providing various features for young generation. For example, some features of Wechat like searching for nearby friends and associate payment options are much better than WhatsApp. Consequently, China is becoming a global leader in setting social media trends. Consider the comparison of Chinese social media with western counter parts and you will appreciate the diversity of Chinese platforms (He & Pedraza, 2015).



Social media types	Chinese social media platforms	Occidental counterparts
Microblogging	*Sina Weibo;* *Tecent Weibo*	*Twitter*
Social network sites	*Qzone; Renren;* *Kaixin; WeChat friends*	*Facebook*
Video sharing sites	*Youku; Tudou*	*YouTube*
Photo sharing sites	*Bababian; Babidou*	*Flickr*
Instant messaging	*QQ*	*MSN*
Q&A	*Tianya Wenda;* *Baidu Zhidao*	*Answers*
Wikis	*Hudong Baike;* *Baidu Baike*	*Wikipedia*
LBS	*Jiepang*	*Foursquare*

Figure 1: Comparison of Chinese Social Media with Western Counterparts (He & Pedraza, 2015)

QQ, Qzone, Wechat, Renren, and Kaixin have millions of Chinese users and these social networks grow in the unique competitive environment (He & Pedraza, 2015). It is customary for Chinese social media to have various services offered by different companies. The native social media are unique, competitive, complex, and fragmented being organized and fragmented by local Chinese companies. This trend sets the basis for utilizing it for business and marketing purposes.

It is important to be aware of the latest trends and liking patterns of people for starting a marketing campaign on social media. Only in this way, the marketers could utilize the forum for seeking attention of online users. Due to a tremendous development of the internet in China with the introduction of 4G, 5G services, the services of online shopping, group buying, and mobile social media Apps are becoming quite popular.

Chinese Social Media and E-Commerce Trends

The recent boom of internet and technology has revolutionized the economy and global markets. The Chinese economy is also strongly linked with the online marketing and shopping forums through e-commerce strategy. Due to huge consumer base and trends of online shopping, the Chinese e-commerce is competing leading players in this regard like the USA.

Local firms have noticed the online trends of social media and marketing their products right at social media forums where people are searching for their favorite things and brands. Currently, the microblogs are driving a huge amount of traffic on Chinese users like Jingdong, Tmall, and Taobao (He & Pedraza, 2015). The Chinese microblogs are linking customers with their searching forums and the online shopping places for easing out the exploration process for customers. The netizens could find products of their choice in reasonable price and quality. Through integration of discussion forums like Weibo with e-commerce, the platform is available for discussion about the products in detail such that people are aware of all pros and cons of the products.

The Xiaomi online sales campaign is the best example of using social media for linking Chinese people to e-commerce. This company is a tech giant that launched its first series of smartphones in 2011 through the media campaign that got very high appreciation from clients (He & Pedraza, 2015). With the help of social media, people commented on the quality of services provided by the smartphone. Thus, social media not only connected the end customers to online businesses, but also provided a suitable forum for discussing various features of products and services.

Launching marketing campaigns on social media looks quite easy for inviting a huge range of customers through the internet. However, local and international enterprises face some challenges in this regard. Firstly, social media' strategy for businesses is not well defined and concrete (He & Pedraza, 2015). Due to lack of experience in this unique way of marketing, the startups and thriving companies have to take a risk in gathering attention of customers. Secondly, social media teams for businesses are scarce. Thirdly, it is difficult to measure the extent of the social media effort and hence allocating the resources for achieving this goal.

The Social Media Platforms of China

China has created many different social media platforms as alternative to western world. These social media platforms had better quality in same cases than the western social media platforms. Some of them like Tik Tok, wechat were also able to achieve to be global competitor in the word of social media globally.

Sina Weibo

It is one of the most famous microblogging forums in China, running as web 2.0 application. It is the market leader in China with almost 50% market share among social media forums. Almost 80% users of this forum are young people. So, it is important to analyze the social media requirements of young people to make this forum successful.

This service was introduced in 2009 and it is now the most popular blogging forum in China. It enables the users to search their favorite content and repost them with limitation of 140 Chinese characters. However, their original content doesn't have any limit of characters' length. However, Chinese characters are quite powerful and concise, and it is possible to embed a lot of information in 140 characters as compared to the western alphabetical system. This strength makes microblogging feature an interesting prospect for Chinese people. Like other typical western social media, Sina Weibo allows users to share content in the form of photos, videos, and URLs. The users can follow their friends and connections to stay updated with their posts.

By the end of September 2017, Sina Weibo claimed 376 Million subscribers that marks an increase of 27% in comparison with progress in 2016 (Wang, 2018). Moreover, the daily active users increased to 165 Million that marked an increase by 25% from the same period. Male users' percentage was 56.3%, while females had 43.7% contribution among overall users. The highest proportion of Sina Weibo users (38.6%) lie in the range of 23 to 30 years of age, while users in range 20-35 make up roughly 82% of total users.

The motivation of using social media like Weibo comes from the Maslow's hierarchy of needs. According to this theory, different requirements like safety need, psychological needs, self-esteem, social belonging, self-transcendence, and self-actualization exist. Motivations for using Weibo include information seeking, opinion sharing, social interaction, and media participation (Wang, 2018). According to a research study, people using Weibo could be categorized as follows (Wang, 2018):

1. Ordinary people use Weibo for opinion expression and entertainment.
2. Celebrities use Weibo for establishing their perfect images.
3. Entrepreneurs use Weibo for marketing their products and services.
4. Governmental officers use Weibo for disseminating information.

The role of Sina Weibo in bringing the Chinese community close to each other is tremendous. People are willing to share their moments, stories, posts, emotions, and much more. The most remarkable part of the forum is that it doesn't rely on international sources of information that could have questionable authenticity. The information from the other Chinese people and other native sources provide authenticity for staying connected and getting important updates.

The historical background of Weibo makes it a formidable choice in comparison with Twitter to save China from political influences of all kinds. The international social media were banned in China during 2009, when many Chinese used unethical comments on microblogs in reaction to the global political situation (Sun, 2013). The complexity of the international social media and technology diffusion required the Chinese government to ban international social media and promote native and local sources of information. It provides the answer to the technological revolution and global socialization through media by providing a suitable to Chinese for their interaction, opinion, sharing, information exchange, and marketing.

The popularity of Sina Weibo could be analyzed from its extremely fast developmental trajectory as compared to global social media giants like Twitter. It took Twitter to achieve the milestone of 100 Million tweet per day, and Weibo achieved this goal in half the time period. The scale of Weibo is quite interesting for Chinese users as things get reposed very often, sometimes 1000 times reposting (Sun, 2013).

Right from the onset, Sina Weibo was always considered as the copy of Twitter. Later on, it was compared with Facebook and Twitter as it depicted the features of both these social media that are banned in China (Sun, 2013). In fact, you can locate features of various American social media sites like Pinterest in Weibo. In addition to copying the international social media features, Weibo also developed many unique features that originated from Chinese internet culture, including threaded comment, rich media, micro-group, private chat, micro-event and so on. Later on, Twitter also adopted some of the innovative features of Weibo.

Apart from the features of Weibo that are strikingly similar to Twitter, the role of Weibo is very strong in terms of linking Chinese with their past events. A quick comparison of Weibo and Twitter suggests that local technologies are structural and behavioral construct. The technological features of Weibo suggests that it is deeply embedded in the Chinese internet culture as a technological genre (Sun, 2013). With the help of genre enactment, millions of users use the recursive link between people and technology. Moreover, a novel structure of technology use is designed and then infused into a local culture.

Sina Weibo has to follow the censorship requirements imposed by the Chinese government. The platform owner, Sina Corp. is employing additional resources to comply with governmental instructions. Internal censorship is quite common in Chinese internet services. The Chinese government monitors internet trends and takes strict actions to block any content or even shutdown the whole website. The internal censorship method of Sina Weibo is quite strong as the website monitors the content shared by the people very closely. According to a research study, the internal censorship of Sina is rigorous and content department is quite fast to remove the content not complying with governmental policies. 35% of the deletion would occur within 5-10 minutes of posting and other 60% would be removed within 24 hours (Sun, 2013). The users who have the history of more deleted posts will observe more surveillance for uploading content complying with the regulations.

The cost of maintaining the censorship for a huge platform like Sina Weibo is quite high (Sun, 2013). With coordination of content inspectors and machine-based surveillance, surveillance of the microblogging platform is quite strict as opposed to western social media. Some people might refer this strategy to labor-intensive business rather than technology oriented one as observed by other countries. Due to a high cost of censorship, many Chinese IT companies couldn't rise to the level of democratic powers.

The strength of Sina Weibo lies in using social media for marketing purposes for gathering attention of the general public. In May 2013, Weibo give 18% shares to the e-commerce giant Alibaba (Sun, 2013). Consequently, Weibo linked to the Taobao platform that facilitates users to shop online on Taobao through the Weibo forum. This move came apparently from the political influence of stakeholders and its own business tactics, but the motivation also lies in the stigma initiated by Twitter for introducing elements of democracy in the Chinese political regime (Sun, 2013). Moreover, Sina Weibo grew in popularity and influence to afflict potential political influence, even though this purpose was never intended.

Concluding the role and image of Sina Weibo, it first emerged as the copycat of Twitter. Now, it is playing the role of the local social media to provide all features of the global technology. This forum allows Chinese people to avail features of information exchange, collaboration, content sharing, and much more. The introduction of local social media to serve the requirements of the global one, makes it clearer to analyze how technology responds to different structural forces.

Wechat

With currently over one Billion monthly active users, Wechat is becoming of the largest social media and multipurpose platform in China (Montag & Gan, 2018). This forum is open to global users also and many Asians users have registered account on it. This forum has attained attention of a huge number of people in China and research studies are now focusing on impact of Wechat on societal and individual levels. Moreover, it is also interesting to analyze the impact of Wechat on social behaviors and interaction among people.

Chinese multinational company Tencent Holding Limited rolled out Wechat in January 2011 (Montag & Gan, 2018). Since the time of its launch, it boasts a huge number of users and provides plenty of functions beyond the usual communication functions of its counterpart WhatsApp in the western world. The huge range of Wechat services include communication, payment features, booking trains or flights, pay for traffic fines, and other some other social services. The core function is to share messages, videos, and photos with contacts. Moreover, you can also share your moments in the form of videos on your profile. It also provides the free video and voice call features as offered by its western counterpart WhatsApp. A large range of emoticons allow users to share their emotions and expressions on social media with their contacts.

The innovation in Wechat is quite outstanding. In Januray 2014, it added a new feature of Red Envelope for sharing gifts with friends in terms of money (Montag & Gan, 2018). It mimics the famous Chinese tradition of exchanging gifts in red packets, particularly spring festival. This feature became so viral on social media that 768 Million Chinese people were involved in sending and receiving red envelopes during six-day holidays in Spring Festival 2018 (Xinhua, 2018). The staggering statistics of Wechat don't end here. In 2017, 38 Billion messages have been sent every day. An average user spent 139 Minutes on calling and 68 Million videos have been shared every day. These statistics clearly indicate that Wechat is becoming the integral part of life of most of the Chinese people.

It is important to explore the reasons of using Wechat. Researchers have investigated the motivations behind Wechat popularity as the social media with the diverse range of features. A quantitative study revealed that 47.1% people used Wechat life services for paying phone bills, while 20.9% people used Wechat for purchasing movie tickets. Wechat life services are user friendly and mostly related to payment options and e-wallet. The most interesting feature of Wechat is its integration with your bank cards. So, you don't have to take cash with you while going anywhere. Your smartphone with Wechat payment options works everywhere in China.

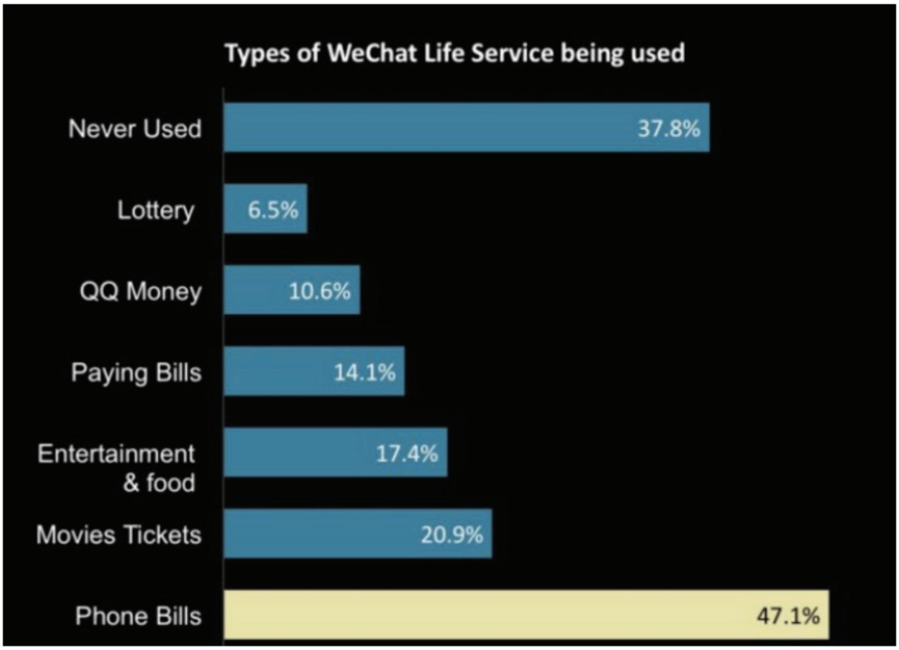


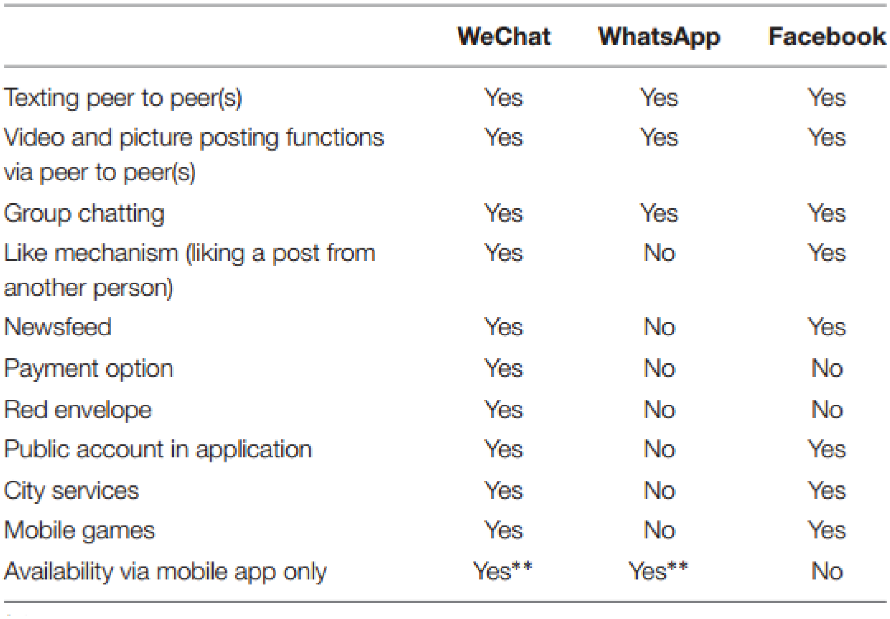
Figure 2: Wechat Life Services Proportion (Rong, 2016)

Comparison of Wechat with Facebook is quite interesting. The "Like" function of Facebook is quite popular to appreciate any content shared by your friends. Wechat also offers this service to comment or like moments of your contacts. This feature is quite important from the perspective of rewards and appreciation since content getting many "Likes" implies that it is popular and meets expectations of various users. Research on this feature on Wechat indicates that it is used for appreciation, enjoyment, and searching for information on Wechat.

Similarly, the news feed feature of Wechat and Facebook are alike to show content that matches with your previous "Likes". This feature provides the personalized interests for users so that they could enjoy spending time on Social media. However, this feature could also be problematic for political and economic perception. Due to prioritizing content according to the personalized interests, the new feed will bias people in developing their opinion about certain aspects of current-affairs. This kind of personalized news feed will have different impact at societal level, depending on the governance across various nations.

Usage of social media extensively also results in psychological and data security problems. These effects are negative outcomes of social media due to addiction to certain features on Facebook. Analysis of Wechat reveals that it is a multipurpose platform and it provides diversity in its functions. It is not important to consider the time spent on it by average users. Rather, the statistics should reveal activities of the users and how these activities are influencing the behavior and everyday life of the people. A good understanding of Wechat usage comes from the psychological construct of people and social norms prevailing in the Chinese culture.

The multipurpose features of Wechat make it quite successful social media in China and other countries. It provides all options for attracting social media lovers for spending their leisure time in exploring its content. It possesses many features of WhatsApp and Facebook, and also additional touches of advanced options like online payments and booking of tickets. The summary of comparison of Wechat with other social media is presented below:



	WeChat	WhatsApp	Facebook
Texting peer to peer(s)	Yes	Yes	Yes
Video and picture posting functions via peer to peer(s)	Yes	Yes	Yes
Group chatting	Yes	Yes	Yes
Like mechanism (liking a post from another person)	Yes	No	Yes
Newsfeed	Yes	No	Yes
Payment option	Yes	No	No
Red envelope	Yes	No	No
Public account in application	Yes	No	Yes
City services	Yes	No	Yes
Mobile games	Yes	No	Yes
Availability via mobile app only	Yes**	Yes**	No

Figure 3: Comparison of Features of Wechat, Facebook, and WhatsApp (Montag & Gan, 2018)

Tencent QQ and Other Social Media Platforms of China

Tencent QQ is basically a subsidiary of Tencent Technology and it is a major short message service provider in China. During the past decade, QQ grew so fast in China that it had an impact on various niches and fields of life. It is a real time communication tool to keep users connected by sharing their messages. Tencent provides innovative features for users of any taste. Apart from messaging service, Tencent also boasts its business in internet-related services, video gaming, and products such as social media and cloud computing.

The performance of QQ has been quite fast, but not smooth. It also suffered from scandals and downfalls due to controversy with Qihoo. The magazine China Computer World released plenty of negative literature about this social media. Despite a few shaky months, the social media were able to win its confidence as a giant leader in the Chinese internet industry.

When you analyze the Chinese market, you will explore the popularity of QQ as compared to Skype or MSN. Since its development in February 1999, it has become an integral part of life of many Chinese people. The key features of QQ include user-friendly features, elegant looking products, and aware of the customer requirements. Apart from the messaging service, other facilities include QQ games, Q Coin, Q Zone, QQ Mail and so on. Due to its innovative features, it is one of the biggest social media brands in China.

The services of QQ are interesting and provide various innovative features to users. Firstly, Qzone is a blog which QQ users can access easily. Some blogs are free and some are paid that could be purchased with Q Coins. Qzone is somewhat similar to Facebook in the sense that both operate for social interaction and customization. QQ made Qzone interesting by including features like banners, music players, font options and much more. It is undoubtedly the next generation multimedia social space for Chinese users.

Another eminent social media product of Tencent, QQ Games provides wonderful experience for Chinese people. It includes two main types: QQ platform with mostly casual games and non-QQ platform online games. It is one of the largest independent R&D platform for playing causal games. In order to seek attention of social media users, QQ games included various interesting options. Players can transform to a specific character in QQ games like Avatar. Users can also enjoy the animations within the game, while expressing their emotions. These animations make social media experience quite colorful. People can relax, enjoy, and utilize the fierce competing options.

There are various other QQ products like QQ Mail, 3G QQ, QQ Anti-virus, input software, online TV, and so on. These services and products are introduced for brand recognition of Tencent. The purpose is to avail the bigger network effect. Tencent makes sure that different people with different social media requirements achieve something of their taste. For QQ users, most of the time is spent while observing the positive network effect. In spite of so many features, the interface of QQ is still immaculate. This is the reason why people would prefer QQ over other social media.

The services of QQ are not entirely free. It offers some paid services for adding another business niche in its market. The paid membership is called as “diamond”. With the help of these features, customers can enjoy some special features on the QQ platform. The colors and types of “diamonds” decide the kind of membership. The highest-rated membership has red “diamonds” for which customers could avail free QQ Show costumes. When customers buy services, they are likely to use them more often and in turn spend more on other niches also.

QQ also launched international version in English, French and Japanese to grab attention of global customers. Later on, the Italian version of the QQ was also made available. In addition to the messenger, QQ services are also expanding to Asian countries and the USA. These are just a few options among a huge range of QQ services. However, the major target market of QQ lies in China. During recent times, Wechat has overtaken QQ in terms of popularity and users because it is a new forum with the latest features regarding enjoyment, communication, and interactive content. QQ was a pioneer for Chinese in social media, but Wechat is the modern leader in this game in China.

Conclusion

This article reviewed the historical background, the current situation, important statistics, pros and cons, and different features of Chinese social media. We highlighted the Chinese social media strategy in the light of governmental policies. Western social media forums are completely banned in China to promote native content, privacy of local political and social ideas, and preventing chaos in China through international media.

In order to serve the Chinese people with their social media requirements, local Chinese companies like Tencent launched platforms like QQ, Wechat, Sina Weibo, Taobao, Renren, Kaixing, and many more. These services are similar in features and trends to their western counterparts like Facebook, Twitter, WhatsApp. The comparison of western social media with Chinese ones show that the latter services are quite competitive and even innovative in some features that western media don’t possess. The biggest example of creativity in social media of Chinese forums is integration of e-wallet payment methods, and also the e-commerce. In conclusion, Chinese social media are quite powerful and satisfies the requirements of Chinese people in terms of their content sharing, information exchange, payment methods, tickets’ booking, gaming, e-commerce, and much more. With the help of these social media resources, online businesses could perform marketing easily to promote their services and products. Finally, Chinese social media are laying the trend of global revolution in e-commerce and online business marketing.

Among these social media platforms some of like wechat are also going global. So, the growth of Chinese popularity in the world and growth of economy and its social impact in the globalization may bring a new opportunity to Chinese social media platforms for globalization. The main question here can be, 'will Chine try to globalize its social media platforms to compete with the western social media platforms? Or will they only keep them to have an internal communication with the locals and promote the regime? Globalization of Chinese social media platforms may bring a big opportunity to the globalization of Chine as well as to re-position the Chinese impact in the world. But this also can be a disadvantage for the country. Because the trolls and other third parties may use these platforms to create their own agenda in Chine and to try to damage the regime. So this will be the question of the future for the global positioning of Chinese social media platforms.

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Chapter 14

SOURCES OF ENERGY AND THE SIGNIFICANCE OF OIL[1]

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INTRODUCTION

In the late 19th century, oil gradually replaced coal which was the primary energy source for the first Industrial Revolution. Although patterns of consumption have changed over time and new sources of energy have emerged, oil has maintained its importance. In the first half of 21st century, despite increasing concerns regarding climate change both at an individual and a global scale, and the operational and governmental investments in sustainable sources of energy, oil and its derivatives continue to account for 97% of the energy needed for the production and usage of many everyday products, particularly the automobile.

The role of oil import and export cannot be ignored in China's double digit economic growth despite a slower pace in recent years, as well as Russia's overcoming of post Soviet economic crises. As oil occupies an important place in global energy consumption, its price serve as an indicator of the economic performance of countries. As a matter of course, the higher and the longer lasting the increases in oil prices, the greater its effect is on macroeconomic variables.

The embargo of several OPEC (Organization of the Petroleum Exporting Countries) member Arab states on Western countries in 1973 and the Iranian Revolution in 1978 led to oil crises and thus inflicted a heavy burden on global economy. Energy consumption that is essential for countries to sustain their economic growth and reach their industrialization objectives resulted in oil shocks and global economic stagnation. Increasing costs of energy led to growing debt especially especially in oil importer developing countries.

The growing world population is expected to double in the middle of this century, and almost all countries around the world are aiming for positive economic growth. This economic development concentrated in the world is combined with increasing energy demand. Energy demand in a growing economy stems from various sectors such as agriculture, industry, commerce, transportation and housing. The growth of the world population and economic standards increases energy consumption. Since existing fossil energy sources are decreasing over time, new and renewable energy technologies should be developed and conventional technologies should be developed in order to meet the energy demand in the future.

DEFINITION AND SIGNIFICANCE OF ENERGY

The word energy derives from Greek energeia. In its lexical meaning, it refers to being or doing something (Übelacker, 2005). Energy has been a factor of economic and social progress since the dawn of humanity. It has been a turning point several times in the history of humanity with the use of fire, illumination of cities and the advance of nuclear physics (Cleveland, 2009). Magnetism which allows for production of electricity was first discovered in China in 3000 B.C. Soon afterwards, bronze was obtained by mixing tin and copper. The first crude oil that was used by humans was found in pools which accumulated through leakages in the ground. Oil was used in Ancient Egypt for the purpose of preservation of mummies and as well as for carriages (Aydın, 2014). In the time of the Industrial Revolution, the use of steam engines increased the need for energy. Besides, the transition to mass production resulted in the population density moving from rural to urban areas which in turn led to an increase in energy consumption. The rapid growth in most countries following World War II has also been a contributing factor in increasing demand for energy (Usta, 2016). The need for energy already had a great importance in the progress of developing countries by 1950s and continued to rise after oil crises in 1970s (Prugh et al., 2005). In 1970s, the interest for energy increased further following the first oil crisis. In 1960, 11 oil exporting countries founded OPEC (Organization of Petroleum Exporting Countries) in order to monitor the production and price of oil. Following the stand the US and Europe took in favor of Israel in 1967 Arab-Israel War, OPEC member states began to turn to oil as a weapon against these countries. In January 1973, OPEC almost quadrupled the crude oil prices which stood at 1,8 USD per barrel (Aydın, 2014). This gave rise to search for alternative sources of energy.

Today, energy is considered a measure of economic progress and industrialization (Başol, 1994). It is a contributing factor to economic growth and thus a highly important input. The energy producing sector creates added value as long as the entirety of the consumed energy is derived from domestic sources. This added value tends to be greater than the growth rate of economy and assists the economic progress as long as it is used efficiently in production. So long as the energy sector has high competitive capacity, economy keeps on demanding and consuming ever more energy. Higher energy consumption following productivity growth promote economic progress even more. Due to these reasons, energy consumption is a great determinant of economic growth (Saatçi & Dumrul, 2013).

Energy consumption increases by day in parallel to rising global population, urbanization, industrialization and advances in technology. Limited sources of energy rapidly decrease at a global scale in inverse correlation to increasing demand for energy. On the other hand, variables such as the global increase in population, varying rates of economic growth and the pursuit for high standards of living have resulted in differing levels of energy need. Thus, developed, develeoping and underdeveloped countries differ in their demand for energy (T.C. Enerji ve Tabi Kaynaklar Bakanlığı, 2014). Within this context, Figure 1 shows primary energy consumption by region.

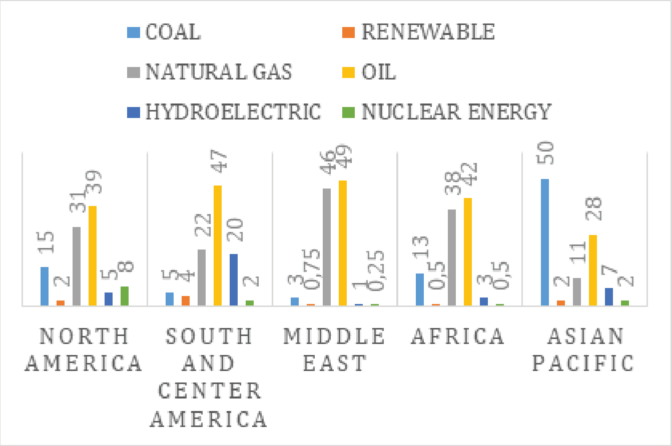

Figure 1. Regional Primary Energy Consumption 2015 (%)

Source: www.enerji.gov.tr, 2017.

As displayed in Figure 1, oil use is widespread in Africa and Americas, whereas gas is more commonly used in Europe, Eurasia and Middle East. While coal makes up 50% of energy consumption in Asia Pacific, this ratio is much lower in Middle East and Americas.

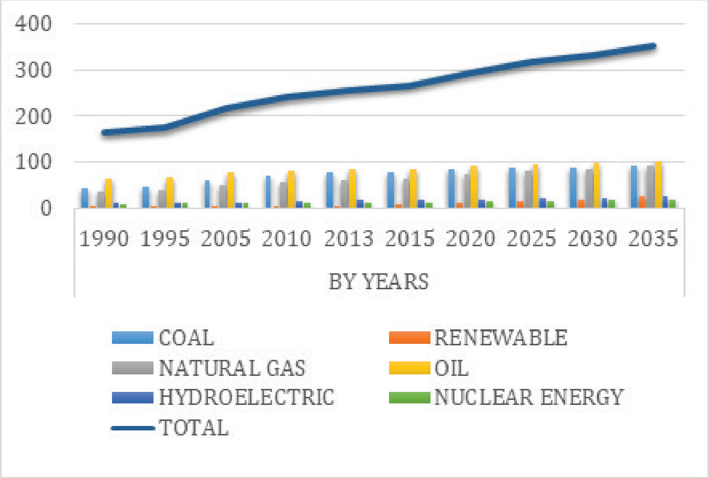

Figure 2. 1990-2035 Global Energy Consumption (Million Barrel Oil Equivalent/Day)

Source: www.enerji.gov.tr.

Figure 2 above demonstrates the global oil consumption from 1990 to 2035. As of 2015, oil is the leading form of fuel, followed by natural gas and coal. Oil is expected to keep its place among primary energy consumption in the long term.

NECESSARY CONDITIONS FOR ENERGY SECURITY AND ENERGY POLICIES

There is no consensus provided in literature regarding the definition of energy security. In its most widespread expression, energy security refers to securing economic energy sources sufficient for meeting a state's vital necessities including cases of international crises and states of conflict. As stated by the working group at Council on Foreign Relations, "energy security is the continuous and uninterrupted supply of safe and economic energy". In practice, it is understood that energy security covers "supplying of energy sources sufficient for basic needs as well as their delivery from the point of production to the end user without any obstacles" (Nogayeva, 2013).

International Energy Agency (IEA) defines energy security as "the uninterrupted availability of energy sources at an affordable price" (IEA, 2014). Energy security is multi-faceted. Whereas long term energy security is concerned mostly with investing in order to provide energy in parallel to economic developments and sustainable environmental needs; short term energy security investigates the ability of energy systems to react to abrubt changes in the supply and demand equilibrium (Öztürk et al., 2013).

According to World Bank, energy security means ensuring that countries can sustainably produce and use energy in order to reduce poverty reduction by facilitating economic growth and to directly improve peoples' quality of life through broadening access to modern energy services (World Bank, 2005).

Energy security was brought to agenda following the oil crisis of 1970s. Subsequent to the founding of International Energy Agency in 1974, the notion of national energy security was officially proposed. Underlying this notion is the stability of crude oil supply and of price-guarantee. Kyoto Protocol which was signed in 1997 refers to energy security in addition to subjects around the protection of the environment and the provision of sustainable development. Thus energy security warrants coordinated and sustainable development, meeting of energy demand and providing for economic stability (Hu & Ge, 2014).

Energy security is closely connected with countries' overall security. For this reason, it is one of the leading matters of discussion both at national and international levels. Energy security as a concept requires contextualization of various prospects ranging from a terrorist attacks or power outage on energy distribution systems to obstacles caused by tornados and to the possibility of a civil war or an invasion (Sevim, 2012). The concept of energy security has changed with the influence of changes in the context of national security and it kept being extended with the inclusion of the security of oil supply in particular, as well as financial, technological, political, military, social and environmental dimensions all the way into 1990s.

Table 1 below displays the classification of energy security events.

Table 1. Energy Security Events

Classification	Event
Global Events Policy discontinuity Fundamental discontinuity Force majeure disruption Export disruption Embargo disruption	Reduction in output by producers, to raise prices Global shortage of production capacity Civil unrest, war, deliberate blockage of trade routes Export cut-back by main exporters Embargo by importers of the exporting state
Local Events Embargo disruption Embargo disruption Logistical disruption Local market disruption	General embargo of the importing state Embargo of the importing state Accident, incident or terrorism, especially along transportation infrastructure By monopolist suppliers, by pressure groups, or through government mismanagement

Source: *Umbach, 2004.*

As shown in Table 1, energy security has several risks associated on global and local scales. Among risks seen on a global scale are policy discontinuity, fundamental discontinuity, export disruption, embargo and force majeure disruption. On the other hand, embargos of the importing and exporting states, logistical disruptions and local market disruptions are risks encountered on the local scale. In such cases, countries need policies of energy security. Risks of energy security are closely related to the presence of fuel supply and to the trends in energy demand. The supply aspect includes the size of physical sources, durability of infrastructures (e.g., electric networks, gas pipelines, oil terminals), feasibility and issuance costs as well as basic variables such as geopolitic and weather conditions, whereas the demand aspect involves variables such as economic growth and changes in economic structure and prices.

Global energy policies are shaped by matters such as the security of energy supply, the provision of energy into consumers' use at low cost and the diversification of energy sources. The security of energy supply include principles of attainability of energy and acceptability (Kaya, 2012).

The objective of an energy security policy is to ensure a steady energy supply and reduce risks including environmental damage. Countries possess several tools in line with this objective. Ensuring strengthened regional cooperation, regional strategic stocking and making provisions for emergency situations are some of these tools. Options such as the diversification of sources of supply for the purpose of decreasing dependence on a country or a region are among more long-termed supplementary precautions (Nicolas et al., 2016).

SOURCES OF ENERGY

All sources that contribute to production of energy can be referred to as sources of energy. Energy sources in an economy refer to all sorts of energy found in nature which can be utilized and made available through technological means regardless of whether they can be workable economically. Some of these sources are classified as non-renewable (exhaustible) sources of energy which are either economically workable or are found in nature in a way that can be economically utilized in the future, whereas some are economically workable and are constantly renewable sources of energy (Karluk, 2014).

Energy sources are divided into two groups based on how they are acquired:

Primary Energy Sources*;* comprise of animal and plant based fossil fuel energies. These sources differ in terms of their elasticity of substitution, ease of transportation and flexibility of end-use. Primary energy sources are also referred to as exhaustable or non-renewable sources of energy. Oil, natural gas and coal are some of the most important primary energy sources.

Secondary Energy Sources include electric, geothermal, wave, nuclear, wind and solar energies. Secondary energy sources are also referred to as renewable sources of energy. (Aydın, 2010).

Table 2. Share of Energy Resources in World Energy Supply (1973-2030)

Energy Resources (OECD)	**1973(%)**	**2008(%)**	**2030 Estimated (%)**
Oil	52,5	37,3	30
Coal	22,6	20,9	16,6
Gas	19	23,7	20,5
Nuclear	1,3	10,9	9,5
Hydro	2,1	2	3,9
Renewable Resources	**2,5**	**5,2**	**19,5**

Energy Resources (World)	**1973(%)**	**2008(%)**	**2030 Estimated (%)**
Oil	48,1	34,3	30,1
Coal	28,5	32,6	28,8
Gas	19,6	22,9	21,6
Nuclear	1,9	5,9	5,3
Hydro	1,8	2,2	2,4
Renewable Resources	**0,1**	**2,1**	**11,8**

Source: *IEA, The International Energy Agency, 2009*

The share of energy resources in world energy supply is shown in Table 2. According to Table 2, the share of renewable energy sources in the world total energy supply, which was 0.1% in 1973, increased to 2.1% in 2008. It is predicted that this increase will continue and reach 11.8% in 2030. This is a more interesting dimension for OECD countries, which consume 45% of the world's energy resources. In 1973, the share of renewable energy sources in the energy supply of OECD countries was 2.5%. This rate increased to 5.2% in 2008 and is expected to be 19.5% in 2030. These positive expectations for the next 20 years lead to increased investments in renewable energy markets and to increase existing capacities (Kum, 2009: 210).

THE SIGNIFICANCE OF OIL AS A SOURCE OF ENERGY

The sources of energy that are being used have changed in time due to various reasons such as changing patterns of energy consumption, emergence of new energy sources, retrenching in existing energy consumption structures, and the resources to afford more pricey energy sources as a result of increasing levels of income (Demir, 2014). Whereas coal was widely used and considered to be the main source of energy in the 19th century, it was gradually replaced by oil towards the end of the century. As oil use began to be more widespread, it became a primary element of international politics (MFA, 2016).

In this age, acquisition and utilization of energy is one of primary indicators of the development of a country. Although energy sources diversify each passing day, oil preserves its importance among primary energy sources (Yergin, 1991). One reason for this is the share oil has in total global energy consumption. Oil is a non-renewable source of energy with a great range of areas of usage from power generation to transportation. In the grand scheme of things, oil remains essential throughout history. Today, various sources date back the use of oil to thousands of years ago. According to Heredotos, asphalt was used 4000 years ago in the construction of Babylonian walls and towers. It is mentioned that it was used as a preservative in cementation as well as an insulant in shipbuilding. Based on historical records, asphalt is known to have been used in embalmment in 300 B.C. Persian tablets reveal the use of oil by the Persian elite in illumination and in medicine (Yergin, 1991).

The first modern oil well was opened in Baku, Azerbaijan in 1848 (Pala, 2003). However, the emergence of oil as a source occured in Titusville on a Saturday afternoon, on August 27th in 1859 when the dark-colored liquid was discovered floating on water by Edwin Drake upon the drill entering a fracture as a 69 feet deep well was being drilled (Yergin, 1991). The discovery of oil led to the invention of the engine and so gave rise to the development of the automative industry. The number of vehicles has rapidly increased in the USA, the UK, England, France and Germany, thus oil claimed its place as the primary raw material of competition.

Early in the 20th century, countries have increasingly become dependent on energy sources to ensure their progress and industrialization. From this era onwards, oil began to be utilized in warships and thus the extra significance oil gained led developed countries to adapt different strategies in order to get hold of it. Energy and oil strategies affected international relations in various ways, which drove countries to take action either solitarily or in cooperation with others with regards to projects and agreements on various scenarios that are to be applied within the context of global competition (Alkin & Atman, 2006).

Starting in mid-20th century, the production center of oil moved to the Middle East and North Africa. By the end of this period, oil replaced coal as a cheaper input, which made it a highly important driving force for economic growth. In 1950s, a nationalization movement went into action in oil-producing countries which contributed to the foundation of OPEC and brought about the use of oil as a political weapon later in 1973-74 (MFA, 2016).

Global Oil Reserves

Global annual oil production was at 150 million barrels in 1900. This number reached 28 billion barrels by. A great portion of this increase was met by OPEC member countries in 1980s. 78% of global oil reserves are found in OPEC member countries whereas 16% are found in non-OPEC countries. OECD countries account for a share of 8% of reserves. 65,3% of oil reserves are found in the Middle East. Saudi Arabia alone accounts for 25% of reserves, followeed by Iraq with a share of 11% and United Arab Emirates, Kuwait and Iran with 9% each. (http://www.kamufinans.com/dunya-petrol-rezervlerinin-dagilimi/, 2016).

Annual oil production has reached its peak in most oil producer countries. These countries utilize the reserve/production relation in order to predict their future oil production trends. In 1956, M. King Hubbert proposed a theory of predictability of the time that passes between the peak point of new reserve discoveries and the peak point of production taking into account the structure of the oil production (Sevim, 2012). This is demonstrated below in Figure 4.

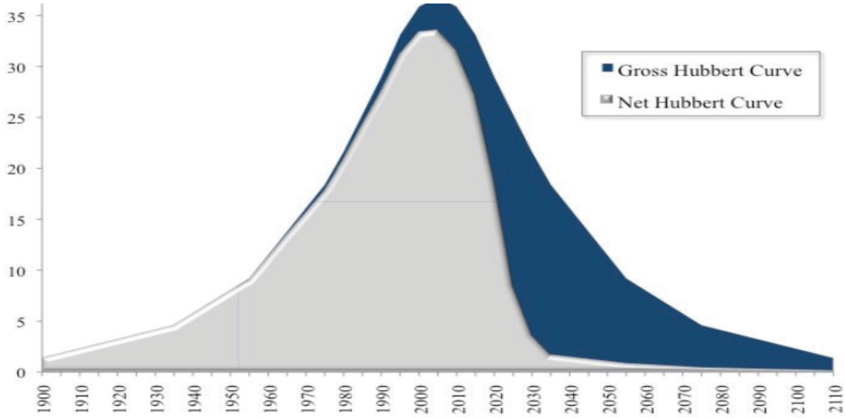

Figure 4. Hubbert Curve

Source: Hubbert, 1955

Hubbert investigated the production of oil in the United States geologically and stated that oil production in 48 states would reach its peak between 1965 and 1970 and foresaw a decline thereafter. His predictions were confirmed as of 1971.

As of 2015, there are 1,697 trillion barrels of proven oil reserves in the world. This corresponds to a 0,06% decrese from 2014. The lifetime of global oil reserves fell from 53,3 years in 2014 to 52,2 years in 2015. Crude oil which carries political and economic singificance met 32,6% of global energy demand in 2015. (http://www.enerji.gov.tr/tr-TR/Sayfalar/Petrol, 2016). Table 3 below displays global oil reserves from 1995 to 2015.

Table 3. 1995-2015 Global Oil Reserves (Million Barrels)

Region	1995	2005	2014	2015
North America	126,9	223,6	238,0	238,0
South and Middle America	83,7	103,6	331,7	329,2
Europe and Eurasia	141,2	139,5	154,6	155,2
Middle East	663,3	755,5	803,8	803,5
Africa	72,0	111,3	29,3	129,1
Asia Pacific	39,1	40,8	42,6	42,6
Global Total	1126,2	1374,4	1700,0	1697,6

Source: BP Statistical Review of World Energy, June 2016

As shown in Table 3, global oil reserves were 1697,6 million barrels as of 2015. It can be seen that Middle East accounts for a share of 803,5 million barrels. The region of South and Middle America follows Middle East with a total oil reserve of 329,2 million barrels in 2015.

"109,7 billion tons (47,7%) of oil reserves are found in countries of Middle East; 19,3 billion tons (8,3%) in Russia Commonwealth of Independent States (CIS) and 17,1 billion tons (7,6%) in Africa. As global oil production reached 93,2 million barrels/day by 2014, China and Europe are expected to be the leading importers of oil by 2030. China is estimated to replace United States as the largest importer of oil by 2017; it is expected that being backed by economic growth, oil import will help China be less oil-dependent in comparison to Europe" (http://www.enerji.gov.tr/tr-TR/Sayfalar/Petrol, 2016).

Global Oil Production and Consumption

Oil production increased to 91,2 million b/d in 2015 by 2,8% from 88,7 million b/d in 2014. Middle East accounted for 30% of this production. Figure 5 below represents region based global oil production from 2006 to 2015. Accordingly, Middle East region is the leading producer of oil in 2015 with 30 million barrels/day. Following Middle East is North America with 19 million barrels/day. All regions with the exception of Middle East and Africa appear to have had an increase in oil production in 2014 compared to 2013.

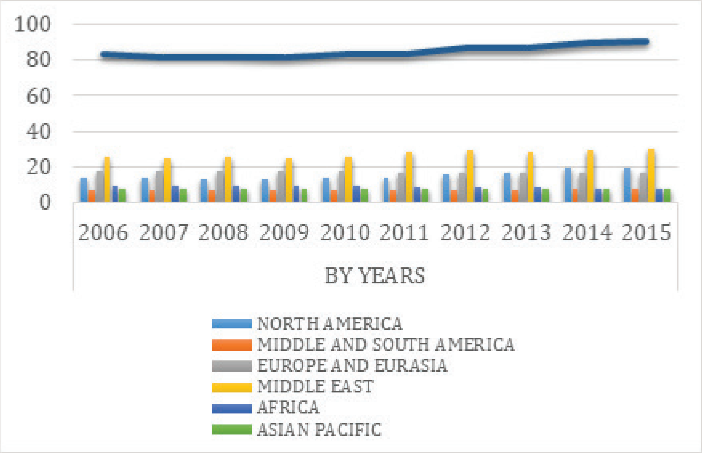

Figure 5. 2006-2015 Global Oil Production By Region (million barrels/day)

Source: BP Energy Outlook, 2016

International Energy Agency (IEA)'s Medium-Term Oil Market Report issued in February 2016 indicates an estimation of a 3,3 million b/d increase in oil supply within the next 5 year term. A reason for this is stated to be the flexibility and significant share non-OPEC countries had in the increase of production in 2015 when oil prices were in fall. A 3,3% increase in production is expected by non-OPEC countries in 2021. (http://www.enerji.gov.tr/tr-TR/Sayfalar/Petrol, 2016).

Global oil consumption went up to 92,1 million b/d in 2014 by 0,1% from 91,2 million b/d in 2013 and climbed by another 2% to 93,8 million b/d in 2015. Figure 6 below represents global oil consumption by region. Accordingly, the demand for oil appears to have decreased after 2008 and tended to increase again after 2010. The leading region in oil consumption in 2014-2015 was Asia-Pacific followed by North America. Middle East, although the leading producer of oil, placed fourth out of six regions in oil consumption.

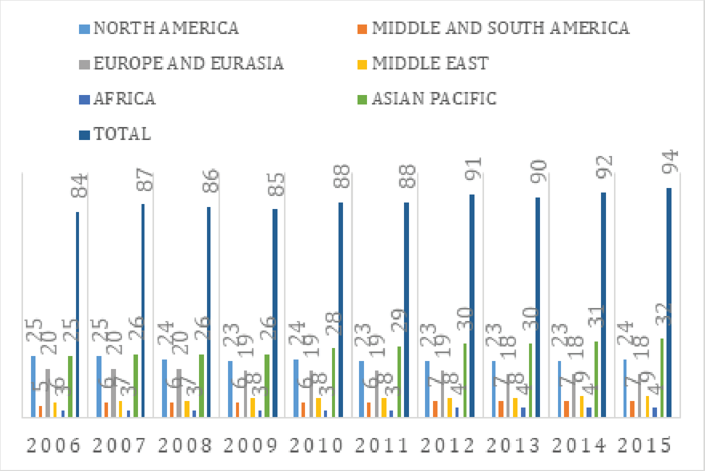

Figure 6. 2006-2015 Global Oil Consumption By Region (million barrels/day)

Source: BP Energy Outlook, 2016

As seen in the Figure 6 above, global oil consumption increased by 0,1% to 92,1 million b/d in 2014 from 91,2 million b/d in 2013, and by a further 2%, to 93,8 millon b/d' in 2015. The most significant regional increases occured in Asia Pacific (3,4%) and in Africa (3,9%).

United States is the leading consumer of oil followed by China, Japan and India respectively. The reason why the greatest consumption is seen in these countries could be the recent increases of production and export as well as the rapid growth in China and India. Since 2010, there is an upward trend in oil consumption in all countries with the exception of the US, Japan and Italy. The daily consumption of oil in the United States has dropped from 19180 thousand barrels in 2010 to 19035 thousand barrels in 2014. Similarly, the daily oil consumption in 2014 decreased to 4298 thousand barrels in Japan and 1200 thousand barrels in Italy from 4442 and 1532 thousand barrels in 2010 respectively. In 2015, oil consumption increased in all countries except Canada, Japan, Russia, Germany, Mexico, Indonesia and France.

RESULTS

At the beginning of the 20th century, dependence on energy resources has increased in order to ensure the development and industrialization of countries. Since this period, the ships that were developed for use in war have opened up to work with petroleum, and thus the increasing importance of oil has forced the developed countries to determine different strategies to have oil.

Oil is an essential source of energy in the process of economic progress and it has played a key role in allowing many countries to move forward through obstacles as well as the stagger some countries had to endure in face of financial crises in the process. Oil, or the so-called "black gold" serves as raw material, intermediate good and a source of energy and is essential for global production. The fluctuations in its price are highly worthy of note for modern economies, particularly for leading stock markets of the world. Factors such as the deceleration of the growth of Chinese economy, and the lack of consensus among oil producer countries on decreasing their production capacities triggered declines in oil prices. Increases in oil prices effect both developed and developing countries either directly or indirectly. Increases in oil prices that has been present since the beginning of 21th century put oil importer developing countries in a tight spot, though on the other hand strengthened natural resource-rich countries such as Russia at an international level.

The effects of changes in oil prices vary depending on whether countries are oil importers or oil exporters. High oil prices lead to income transfers from oil-importing countries to oil-exporting countries, causing a decrease in the growth of importing countries. On the other hand, the rise in oil prices led to an increase in input costs, leading to a decrease in production in importing countries.

Most of the oil consumption in oil importer countries is covered by imports. Therefore, it is very important to determine the policy responses to be followed in order to prevent the adverse effects of the increases in oil prices in the oil importing countries.

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Chapter 15

ACADEMIC PROCRASTINATION AND SELF-HANDICAPPING AS MEDIATORS FOR THE EFFECT OF PERFECTIONISM ON ACADEMIC ACHIEVEMENT

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People put great effort into reaching perfection, and this behavior is an important field of study in psychology literature. Perfectionism, which has a multidimensional structure, has been defined as a personality trait that is associated with aspirations for flawlessness, overly high standards and the interpretation of one's behavior through a critical lens (Flett and Hewitt, 2002). Perfectionism was first examined in detail by personality theorists (Blatt, 1995; Freud, 1959; Hamachek, 1978), and the issue was then taken up by contemporary theorists (e.g. Frost, Marten, Lahart and Rosenblate, 1990; Hewitt and Flett, 1991a; 1991b; 1993; 2002; Slaney, Rice, Mobley, Trippi and Ashby, 2001), whose findings related to perfectionism were mostly negative (e.g., Frost et al., 1990; Hewitt and Flett, 1991a; 1991b; 1993; Yorulmaz, 2002). The first attempts to measure perfectionism as a multidimensional construct were Frost et al. (1990), followed shortly thereafter by Hewitt and Flett (1991a), who developed a new multidimensional perfectionism scale that took into account both the personal and interpersonal aspects of perfectionism. Hewitt and Flett's (1991a) multidimensional scale contain the three dimensions of self-oriented perfectionism, other-oriented perfectionism, and socially prescribed perfectionism.

Self-oriented perfectionism involves the belief that striving for perfectionism and being perfect are important for an individual, and the individual thus sets overly high standards for themselves. Other-oriented perfectionism concerns an individual's beliefs regarding the skills of others, and involves high expectations from others. Socially prescribed perfectionism, on the other hand, refers to the belief that other people set overly high standards for the individual in question, in which acceptance by others is dependent upon meeting these standards (Hewitt and Flett, 1991a, 2002). Aside from the negative effects of self-blame, and symptoms of depression (Hewitt, Mittelstaed and Flett, 1990; Wheeler, Blankstein, Antony, McCabe and Bieling, 2011) and anorexia (Cockell, Hewitt, Seal, Sherry, Goldner, Flett, and Remick, 2002; Davis, Kaptein, Kaplan, Olmsted and Woodside, 1998; Hewitt and Flett, 2007; Hewitt, Flett and Ediger, 1995), self-oriented perfectionism also has some positive effects, such as aspirations for success, and the development of self-esteem (Hewitt and Flett, 1991a; 1993; Oral, 1999; Neumeister, 2004; Stoeber and Otto, 2006), intrinsic motivation (Einstein, Lovibond and Gaston, 2000; Stoeber, Feast and Hayward, 2009), academic achievement (Blankstein and Dunkley, 2002; Cox, Enns and Clara, 2002; Flett, Blankstein and Hewitt, 2009), self-control (Flett, Hewitt, Blankstein and O'Brien, 1991) and adaptive social skills (Flett, Hewitt and DeRosa, 1996). Furthermore, some studies have reported that self-oriented perfectionism is related to positive or adaptive perfectionism (Frost, Heimberg, Holt, Mattia and Neubauer, 1993). In her study of highly talented college students, Neumeister (2004) argued that self-oriented perfectionism can lead to mastery and performance-oriented goals.

Studies of other-oriented perfectionism also report both positive and negative aspects. In addition to negative traits such as authoritarianism (Yadegarfard and Yadegarfard, 2016), social distance (Hewitt, Flett and Turnball, 1992), low agreeableness (Hill, McIntire and Bacharach, 1997; Sherry, Hewitt, Flett, Lee-Baggley, and Hall, 2007), interpersonal problems (Hewitt and Flett, 2007), eating disorders, assigning hostility toward others, lack of trust and blame (Franco-Paredes, Mancilla-Diaz, Vazquez, Lopez ve Alvarez, 2005), this dimension is also associated with such positive traits as the ability to motivate and lead others (Franco-Paredes, et al., 2005), academic achievement (Flett,et al., 2009) and assertiveness (Flett,et al., 1996). In short, studies report that both self-oriented perfectionism and to a lesser extent, other-oriented perfectionism are associated with adaptive and positive traits (Flett and Hewitt, 2002; Flett, et al., 1996). Other-oriented perfectionism, in contrast, is overlooked in most studies into the clinical importance of multidimensional perfectionism (Dunkley, Blankstein, Masheb and Grilo, 2006). Many recent studies examining Hewitt and Flett's (1991a) multidimensional model of perfectionism have focused on comparing self-oriented perfectionism and socially prescribed perfectionism, paying less attention to other-oriented perfectionism (eg. Miquelon, Vallerand, Grouzet and Cardinal, 2005; Powers, Koestner and Topciu, 2005).

There have also been previous studies reporting that socially prescribed perfectionism is associated with anxious, overly protective, affectionless and harsh parenting (Flett, Hewitt, Oliver ve Macdonald, 2002); destructive relationship responses and the depersonalization of and obsessive behavior toward a partner (Flett, Hewitt, Shapiro, and Rayman, 2001); as well as suicidal tendencies (Hamilton and Schweitzer, 2000; Hewitt, Caelian, Chen and Flett, 2014; Hewitt, Newton, Flett and Callander, 1997; Roxborough, Hewitt, Kaldas et al., 2012). There have also been numerous studies reporting that socially prescribed perfectionism is more negative than self-oriented perfectionism, and is more strongly associated with relationship discord (Flett et al., 2001; Klibert, Langhinrichsen-Rohling, and Saito, 2005; Sherry, Hewitt, Flett, and Harvey, 2003). According to Neumeister (2004), self-oriented perfectionists are motivated to achieve success, whereas socially prescribed perfectionists are motivated to avoid failure by setting both performance-oriented and performance-avoidant targets. Frost et al. (1993) found that the results of measurements conducted using their multidimensional scale were closely related to those conducted using the multidimensional scale of perfectionism developed by Hewitt and Flett (1991a). The authors found that self-oriented perfectionism, other-oriented perfectionism, personal standards and order were clustered together as a factor reflecting the more positive aspects of perfectionism, whereas socially prescribed perfectionism, concern over mistakes, doubts about actions, parental criticism and parental expectations were clustered together as a factor reflecting the more negative aspects of perfectionism. According to Klibert et al. (2005), self-oriented perfectionism can be viewed as a positive trait only when it is not accompanied by socially prescribed perfectionism. Similarly, many studies (Dunkley et al., 2006; Sherry, et al., 2003) have reported that self-oriented perfectionism cannot be a good predictor of positive perfectionism if it overlaps with socially prescribed perfectionism, or if self-criticism is not kept under control.

Perfectionism can also lead to procrastination, as another negative tendency. According to Flett, Hewitt and Martin (1995), procrastination is closely related to perfectionism, in that it involves a tendency to set high standards. Accordingly, many researchers who share this view have studied perfectionism and procrastination together (E.g., Bong, Hwang, Noh, and Kim, 2014; Smith, Sherry, Saklofske, and Mushqaush, 2017; Solomon and Rothblum, 1984, Walsh and Ugumba-Agwunobi, 2002).

The Relationship between Procrastination, Academic Procrastination and Perfectionism

Procrastination is defined as the postponement of tasks to the last minute (Solomon and Rothblum, 1984), or the voluntary delaying in taking an intended action, despite the potential for negative consequences (Steel, 2007). Solomon and Rothblum (1984) argue that the process of procrastination results from worries about harsh judgments and evaluations. People are reported to procrastinate more when faced with tasks that are viewed as inconvenient, boring or difficult (Milgram, Sroloff and Rosenbaum, 1988). Different causes are identified for procrastination (Ferrari and Díaz-Morales, 2007), but both perfectionism and procrastination are thought to be linked to an excessive fear of failure (Flett, Blankstein, Hewitt and Koledin, 1992; Solomon and Rothblum, 1984). Procrastination has been found to be associated with higher levels of depression (Saddler and Sacks, 1993), and with higher anxiety (Haycock, McCarty and Skay,1998) and concern (Stöber ve Joormann, 2001) and with lower self-esteem (Ferrari, 1991) in populations. According to Burka and Yuen (1983), perfectionists set unrealistically high standards for themselves, and procrastinate due to their belief that they cannot meet these standards. According to another view, perfectionist individuals tend to procrastinate because they fear being compared to their peers, as there can be no failure or insufficiency if a task is not attempted (Closson and Boutilier, 2017). This behavioral pattern indicates that procrastinators may have low levels of self-esteem. The idea that lower levels of self-esteem would be associated with a stronger tendency to procrastinate is supported also by research findings (Ferrari, 1991; 1994). The socially prescribed dimension of perfectionism in particular is a strong predictor of procrastination. Flett et al. (1992) found that people who scored higher in socially prescribed perfectionism reported engaging in more procrastination than self-oriented perfectionists. In another study, Closson and Boutilier (2017) found that socially prescribed perfectionism was positively related to procrastination and negatively related to academic participation, whereas self-oriented perfectionism was related negatively with procrastination.

Academic procrastination is common among college students (Solomon and Rothblum, 1984), defined as postponing such academic tasks as preparing for an exam or turning in homework, waiting until to the last minute (Milgram, Mey-Tal and Levinson, 1998; Schouwenburg, 1995), and the intentional delaying of academic tasks out of a fear of making mistakes (Senecal, Koestner and Vallerand, 1995). The tendency for academic procrastination has been found to have a negative relationship with self-esteem (Beswick, Rothblum and Mann, 1988; Lekich, 2006). College students who tend to procrastinate receive lower academic scores than non-procrastinators (Steel, 2007), although the relationship between the tendency for academic procrastination and academic achievement may be stronger or weaker, depending on the overall and performance-related self-esteem levels of students (Balkıs and Duru, 2010). There have been many studies reporting a negative relationship between procrastination and academic performance (Balkıs, Duru, Buluş and Duru, 2008; Beck, Koons and Milgrim, 2000; Lakshminarayan, Potdar and Reddy, 2013; Moon and Illingworth, 2005; Van Eerde, 2003; Wang and Englander, 2010). Among college students, in particular, higher levels of perfectionism are associated with higher levels of academic procrastination (Jadidi, Mohammadkhani ve Tajrishi, 2011). There are also studies reporting academic procrastination to have a significant and positive relationship with non-adaptive, socially prescribed perfectionism (Bong et al., 2014; Burns, Dittman, Nguyen and Mitchelson, 2000; Çakıcı, 2003; Saddler and Sacks, 1993; Wernicke, 1999), and a negative relationship with self-oriented perfectionism (Sula Ataş and Kumcağız, 2019; Bong et al., 2014; Closson and Boutilier, 2017; Çakıcı, 2003; Özer and Altun, 2011).

In addition to having perfectionist personality traits, people who report engaging in frequent procrastination display self-handicapping behavior (Ferrari and Tice, 2000), make up excuses (Ferrari, 1993), and identify factors other than their own performance as the reason for delay (Ferrari, Johnson, and McCown, 1995). These are reminiscent of self-handicapping behaviors.

The Relationship between Self-Handicapping and Perfectionism

Defined by Zuckermann and Tsai (2005) as the creation of handicaps that threaten the optimum performance of a task, the concept of self-handicapping was first raised by Berglas and Jones (1978), who argued that individuals engage a self-handicapping actions or performance choices do so to create an excuse or an opportunity to externalize failure and to internalize success. Most researchers argue that people who engage in self-handicapping behaviors do so to protect themselves from the negative effects of failure (Eg., Berglas and Jones, 1978; Covington, 1992; Greenberg, 1985; Urdan and Midgley, 2001). Self-handicappers create handicaps to their performance in order to avoid a situation that may negate their desired self-concept (Rhodewalt and Davison, 1986). Thus, according to Berglas and Jones (1978), any potential failure can be attributed to the externally created handicap, rather than to a deficiency of the person. If, on the other hand, the person succeeds despite the handicap, this would be an advantage, in that the success can be attributed to the person themselves. Self-handicapping is seen in individuals who lack confidence in their abilities, and as a behavior undertaken prior to the worrying event in question (Greenberg, 1985). Moreover, the more importance attributed to an event, the more worrying it becomes, and the more effective the self-handicapping mechanism (Greenberg, 1985). According to Urdan and Midgley (2001), self-handicapping can serve as a strategy of self-presentation as a means of manipulating the perceptions of others so that one's deficiencies are not revealed, or as a self-preservation strategy. Self-handicapping is a way of preserving self-esteem, but is also a destructive strategy that hampers self-awareness and prevents effort and taking responsibility, and by using this strategy, the individual facilitates the attribution of both failure and success (Hirt, Deppe and Gordon, 1991). With self-handicapping strategies, a student can create obstacles to future success, and then attribute failure to these obstacles rather than to their lack of skills. Thus, the student shifts attribution from internal to external factors, and creates a defense mechanism for the preservation of self-confidence in the face of potential failure or low performance (Bobo, Whitaker and Strunk, 2013). Among student populations, self-handicapping is associated with weak adaptation and academic failure (Garcia, 1995; Zuckerman, Kieffer and Knee, 1998). Zuckerman et al. (1998) found that self-handicappers had lower performance and worse study habits than those who did not engage in self-handicapping, and had also lower self-esteem. Garcia (1995), on the other hand, reports that self-handicappers have low intrinsic motivation and bad time-management practices.

One of the most common self-handicapping strategies employed by students is procrastination. Studies of procrastination have reported that college students procrastinate more when they are worried about academic tasks, and procrastination is very common in the case of homework (Eg., Ellis and Knaus, 1977; Onwuegbuzie, 2004; Solomon and Rothblum, 1984; Özer, Demir, and Ferrari; 2009). Beck, Koons and Milgrim (2000) report that people who self-handicap more, spending less time studying and preparing for exams, also tend to procrastinate more than people who display fewer self-handicapping behaviors. Similarly, Ferrari and Tice (2000) report that procrastinators spend less time preparing for exams, and if they are assigned tasks that require cognitive skills, they tend to self-handicap by spending more time on fun and alternative tasks. Perfectionism, on the other hand, is considered to be one of the reasons underlying self-handicapping behavior among students (Kearns, Forbes, Gardiner and Marshall, 2008; Stewart and Degeorge-Walker, 2014). Kearns et al. (2008) found that not all perfectionist students engage in self-handicapping, but they have a higher tendency to display such behaviors. The authors also report that students who desire to be perfect, and to be perceived as such, are more likely to engage in self-handicapping if they are also worried about their self-images. They argue that perfectionists in particular self-handicap out of a fear of failure when they believe they may fail to perform well, in order to mask potential failure. There have been many studies identifying a positive relationship between self-handicapping and perfectionism, and a negative relationship with academic achievement (Hobden and Pliner, 1995; Karner-Huţuleac, 2014; Zuckerman et al., 1998). In a study by Hobden and Pliner (1995) in which they made use of Hewitt and Flett's (1991a) scale to examine the relationship between multidimensional perfectionism and self-handicapping, it was found that students with self-oriented and socially prescribed perfectionism were more likely to display self-handicapping behaviors. Self-oriented perfectionists use handicapping for self-protection, whereas socially prescribed perfectionists self-handicap out of a fear of self-presentation. People with non-adaptive perfectionist tendencies frequently engage in self-handicapping in order to avoid threats to their self-esteem (Stewart and Degeorge- Walker, 2014). Puldorf, Johnson and Awaida (2004) conducted an intercultural study in which they found that self-oriented perfectionism and self-esteem were major predictors of self-handicapping in both the Lebanese and British cultures, and that self-handicapping was partially a result of self-doubt.

Perfectionism, when faced with unrealistic expectations and goals, can lead to procrastination and self-handicapping among students, and thus lower academic achievement. The present study examines procrastination and self-handicapping as mediators for the effect of perfectionism on academic performance.

Method

The Research Process and Participants

This study has a relational research design. The participants were college students attending various colleges, and included 158 female (45%) and 196 male (55%) respondents, totaling 354. The ages of the participants varied between 17 and 37 (*Mean* = 21.63, *SD* =0.17).

Data Collection Instruments

Démographique Questionnaire. The first part of the questionnaire asked participants about their academic achievement scores for the previous year, and contained items on gender, age and economic status, among others.

Multidimensional Perfectionism Scale (MPS-HF). Hewitt and Flett (1991a), based on their multidimensional conception of perfectionism, developed the 45-item Multidimensional Perfectionism Scale (MPS-HF). The scale has three dimensions, namely "self-oriented" perfectionism, "other-oriented" perfectionism and "socially prescribed" perfectionism. The responses to the items are evaluated using a 7-point Likert scale (1=strongly disagree, 7=strongly agree). The original scale had an internal consistency coefficient of .86 for "self-oriented" perfectionism, .82 for "other-oriented" perfectionism and .87 for "socially prescribed" perfectionism. The scale was adapted for use in Turkey by Oral (1999), who also examined the validity and reliability of the Turkish version. Oral found a Cronbach's alpha coefficient of .91 for "self-oriented" perfectionism, .73 for "other-oriented" perfectionism and .80 for "socially prescribed" perfectionism.

Self-Handicapping Scale (SHS). Developed by Jones and Rhodewalt (1982), this scale evaluates various types of self-handicapping, such as procrastination, lack of effort, getting ill, abuse of alcohol or drugs, and emotional problems. The scale comprises 25 items, which are scored on a 6-point Likert scale, and all items are grouped under a single dimension. Higher scores on the scale indicate a higher tendency to engage in verbal or behavioral self-handicapping. Rhodewalt (1990) reported a coefficient of .79 for internal consistency reliability of the scale, and .74 for its test retest reliability. The study was adapted for use in Turkey by Akın (2012), who also examined the validity and reliability of the Turkish version, reporting a coefficient of .90 for internal consistency reliability, and .94 for test retest reliability.

Aitken Procrastination Inventory (API). This inventory, developed by Aitken (1982), measures the tendency of students to procrastinate when faced with academic tasks. Higher scores in the inventory indicate a stronger tendency to procrastinate when faced with academic tasks. Adapted for use in Turkey by Balkıs (2006), the inventory has 16 items, scored on a 5-point Likert scale. All items of the scale are grouped under a single dimension. Aitken (1982) reported a coefficient of .82 for internal consistency reliability for the inventory. Balkıs (2006) reported a coefficient of .89 for internal consistency reliability, and .87 for test retest reliability of the Turkish version of the inventory.

Procedure

Data was collected during face-to-face interviews. Prior to the interviews, the participants were informed about the study, and their voluntary consent for participation was obtained. The participants took 20–25 minutes to respond to the questionnaires.

Results

The data collected in the study was analyzed using the SPSS 22 software package, and the mediating effect was examined through structural equation modeling with the help of the IBM SPSS Amos software package. The three dimensions of perfectionism, namely “self-oriented” perfectionism, “other-oriented” perfectionism and “socially prescribed” perfectionism, were the independent variables, academic achievement scores were the dependent variable, and self-handicapping and academic procrastination were the mediating variables. Each dimension of perfectionism was first examined for the significance of its effect on academic achievement, followed by an examination of its mediating effects.,

Direct and Mediated Effects of “Self-Oriented” Perfectionism on “Academic Achievement”

According to MacKinnon, Fairchild and Fritz (2007), mediating variables are part of the cause and effect relationship between independent and dependent variables. To explore any mediating effects, the effect of the independent variable on the dependent variable must be statistically significant (Baron and Kenny, 1986). Baron and Kenny explain that for a mediating effect to exist, the independent variable must have a significant effect on the mediating variable, as well as on the dependent variable. Full mediation may exist when, upon the inclusion of the mediating variable in the regression analysis in the second step, the relationship between the independent variable and the dependent variable becomes insignificant. If that relationship weakens but remains significant, partial mediation may occur (MacKinnon, et al., 2007).

Analyses have shown that the “self-oriented perfectionism” (SOP) dimension has a direct and significant effect on “academic achievement” (AA) ($\beta = 0.19$; $t = 3.65$; $p<0.01$). Table 1 and Figure 1 show the relationship between the two variables.

Table 1. Findings of the direct effects of the "self-oriented perfectionism" dimension on "academic achievement"

			β	**t**	**p**
SOP	→	AA	0,19	3,646	0,010*

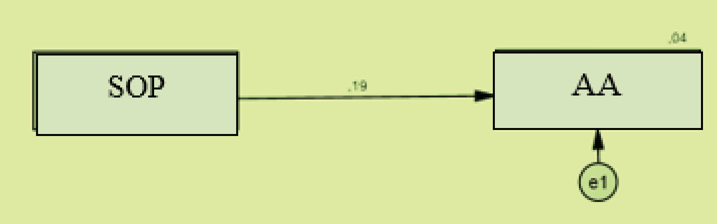

Figure 1. Direct effects of the "self-oriented perfectionism" dimension on "academic achievement"

As a direct and significant effect was observed between the "self-oriented perfectionism" (SOP) and "academic achievement" (AA) variables, we proceeded to examine the mediating effects of "academic procrastination" (AP) and "self-handicapping" (SH).

Direct and statistically significant effects exist between "self-oriented perfectionism" and "academic procrastination" (β = -0.35; *t* = -7.10; *p*<0.01), "self-oriented perfectionism" and "academic achievement" (β = 0.14; *t* = 2.51; *p*<0.01), and "academic procrastination" and "academic achievement" (β = -0.15; *t* = -2.65; *p*<0.01). When "academic procrastination" is included as a mediating variable, the coefficient for the effect of "self-oriented perfectionism" drops from 0.19 to 0.14. It is thus concluded that "academic procrastination" has a partial mediating effect. The findings related to the mediating effect of "academic procrastination" are presented in Table 2 and Figure 2.

Table 2. Findings regarding the mediated effects of the "self-oriented perfectionism" dimension on "academic achievement" via "academic procrastination"

			β	**t**	**p**
SOP	→	AP	-0,354	-7,101	**0,010***
SOP	→	AA	0,139	2,507	**0,012***
AP	→	AA	-0,147	-2,65	**0,008***

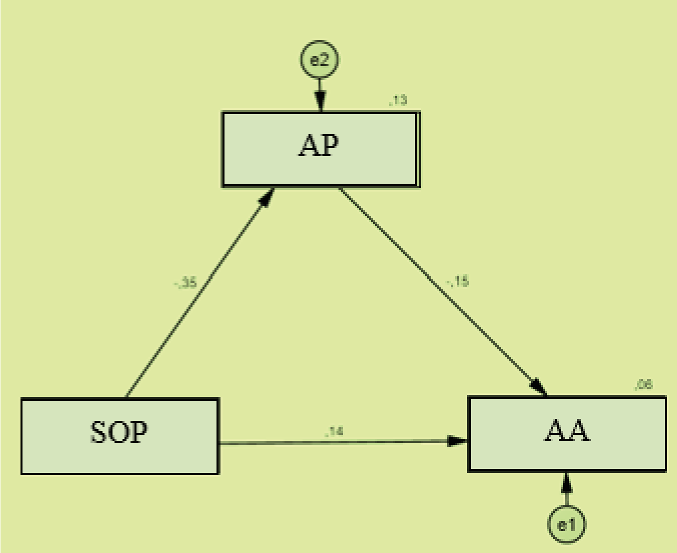

Figure 2. Mediated effects of the "self-oriented perfectionism" dimension on "academic achievement" via "academic procrastination"

Direct and statistically significant effects exist between "self-oriented perfectionism" and "self-handicapping" (β = -0.12; *t* = -2.31; *p*<0.05), "self-oriented perfectionism" and "academic achievement" (β = 0.17; *t* = 3.34; *p*<0.01), and "self-handicapping" and "academic achievement" (β = -0.13; *t* = -2.55; *p*<0.01). When "self-handicapping" is included as a mediating variable, the coefficient for the effect of "self-oriented perfectionism" drops from 0.19 to 0.17. It is thus concluded that "self-handicapping" has a partial mediating effect. The findings regarding the mediating effect of "self-handicapping" are presented in Table 3 and Figure 3.

Table 3. Findings related to the mediating effects of the "self-oriented perfectionism" dimension on "academic achievement" via "self-handicapping"

			β	**t**	**p**
SOP	→	SH	-0,122	-2,314	**0,021***
SOP	→	AA	0,174	3,34	**0,010***
SH	→	AA	-0,133	-2,551	**0,011***

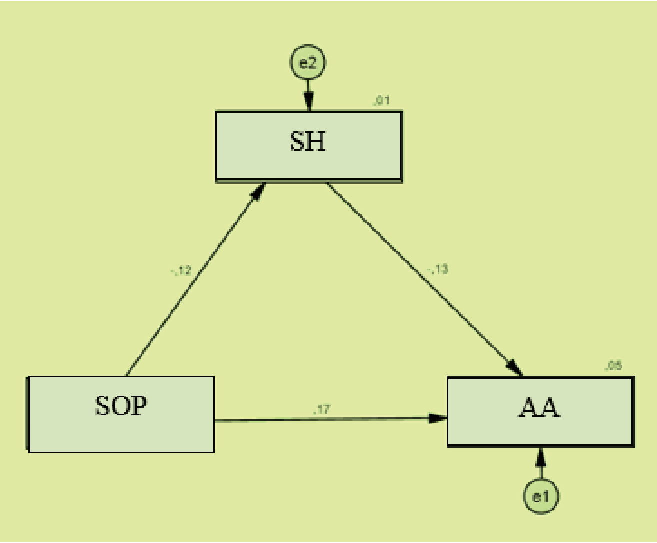

Figure 3. Mediated effects of the "self-oriented perfectionism" dimension on "academic achievement" via "self-handicapping"

Direct and Mediated Effects of "Other-Oriented" Perfectionism on "Academic Achievement":

"Other-oriented perfectionism" (OOP), as another dimension of perfectionism, had a direct and significant effect on "academic achievement" (AA) (β = 0.11; $t = 2.10$; $p<0.05$). Table 4 and Figure 4 show the relationship between the two variables.

Table 4. Findings regarding the direct effects of the "other-oriented perfectionism" dimension on "academic achievement"

			β	**t**	**p**
OOP	→	AA	0,111	2,103	**0,035***

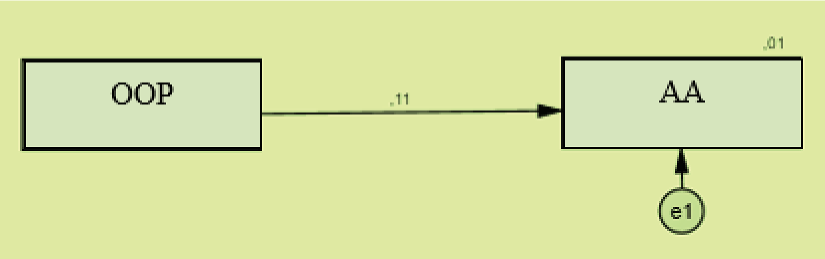

Figure 4. Direct effects of the "other-oriented perfectionism" dimension on "academic achievement"

To explore a mediating effect, the direct effect between the two variables needs to be statistically significant. As a direct and significant effect was observed between the "other-oriented perfectionism" (OOP) and "academic achievement" (AA) variables, we proceeded to examine the mediating effects of "academic procrastination" (AP) and "self-handicapping" (SH).

Direct and statistically significant effects exist between "other-oriented perfectionism" and "academic procrastination" (β = -0.21; *t* = -4.01; *p*<0.01), and "academic procrastination" and "academic achievement" (β = 0.18; *t* = 3.39; *p*<0.01). Between "other-oriented perfectionism" and "academic achievement," on the other hand, no statistically significant relationship was found (β = -0.07; *t* = -1.38; *p*>0.05). According to MacKinnon, et al. (2007), full mediation may exist when, upon the inclusion of the mediating variable in the regression analysis in the second step, the relationship between the independent variable and the dependent variable becomes insignificant. No statistically significant relationship was identified between "OOP-AA" after "AP" was included in the analysis, leading to the conclusion that "AP" has a full mediating effect. The findings related to the mediating effect of "academic procrastination" are presented in Table 5 and Figure 5.

Table 5. Findings regarding the mediated effects of the "other-oriented perfectionism" dimension on "academic achievement" via "academic procrastination"

			β	**t**	**p**
OOP	→	AP	-0,208	-4,005	**0,010***
OOP	→	AA	0,074	1,383	**0,167**
AP	→	AA	-0,18	-3,387	**0,010***

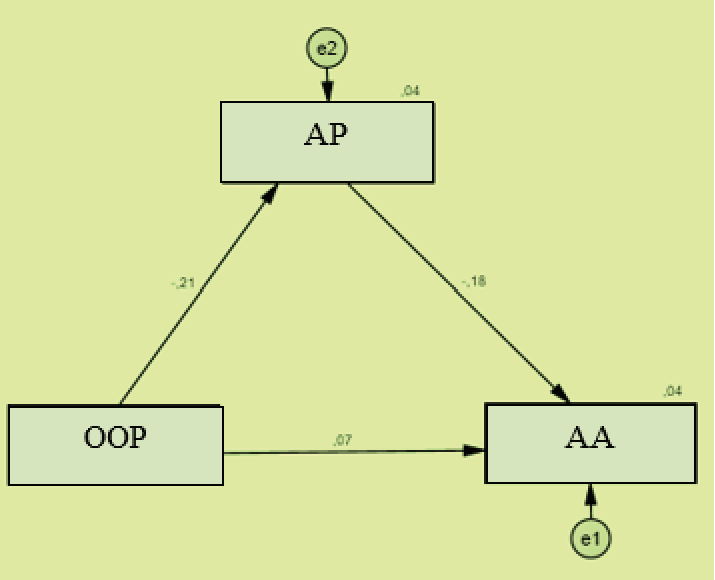

Figure 5. Mediated effects of the "other-oriented perfectionism" dimension on "academic achievement" via "academic procrastination"

No direct or statistically significant effects exist between "other-oriented perfectionism" and "self-handicapping" (β = -0.09; *t* = -1.63; *p*>0.05), nor between "other-oriented perfectionism" and "academic achievement" (β = 0.09; *t* = 1.88; *p*>0.05). Between "self-handicapping" and "academic achievement," on the other hand, a statistically significant relationship was found (β = -0.15; *t* = -2.78; *p*<0.01). For mediating effects to exist, both of the relationships between "OOP – SH" and "SH – AA" must be statistically significant. No statistically significant relationship existed between "OOP – SH", leading to the conclusion that "SH" does not have a mediating effect. Findings regarding the mediating effect of "self-handicapping" are given in Table 6.

Table 6. Findings regarding the mediated effects of the "other-oriented perfectionism" dimension on "academic achievement" via "self-handicapping"

			β	**t**	**p**
OOP	→	SH	-0,086	-1,627	**0,104**
OOP	→	AA	0,099	1,878	**0,061**
SH	→	AA	-0,146	-2,777	**0,005***

Direct and Mediated Effects of "Socially Prescribed" Perfectionism on "Academic Achievement":

The "socially prescribed perfectionism" (SPP) dimension had no direct or significant effect on "academic achievement" (AA) (β = 0.07; *t* = 1.23; *p*>0.05). To explore any mediating effects, the effect of the independent variable on the dependent variable must be statistically significant (Baron and Kenny, 1986). Because a direct and significant effect was not observed between "socially prescribed perfectionism" and "academic achievement" variables, there was no need to examine the mediating effects of "academic procrastination" and "self-handicapping". In other words, variables "AP" and "SH" are considered not to have mediating effects because no statistically significant relationship exists between "SPP – AA". Findings regarding the relationship between "socially prescribed perfectionism" and "academic achievement" are presented in Table 7 and Figure 6.

Table 7. Findings regarding the direct effects of the "socially prescribed perfectionism" dimension on "academic achievement"

			β	**t**	**p**
SPP	→	AA	0,065	1,229	**0,219**

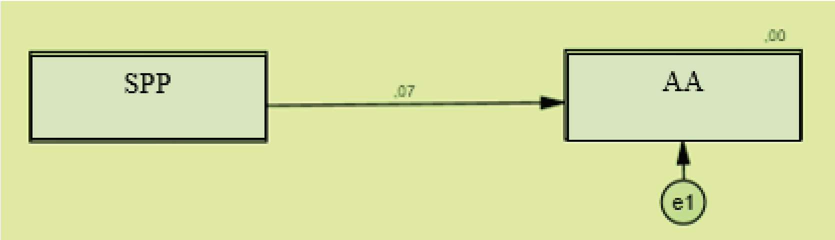

Figure 6. Direct effects of the "socially prescribed perfectionism" dimension on "academic achievement"

Discussion, Conclusion and Suggestions

This study has examined the effect of perfectionism on academic achievement, and how this effect is mediated by self-handicapping and academic procrastination.

The findings reveal that higher levels of "self-oriented perfectionism" and "other-oriented perfectionism" are associated with higher levels of "academic achievement". The socially prescribed perfectionism dimension, on the other hand, was not found to have a statistically significant effect on academic achievement. These findings are consistent with existing literature. Self-oriented perfectionism is reported to be related to positive and adaptive perfectionism (Cox et al., 2002; Frost, et al., 1993). Studies on perfectionism and academic performance show that positive aspects of perfectionism have a positive relationship with academic performance. Multiple studies have reported that students with higher levels of positive perfectionism have higher exam scores and higher grade point averages than students with lower levels of perfectionism (Accordino, Accordino, and Slaney, 2000; Blankstein, Dunkley and Wilson, 2008; Castro and Rice, 2003; Cox et al., 2002; Grzegorek, Slaney, Franze and Rice, 2004; Kyeon, Cho, Hwang and Ku, 2010; Nounopoulos, Ashby and Gilman, 2006; Sevlever and Rice, 2010; Stoeber, Haskew and Scott, 2015; Stoeber and Rambow, 2007; Verner-Filion and Gaudreau, 2010). Self-oriented perfectionism, in particular, is reported to have a positive relationship with academic achievement (Blankstein and Dunkley, 2002; Bong et al., 2014, Flett, et al., 2009; Stoeber et al., 2015), whereas socially prescribed perfectionism is reported to be associated with non-adaptive study strategies (Blankstein and Dunkley, 2002), and thus to have a negative effect on academic achievement (Arthur and Hayward, 1997; Bong et al., 2014). The positive effect of self-oriented perfectionism on academic achievement can be attributed to this sort of perfectionism, leading to higher levels of intrinsic motivation (Einstein et al., 2000; Stoeber et al., 2009), which in turn has a positive effect on academic achievement. As mentioned previously, other-oriented perfectionism is usually overlooked in debates on the clinical importance of multidimensional perfectionism (Dunkley et al., 2006), and consequently there is a lack of studies on the relationship between this dimension and academic performance and achievement. The findings of the few studies that exist are consistent with the findings of the present study. Flett et al. (2009) report that other-oriented perfectionism has a significant and largely positive relationship with exam performance. Both self-oriented perfectionism and to a lesser extent, other-oriented perfectionism are reported to be associated with adaptive and positive traits (Flett and Hewitt, 2002; Flett, et al., 1996). Based on previous researches of perfectionism and academic performance (Flett et al., 2009; Stoeber, 2012), exam performance is expected to be positively affected by self-oriented perfectionism, and negatively affected by socially prescribed perfectionism. In the present study, however, no significant relationship was identified between socially prescribed perfectionism and academic performance. A study has reported similar results; in a study by Wong, et al. (2018), self-oriented perfectionism was found to be a predictor of academic achievement, while socially prescribed perfectionism did not predict academic achievement.

Academic procrastination refers to the intentional postponing of important academic activities (Schouwenburg, 2004). The relationship between “self-oriented perfectionism” and “academic achievement” was found to be partially mediated by “academic procrastination”. Self-oriented perfectionism has a negative relationship with procrastination (Closson and Boutilier, 2017; Özer and Altun, 2011; Sula Ataş and Kumcağız, 2019). College students who tend to procrastinate receive lower academic scores than non-procrastinators (Steel, 2007). There have been many studies reporting a negative relationship between procrastination and academic performance, consistent with the present study (eg., Balkıs and Duru, 2010; Balkıs et al, 2008; Beck et al., 2000; Beswick et al., 1988; Lakshminarayan et al., 2013; Moon and Illingworth, 2005; Tice and Baumeister, 1997; Tuckman, 2002; Van Eerde, 2003; Wang and Englander, 2010). In a study by Stoeber, et al. (2015), the relationship between self-oriented perfectionism and exam performance was found to be mediated by task-oriented goals. Self-oriented perfectionism helps students set task-oriented goals, which in turn leads to better exam results (Stoeber et al., 2015). Setting task-oriented goals is assumed to function in a way in an opposite way to academic procrastination. Accordingly, the mediating effect identified in the present study is consistent with the findings of Stoeber et al. (2015).

Students often face performance challenges in academic environments, and can resort to self-handicapping strategies to deal with challenges that they expect to fail (Strube, 1986). Perfectionism is considered to be one of the underlying drivers of self-handicapping behaviors among students (Kearns et al., 2008, Stewart and Degeorge-Walker, 2014). Kearns et al. (2008) observe that not all perfectionist students display self-handicapping behavior, but that students who are worried about their self-image, and that would also like to be perceived as perfect by others, would be more likely to engage in self-handicapping. Many studies, however, have found that self-handicapping is positively related to perfectionism and negatively related to academic achievement (Hobden and Pliner, 1995; Karner-Huţuleac, 2014; Zuckerman et al., 1998). The findings of the present study in this regard are different to those of most studies on perfectionism, with higher levels of self-oriented perfectionism being associated with lower levels of self-handicapping. This may be a reflection of the argument put forward by Kearns et al. (2008), who stated that not all perfectionist students engage in self-handicapping behaviors. Moreover, two recent studies (Akar, Doğan and Üstüner, 2018; Strumbel, 2016) report findings similar to those of the present study. Similarly, Strumbel (2016) found that people scoring high in self-oriented perfectionism were less likely to engage in self-handicapping. Akar et al. (2018) found that positive perfectionism was associated with less self-handicapping behavior among students. People with a tendency for self-oriented perfectionism – considered to be a positive dimension – are reported to aim for success and to have higher levels of self-esteem (Hewitt and Flett, 1991a; 1993; Oral, 1999; Neumeister, 2004; Stoeber and Otto, 2006); and people with high levels of self-esteem, in turn, are known to engage in less self-handicapping behaviors (Üzbe and Bacanlı, 2015). Thus, self-oriented perfectionists are thought to avoid self-handicapping, because they have high self-esteem. The findings also indicated that the relationship between “self-oriented perfectionism” and “academic achievement” was partially mediated by “self-handicapping”. Higher levels of self-oriented perfectionism are associated with lower levels of self-handicapping, and lower levels of self-handicapping are associated with higher levels of academic achievement. A recent study reports similar findings on mediating effects. Akar et al. (2018) found that the relationship between positive perfectionism and academic achievement was partially mediated by self-efficacy and self-handicapping. Akar et al.’s study also found that the tendency for positive perfectionism among students had a positive effect on their academic achievement and self-efficacy, and a negative effect on self-handicapping. Self-handicapping among students has been associated with negative academic results (Urdan and Midgley, 2001; Zuckerman et al., 1998), and it was also found in the present study that self-handicapping lowers academic achievement. Even though no examination of academic achievement was made *per se*, a study into the relationship between perfectionism and performance found that this relationship was mediated by self-handicapping strategies. Stoeber, Uphill and Hotham (2009) found that performance avoidance mediated the relationship between perfectionist personal standards and performance among athletes.

The findings of the present study are expected to contribute to literature with regards to the dimension of “other-oriented perfectionism”, which has been covered in few studies to date. There are a lack of studies on the mediation of the effects of other-oriented perfectionism. The relationship between “other-oriented perfectionism” and “academic achievement” was found to be fully mediated by “academic procrastination”. Higher levels of other-oriented perfectionism were associated with lower levels of academic procrastination, and lower levels of academic procrastination were associated with higher levels of academic achievement. In addition to self-oriented perfectionism, other-oriented perfectionism is also considered to be associated with the adaptive aspects of perfectionism, though to a lesser extent (Flett and Hewitt, 2002; Flett, et al., 1996). It is reported that other-oriented perfectionism is associated with higher levels of self-confidence (Bieling, Israeli ve Antony, 2004). In a study on self-efficacy when deciding upon a career, Ashby, Bieschke and Slaney (1997) found that adaptive perfectionists scored significantly higher in making accurate self-evaluations, setting appropriate goals, planning for the future and problem-solving. According to Flett, Hewitt, Blankstein, Solnik and Van Brunschot (1996), self-oriented and other-oriented perfectionists tend to have positive problem-solving tendencies. Thus, the finding that higher levels of other-oriented perfectionism, which is considered to be adaptive, are associated with lower levels of academic procrastination and higher levels of academic achievement, consistent with previous researches.

Self-handicapping was not found to have a significant mediating effect between “other-oriented perfectionism” and “academic achievement”. Moreover, socially prescribed perfectionism was not found to have a significant effect on academic achievement, and thus any mediating effects between the two were not explored.

This study has a number of limitations. The academic achievement scores were limited to the previous year, and the participants were all students who majored in social sciences, limiting the generalizability of the findings. The inclusion of self-esteem among the variables would permit a more detailed examination, and further studies could examine the relationships between variables related to parental expectations and sense of achievement.

This study has examined the effects on academic achievement of such important phenomena as perfectionism, self-handicapping and academic procrastination. It identifies the frequency of two problematic behaviors – academic procrastination and self-handicapping – among students, and helps prevent these issues in the future by raising awareness. Given the lack of studies on the mediating effects of academic procrastination between perfectionism and academic achievement, the finding that the positive aspects of perfectionism are negative predictors of self-handicapping and academic procrastination, and thus affect academic achievement, constitutes an important contribution to the literature.

Over the last three decades, studies of perfectionism have examined many aspects of this phenomenon, resulting in a substantial body of knowledge. The authors have established that perfectionism, while usually viewed negatively, has a multidimensional structure, and when used properly, has aspects that can motivate a person and lead to desirable results. Moreover, an increasing number of studies have found that the positive and adaptive aspects of perfectionism are associated with higher performance in different areas of life and at different achievement levels. This study is expected to contribute to literature in this sense.

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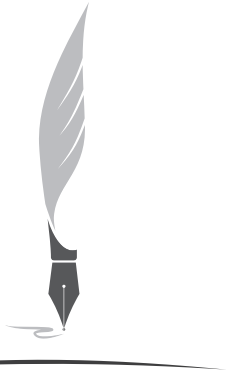

Chapter 16

EFFECTS OF SOCIAL MEDIA ON VOTERS IN ELECTIONS CAMPAIGN: “EXAMPLE MALATYA OF GENERAL ELECTIONS OF NOVEMBER 2015”

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1. INTRODUCTION

In recent years, one of the common features of political campaigns ranging from large protests to different types of elections has been the frequent use of digital media for communication and coordination (Zhang and Song, 2018: 2). The impact of the new digital technologies has recently become the object of great interest for scientists alike. Especially for the social scientist, new mass media have increased quantity and variety of entertainment options and possibilities of information channels. Potential implications for voting behavior are enormous. Two, possibly counteracting, effects could be triggered. One of them is potential voters could be distracted from consumption of political information and mobilized towards the use of new Technologies for amusement. The other one is, the new media could offer unprecedented ways for information acquisition and political participation (Belloc, 2018:14).

The internet, which was used only as a means of getting information and accessing information at first, changed later. Especially defined as social media, Facebook, Twitter etc. With the spread of the sites, it has become a social communication tool. It has created a virtual society that is constantly communicating almost everywhere where human beings exist (Köseoğlu and Al, 2013: 109). Since the internet became available to the general population, information travels quicker and a generation has grown up during a time of instant connectivity and communication (Vonderschmit, 2012:1). The use of social media in politics has also increased. It is widely used especially in election periods. With social media, messages not only spread faster, but also penetrate deeper at cheaper cost. The social link between the recipients also creates a social impact that causes more people to participate in the political process or collective action (Ayankoya et al., 2015: 8). A significant portion of online campaigns should be reserved for voter mobilization and the organization of campaigns (Lilleker et al., 2011; Nielsen and Vaccari, 2013).

Social media provides access to resources affecting psychological participation, campaign buying and political participation (Vitak et al., 2011). During the election periods, social media became common communication channels for candidates. Platforms such as Facebook and Twitter allow candidates to reach voters directly, mobilizing supporters and influencing the public agenda. These fundamental changes in political communication therefore offer election candidates a wide range of strategic options (Stier et al.,2018: 2). 2008 US Presidential elections are shown as examples of the first political election activity carried out on social media. In this period, Democratic Party Candidate, Barack Obama tried to communicate with his voters through a total of 16 different social media environments. Following the USA Presidential Elections, it was observed that parties and candidates turned to social media in the elections held in the UK and Australia in 2010. The political use of the internet for the first time in Turkey was seen during the 2002 General Elections (Onat and Okmeydan, 2015: 80).

In this study, it was pointed out that social media influenced voters during election periods. It is aimed to reveal the effect of social media on voter behavior in November 1 General Elections. The hypothesis of the research is that voters follow social media in election rotations. However, the social media is not effective in the political behavior of the voter. In the research, for this purpose the Survey Research model was applied and the questionnaire technique was used in this context.

2. LITERATURE REVIEW

Media play a vital role in the perception and decisions of individuals in both economic and political contexts, as information is often distributed through media channels (Deventer et al. 2019: 246). One of the most used media types today is social media. Sweetser says that in today's social media environment, publics are increasingly connecting with political groups through new media technologies (Housholder and LaMarre, 2015: 138), while social media have been touted as a mechanism for engaging key stakeholder groups, disseminating campaign messages and increasing candidate support (LaMarre and Suzuki-Holbrecht, 2013; Housholder and LaMarre, 2015: 138). The online tools and web media that allow users to interact and communicate with each other by sharing their knowledge, opinions, interests, feelings and thoughts are called social media. Easy-to-use and open-to-participate virtual communication environments such as blogs, online chat sites, RSS, social networking sites, social bookmarking, forum, podcast, email chains and wikis are social media (Onat, 2010: 105). The most important feature of using social media as a tool for political communication with its functions such as providing public support and changing instability in a positive way is interactivity. In order to attract public support, there is interactivity in the two-way communication with the target audience and in all areas that can create support. This situation has shaped the traditional tools and methods of political communication in the light of new technologies (**Öztürk**, 2014: 400-405).

Social media is used as a political propaganda tool. Today it is the intensity of use by active actors of the political system. Almost all political parties and party sub-organizations now have an active account on social media, and parties continue all their political programs through these accounts. In fact, most of the public relations activities of political parties are carried out through these portals. Political parties; It announces daily activities programs, political ideas, conflicts with rival parties to voters through these accounts (Köseoğlu and Al, 2013: 115). Social media use of political campaigns played a vital role for every political party and candidate. Since social media sites attract more attention and traffic from a public or official campaign websites, their connection has become valuable and critical. Social media not only allows politicians to search for information, but also allows them to interact with others and express them online by writing articles about political views, attitudes to social networking sites and blogs (Kushin and Yamamoto, 2009; Kumar and Natarajan, 2015: 2-3). Election campaigns are run not only by party leaders, but also by candidates for the election. Especially online social media such as Facebook and Twitter offer individual candidates new opportunities to reach voters regardless of the central party (Karlsen 2011; Zittel 2009; Karlsen and Enjolras, 2016:339)

Social media offers much more important opportunities in political communication compared to traditional media. The most important of these opportunities is that the political character and the electorate can communicate with each other without time and place restrictions. Thus, an environment of mutual understanding and tolerance, instant feedback and much lower communication costs arise (Onat and Okmeydan, 2015: 83). Social media can be used as an effective campaign tool, but it is often not tracked or misused by filling supporters with irrelevant advertisements and requests. However, when it is used to disseminate relevant information and relate people to politicians, it will create a more successful campaign and create a stronger democracy (Vonderschmit, 2012: 2-3).

3. OBJECTIVE AND METHOD

In this study, it was aimed to reveal the effect of social media on voter behavior in the General Elections of November 1 in Turkey. The hypothesis of the research was that voters follow social media during the election periods. However, the social media was not effective in the political behavior of the voter. In addition, voters do not trust social media messages sufficiently. In the research, the field research model was applied and survey technique was used. The research was limited to 500 people in the Malatya city center. A questionnaire form consisting of 21 questions was used. In addition, questionnaire questions were prepared for the purposes of the research. The frequency and percentage analyze of the data obtained in the research were calculated. The reliability of the questionnaire was calculated with the Cronbach Alpha coefficient and determined to be reliable.

In the questionnaire, age, gender and educational status were asked. Then, questions were asked to determine the rate of participants' use of social media, the reliability of information shared on social media, and the impact of voters on political behavior. People under the age of 18 were not included in the study because they cannot make political choices. The data obtained after the research was evaluated by SPSS 20.0 statistical program, and the frequency and percentage values of the answers were determined.

4. RESEARCH FINDINGS

The following findings were reached in the study.The data obtained are presented in the tables.

Table 1. *Distribution of Participants by Age*

		Frequency	Percent
Reply	Between 18-25	122	24,0
	Between 26-35	100	20,0
	Between 36-45	104	21,0
	Between 46-55	96	19,0
	Over 55	78	16,0
	Sum	500	100,0

In Table 1, 24% of the respondents were between the ages of 18-25. The remaining 20% were 26-35 years old, 21% 36-45 years old, 55% and over were 16%.

Table 2. *Distribution of Participants by Gender*

		Frequency	Percent
Reply	Female	176	35,0
	Male	324	65,0
	Sum	500	100,0

When the gender distribution of the participants was examined in Table 2, it consisted of men with a rate of 65%. It was seen that the rate of female participants is 35%.

Table 3. *Distribution of Participants by Educational Status*

		Frequency	Percent
Reply	Primary school	86	17,0
	Secondary school	89	18,0
	High school	191	38,0
	Bachelor degree	53	11,0
	Others	81	16,0
	Sum	500	100,0

In Table 3, it was seen that the highest share among the participants in the survey was 38% with high school graduates. The percentage of primary school graduates was 17. Undergraduate graduates were around 11%.

Table 4. *Distribution of Participants According to Whether They Voted in the General Elections of 1 November or not*

		Frequency	Percent
Reply	Yes	425	85,0
	No	75	15,0
	Sum	500	100,0

In Table 4, the percentage of participants who made political choices in the general elections of 1 November was found to be 85% (425 people). The rate of participants who do not make political choices was 15%.

Table 5. *Distribution of Participants According to Whether They Are Actively Using the Internet or not*

		Frequency	**Percent**
Reply	**Yes**	388	78,0
	No	112	22,0
	Sum	500	100,0

The proportion of participants actively using the Internet was 78% (388 people) as shown in Table 5. On the other hand, the rate of participants who did not use the internet actively was found to be 22%.

Table 6. *Distribution of Participants According to Whether They Are Actively Using Social Media or not*

		Frequency	**Percent**
Reply	**Yes**	386	77,0
	No	114	23,0
	Sum	500	100,0

The participant value actively using social media in Table 6 was 77%. The rate of those who do not use was 23%.

Table 7. *Distribution of Participants According to Hours of Using the Internet During the Day*

		Frequency	Percent
Reply	**1-2 Hours**	123	32,0
	2– 3 Hours	116	30,0
	4– 5 Hours	97	25,0
	5– 6 Hours	27	7,0
	6 Hour and above	25	6,0
	Sum	388	100,0

In Table 7, it was seen that the proportion of participants who spend the most time using the internet during the day was between 32 and 1 hours. This rate was followed by a range of 30% to 2-3 hours, 25% to 4-5 hours. The group with the least amount of time was the group with 6% and 6 hours or more.

Table 8. *Distribution of Participants According to Purpose use of Internet*

		Frequency	**Percent**
Reply	**News**	116	30,0
	Research - Homework	32	8,0
	Social media	158	41,0
	Communication	66	17,0
	Others	16	4,0
	Sum	388	100,0

In Table 8, it was seen in the evaluation of the purpose of using the internet that most of the respondents responded to social media with a rate of 41%. This rate was followed by news preference with 30%. The rate of participants who answered the research and homework was 8%.

Table 9. *Distribution of Participants According to the Social Media Tool Used the Most*

		Frequency	Percent
Reply	**Facebook**	149	39,0
	Twitter	37	10,0
	Instagram	117	30,0
	Youtube	39	10,0
	Google Plus	44	11,0
	Sum	386	100,0

As seen in Table 9 in the most used social media tool evaluation, Facebook has become the most preferred social media tool with 39%. Instagram was the second preferred social media tool with 30%. The least used social media tool was Twitter with 10% (37 people).

Table 10. *Distribution of the Opinions of the Participants to the Most Effective Communication Tool used by the Political Parties to Reach the Masses*

		Frequency	Percent
Reply	**TV**	241	48,0
	News Sites	67	13,0
	Social Media	98	20,0
	Rallies	88	18,0
	Others	6	1,0
	Sum	500	100,0

In Table 10, the most effective communication tool used by politicians in reaching the masses was found as TV with 241 people (48%). The rate of participants who see social media as the most effective communication tool was 20%. According to the participants, the rate of those who see news sites as an effective communication tool for political parties was 13%.

Table 11. *Distribution of Participants According to Whether There Are Political Parties or Actors Following Social Media Regularly or not*

		Frequency	Percent
Reply	**Yes**	256	66,0
	No	130	34,0
	Sum	386	100,0

In Table 11, it was seen that 66% of people actively using social media regularly follow the political party or actor. 34% was do not follow the political party or actor.

Table 12. *The participants of the survey think whether social media is an effective tool for reaching the masses or not*

		Frequency	Percent
Reply	**Yes**	313	81,0
	No	73	19,0
	Sum	386	100,0

According to the participants in Table 12, 8% social media was an effective communication tool for reaching the masses. 19% thought the opposite of this situation.

Table 13. *Distribution of Participants According to Whether Social Media is Effective in Political Communication Campaigns or not*

		Frequency	Percent
Reply	**Yes**	268	70,0
	No	78	20,0
	No idea	40	10,0
	Sum	386	100,0

In Table 13, 70% of respondents answered that social media was an effective communication tool in political communication campaigns. It was seen that 20% of them think that it is not effective. The rate of participants who say no idea was 10%.

Table 14. *Distribution of the survey participants that Social Media Effectively Using Single use or People of Political Parties in Turkey*

		Frequency	Percent
Reply	**Yes**	229	59,0
	No	88	23,0
	No idea	69	18,0
	Sum	386	100,0

In Table 14, the participants ratio of the opinion that political parties and individuals to effectively use social media in Turkey was 59%. The rate of participants who do not share this view was 23%. The rate of those who have no idea was 18%.

Table 15. *Distribution of Participants According to Whether They Have Interaction With Comments and Likes on Political Content Shares in Social Media Sharing or not*

		Frequency	Percent
Reply	**Yes**	249	65,0
	No	137	35,0
	Sum	386	100,0

In Table 15, it was seen that the rate of participants who interact with comments or likes on political content posts is 65%. The rate of those who do not respond to political posts with comments or likes was 35%.

Table 16. *Distribution of the Participants According to Whether the Political Content Messages Shared on Social Media Affect Political Preference or not*

		Frequency	**Percent**
Reply	**Yes**	96	25,0
	No	280	72,0
	No idea	10	3,0
	Sum	386	100,0

In Table 16, 72% of the respondents answered that political posts shared on social media do not affect their political preferences. In 25%, it was seen that social media messages were effective in political choice. The rate of participants who have no idea about this was 3%.

Table 17. *Distribution of the Questionnaires According to Whether They Trust Information from Social Media in Political Communication Campaigns or not*

		Frequency	**Percent**
Reply	**Yes**	184	48,0
	No	191	49,0
	No idea	11	3,0
	Sum	386	100,0

In Table 17, 49% of the participants stated that they do not trust the information received from social media in their political communication campaigns. The rate of trustworthy participants was determined to be 48%. The rate of participants who say I have no idea was 3%.

Table 18. *Distribution of Opinion of the Participants According to Whether Politicians Actively Use Social Media in the 1st November General Elections or not*

		Frequency	Percent
Reply	Yes	209	54,0
	No	97	25,0
	No idea	80	21,0
	Sum	386	100,0

According to Table 18, 54% of the respondents think that politicians actively use social media in the November 1 general elections. The rate of participants who do not have this thought was 25%. It was seen that the rate of the participants who have no idea was 21%.

Table 19. *Distribution of the Participants According to Whether Social Media Posts Are Effective in Their Political Preferences in the 1st November General Elections*

		Frequency	Percent
Reply	**Yes**	71	19,0
	No	291	75,0
	No idea	24	6,0
	Sum	386	100,0

In Table 19, 75% of the participants stated that while making their political choices in the general elections of 1 November, social media messages were not effective. The participant, who stated that he was influenced by social media messages while making political choices, was determined to be 19%. The percentage of participants who say I have no idea was 6%.

5. CONCLUSIONS

Media has always been an indispensable tool in political communication studies. However, developing information and communication technologies have brought a new dimension to mass media. Social media has become an indispensable part of our life. Social media, in which all public and private institutions are trying to establish a fast and effective communication with their target audiences, is important for political organizations. Social platforms used in election campaigns are followed by the public. However, the reflection of social media on political behavior is a curious issue. In this study, the effects of social media on voter behavior in the general elections of 1 November 2015 were discussed. As a result of the research, the following results were reached:

- According to the participants, social media has been found to be an effective communication tool for reaching the masses.

- The participants were found to think that social media was an effective communication tool in their political communication campaigns.

- The proportion of social media participants who are of the opinion that the effective use of people and political parties in Turkey were found to be 59%.

- Most of the participants wrote comments or likes on the social media messages of politicians.

- 72% of respondents replied that political content posts shared on social media did not affect their political preferences.

- 49% of the participants was do not trust the information received from social media in their political communication campaigns.

- 54% of the participants thought that politicians actively used social media in the November 1 general elections.

- 75% of the participants stated that while making their political choices in the general elections of 1 November, social media messages were not effective.

When a general evaluation was made, voters think that it was necessary to use social media in political communication. But while voting, social media messages were not effective. The auditions did not trust the messages they receive from social media in political communication.

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Chapter 17

VIRAL MARKETING AS A MEANS OF PROMOTING LIVE QUIZ SHOW “HADI LIVE”

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1. INTRODUCTION

In this study, especially the virality and viral marketing were analysed. The viral marketing touches on a phenomenon in which the communication message spreads from person to person like a virus, so that the name viral marketing. It can be defined as a marketing strategy that permeates users to spread or share the message to others which can lead to multifold growth. When something like TV programme, advertisement or brand slogan became viral, they would have a tremendous impact and would provide their companies more visibility on the market. However, there is no single way to make something viral, here are different approaches to achieving successful results. The effectiveness of these approaches may vary by product or service (Goldsmith 2002, 3-6.) However sometimes viral effect can increase risk of negative reactions of consumers against the company. In this situation viral effect will able to damage company's reputation. The unpredictable nature of viral marketing and high potential outcomes motivated the author to explore this issue in more depth because understanding certain approaches and elements increases the chances to derive successful outcomes. Nowadays, many people in Turkey are participating as an active user to live quiz program, and they follow the latest news and trends related the program. This fact became an additional motivational point to research effectiveness and importance of viral marketing in the live Quiz show "Hadi". In this study, it is considered that the show is successful thanks to the implementation of successful viral marketing techniques. This research article intents to prove or refute this.

2. METHODOLOGY

The research methodology embodies of literature reviews consisting of expert articles, reports, internet resources, books and interviews. Since the aim of the study is to examine the current theories on the subject, it is focused on the theoretical literature review. The author preferred a theoretical literature review method in which old studies as well as current theories were examined. This section also includes the component of historical review, as it consists of viral marketing history and 'Hadi' quiz content. The literature review is divided into three main sections: The definition of viral marketing, the STEPPS theory of Jonah Berger, and the description and analysis of "Hadi" show according to the live quiz step theory.

3.LITERATURE REVIEW

3.1. VIRAL MARKETING-CONCEPTUAL ANALYSIS

In the contemporary competitive business world, every business owners look forward different technique to promote their business in globally.

One of these widely available, casual and effective marketing techniques is viral marketing. There is word-of-mouth conception behind the viral marketing namely, using influencers to make peer-to-peer product recommendations. The first users of the term viral marketing are Steve Jurvetson and Tim Draper in 1997 in an article taking Hotmail as an example. They use the virus metaphor that spreads messages or content through social media for viral marketing. Analogized the spreading of messages or content to a virus and calling viral marketing as a digitalized sneeze" that could be categorized by the release of "millions of tiny particles that can infect others who come into contact with them" (Knight, 1999). Wilson (2000:232) defines the viral marketing as any strategy that motivate individuals to relegate a marketing message to others, creating the potential for exponential growth in the message's exposure and influence. Shirky (2000) suggests that, in generally, viral marketing will signify word-of-mouth advertising to most people.

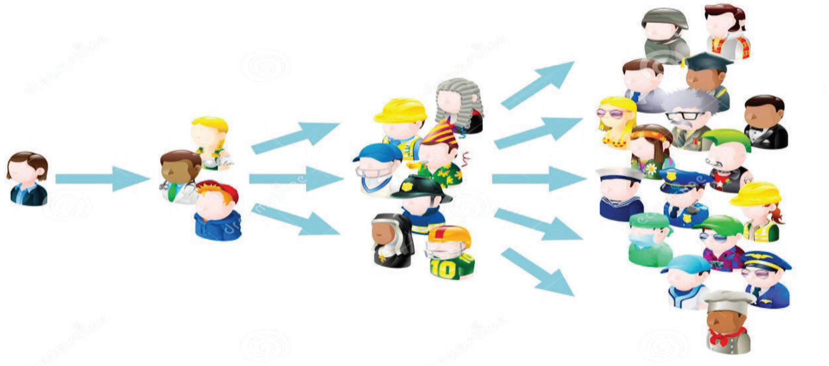


Figure 1. *Concept of viral marketing with groups people vector image (* www.graph-ist.com*)*

Viral communications are not confined by geographical boundaries and have the potential to reach many, sometimes on a global scale, in a short period of time, like a virus (Van der Lans and Van Bruggen, 2010). According to Allen it is a plan that is pitch towards raising appreciation about company products and services that is being provide an explicit variety of people. It primarily applies the word-of-mouth method to propagate the presence of the company and the existence of the products and goods. It can also make use of other marketing tools like giving away free gifts and free download program to persuade people (Allen, 2008:35). Besides all of these definitions of viral marketing it can be say viral marketing is "a marketing strategy that encourages consumers to pass along messages to others in order to generate added exposure" (Plummer et al., 2007: 263) or business "activities to make use of customers' communication networks to promote and distribute products" (Helm, 2000: 158), all through the use of the internet and, in particular, social networks (Petrescu, 2014:2)

3.2. TYPES OF VIRAL MARKETING

Viral marketing can be divided into two classifications as online and offline by channels and methods that used (Malinen, 2018:14). Online viral marketing includes viral videos, viral games, blogging and e-mail. Making a video one of the most excellent way to go viral for a company. A video can make consumers engage in company's product and experience. If a company creates a video, which is the more shocking, memorable or funny, it is more likely to go viral and downloads it into its media. Viral videos may be not necessarily related with a company or a product. As the main requirement, the company information cannot interfere with the video, but it might be added as a subtitle or in the form of expression of a character (Goldsmith, 2002: 79-82). Simple mechanism of games is designed to entertain the players for long hours. One of the well-known examples of viral games is "Candy Chrush". It has a simple gameplay and tasks, and also easy to learn instructions. Levels of the game are interesting and full of surprise. Blogs are another way of online viral marketing. People can share their pictures, short videos and blogs easily using different social media platforms such as Twitter, Instagram etc. If the content is interesting or useful, visitors tend to tell friends, usually by sending them a link (Scott , 2009:166). Thus the content can be trend. E-mail is one of the most effective methods for companies to reach their brands to costumers directly. By using E-mail marketing, digital word of mouth marketing aims to attract the attention of consumers using new methods and to increase sales. Sending E-mail as a viral marketing tool is a very influential way to create brand awareness and loyalty. Companies can contact with their costumers and potential customers in the accordance with their interests. Messages can be shaped personally and timing is flexible (Kalpakoğlu and Toros, 2011:4124). Offline viral marketing includes three subcategories, such as buzz, opinion leaders, and friend strategy. If the original information is backed up with fictional information that increases the level of discussion and with extra details, the benefit of the company or product will be surprising. This path is very dangerous because the result is unpredictable and the wind can reverse and let the company or product stand out, let alone lose their reputation (Rosen, 2009: 158-161).

Friend's strategy viral marketing is one of the easiest methods to use a friend script. According to Cassingena (2009: 61), it is a simple programming script that companies can easily add to their website. Generally, tell a friend scripts are installed in pages where a media is placed so that a person can easily send the media to any of his/her friends or relatives and in return he/she wins some promotion like bonuses or prizes. Opinion leaders are one of the certain parts of the consumer segment and at the same time they are important references for other consumers. They are specialists about some specific products. They use different media channels as sources and they are in contact with other mentors of the same age and social group. They share their knowledge and suggestions in the interpersonal communication network with other poeple, and at the same time, they are the activists who can affect others (Zhang & Dong, 2008:21). Because opinion leaders are viewed as honest and trustworthy by opinion follower, they usually can influence people's opinion (Malinen, 2018:14). Opinion leaders can have a large number of followers or fans with their innovative and entrepreneurial personalities and social structure (Childers, 1986: 184-185). There are several opinion leaders can have a significant influence on a variety of topics, and that people with more connections might exert even greater influence on information dissemination (Zhang, Zhao, & Xu, 2016:3).

3.3. BENEFITS OF VIRAL MARKETING

Unlike traditional media ads, one of the most important advantages of viral marketing is its cost. Viral marketing provides access to a large number of people at an extremely low cost. People don't need to spend a lot of time producing something they want to share. It is not necessary to pay for printing and distribution. Therefore, viral marketing is more effective than traditional ad media formats (Ahlberg, 2018: 14). Another important advantage of viral marketing is audience reach. Going viral spreads company's message and brand to very large group of people much further than their expectation. Of course, there are also some featured assets of viral marketing except from low cost and audience reach. It can be found all advantages of viral marketing the table below.

Table 1. *Advantages of Viral Marketing (Woernld, et. al: 2008)*

CATAGORY	BENEFITS
Financial	Low cost (inexpensive)
Diffusion speed	Large audience in short time Efficiency in its diffusion Exponential growth
Market segmentation	Ease of access to target audience
Monitoring and control of results	Easy to monitor Many options to measure results

3.4. DISADVANTAGES OF VIRAL MARKETING

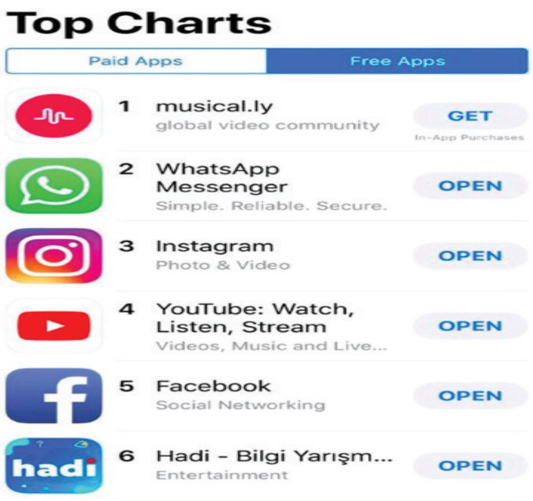
For all its advantages, viral marketing also has many unexpected pitfalls. It can be seen all disadvantages of viral marketing the table below.

Table 2. *Potential disadvantages of Viral Marketing (Woernld, et. al: 2008)*

CATAGORY	DISADVANTAGES
Control	Loss of control in communication
	Spam
	Lack of control mechanisms over distortion processes and adverse selection of customers
Negative potential impact	Risk of adverse effect
	Message may be misinterpreted
	Risk of creating a bad brand image
Results measurement	Difficult to measure final impact if not done correctly.

4."HADI" LIVE QUIZ SHOW- CONCEPTUAL ANALYSIS

Starting in 2011, " Who Wants 500 Billion TL ?" (modeled on the lines of Who Wants to be a Millionaire), has been become a very popular tv program in a short time. One of Turkey's famous performers Kenan IŞIK hosted this TV game show with a massive jackpot. Although only one person won in the contest, everyone imagined in front of the TV screen and thought he had won.TV quiz shows, which have been watched by whole families on television screens for years, started to take its place in the mobile sector with the developing technology. After than it's rather surprising that it did not take so long for an entrepreneur to launch a live trivia show for the masses. As a live trivia game "Hadi" has become one of the applications that have been on the rise recently. Hadi succeeded to become the 6th most downloaded application after WhatsApp, Instagram, Facebook in app store and 12th op Grossing Entertainment Apps in Google Play in Turkey.



Top Charts

Paid Apps | Free Apps

1 musical.ly
global video community
GET
In-App Purchases

2 WhatsApp Messenger
Simple. Reliable. Secure.
OPEN

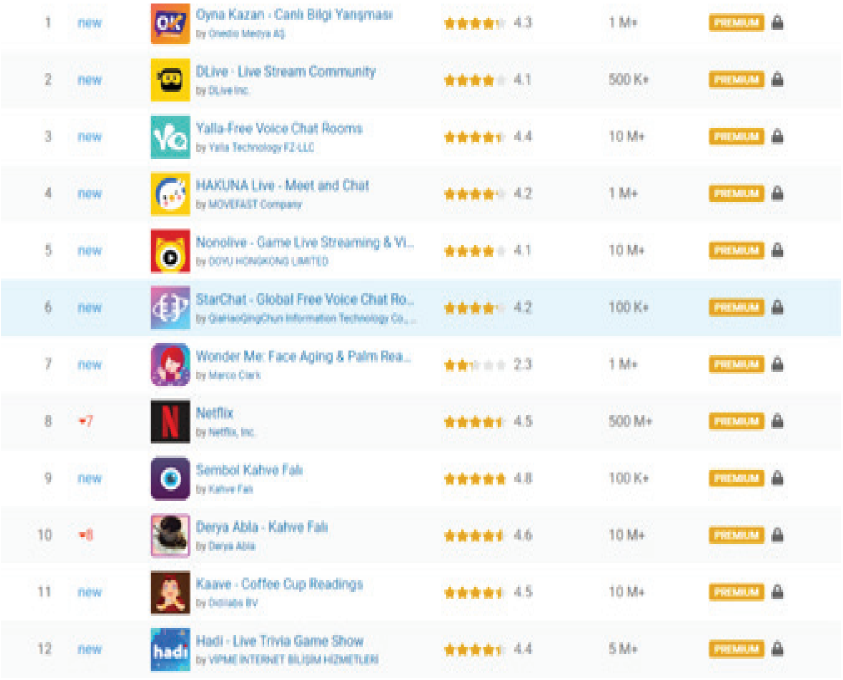
3 Instagram
Photo & Video
OPEN

4 YouTube: Watch, Listen, Stream
Videos, Music and Live...
OPEN

5 Facebook
Social Networking
OPEN

6 Hadi - Bilgi Yarışm...
Entertainment
OPEN

Figure 2. *The most downloaded apps list for App Store ranking* https://webrazzi.com *(App Store,21.06.2018)*



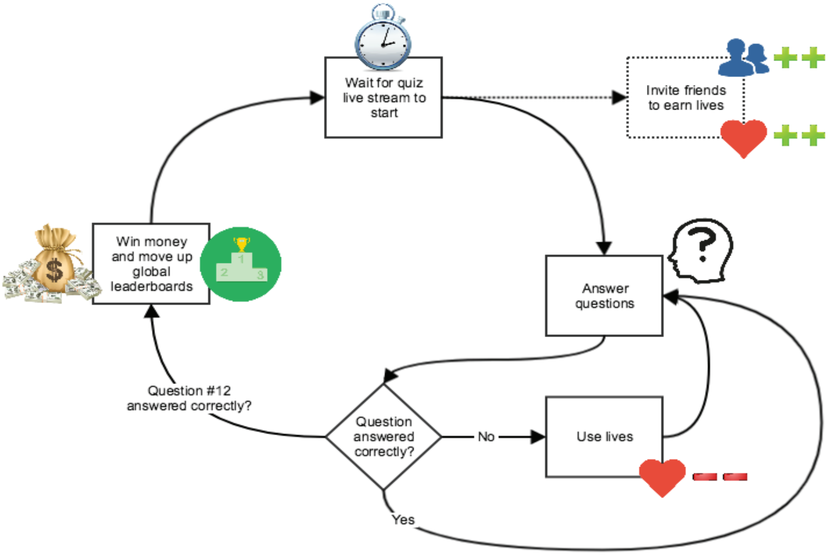
1	new	Oyna Kazan - Canlı Bilgi Yarışması by Onedio Medya AŞ	4.3	1 M+	PREMIUM
2	new	DLive - Live Stream Community by DLive Inc.	4.1	500 K+	PREMIUM
3	new	Yalla-Free Voice Chat Rooms by Yalla Technology FZ-LLC	4.4	10 M+	PREMIUM
4	new	HAKUNA Live - Meet and Chat by MOVEFAST Company	4.2	1 M+	PREMIUM
5	new	Nonolive - Game Live Streaming & Vi... by DOYU HONGKONG LIMITED	4.1	10 M+	PREMIUM
6	new	StarChat - Global Free Voice Chat Ro... by QiaHaoQingChun Information Technology Co., ...	4.2	100 K+	PREMIUM
7	new	Wonder Me: Face Aging & Palm Rea... by Marco Clark	2.3	1 M+	PREMIUM
8	▾7	Netflix by Netflix, Inc.	4.5	500 M+	PREMIUM
9	new	Sembol Kahve Falı by Kahve Falı	4.8	100 K+	PREMIUM
10	▾8	Derya Abla - Kahve Falı by Derya Abla	4.6	10 M+	PREMIUM
11	new	Kaave - Coffee Cup Readings by Didilabs BV	4.5	10 M+	PREMIUM
12	new	Hadi - Live Trivia Game Show by VIPME INTERNET BILIŞIM HIZMETLERI	4.4	5 M+	PREMIUM

Figure 3. *The most downloaded apps list for Google Play ranking (*www.appbrain.com *,21.06.2018)*

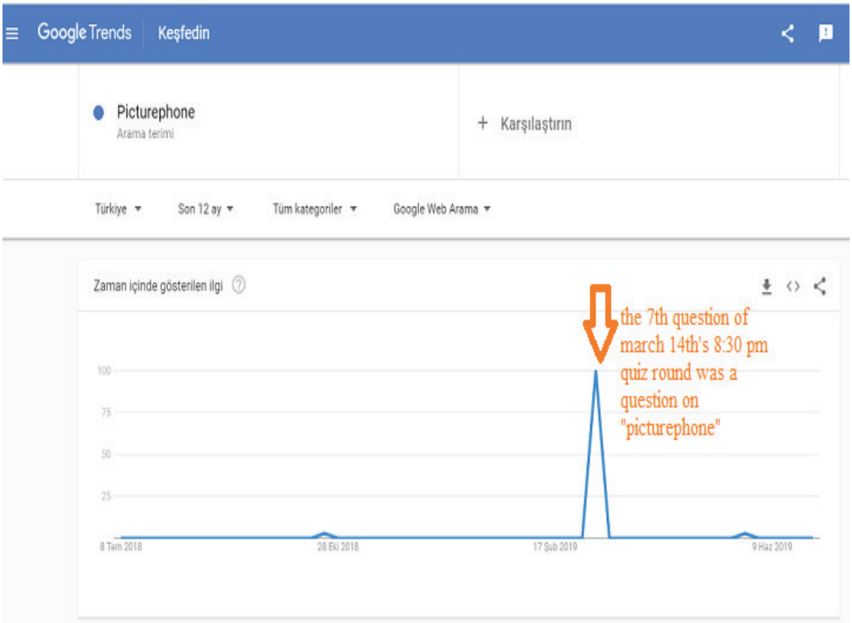
Published by Vipme Internet Bilisim Hizmetleri Ticaret Anonim Sirketi, “Hadi” Live award-winning quiz is a free to play live trivia game show app was launched firstly in January 2018 at Play market and then February 2018 at Appstore. Genarally streamed live twice a day (12:30

pm and 20:30pm UTC+3), players can earn money by answering 12 trivia questions correctly. The contest is a quiz where online people can make real money.

Figure 4. *Hadi's mobil streaming guide (www.flaregames.com)*


Wait for quiz live stream to start
Invite friends to earn lives
++
++
Answer questions
Use lives
--
Question answered correctly?
No
Yes
Question #12 answered correctly?
Win money and move up global leaderboards
1
2
3
$

Live broadcasting starts at a certain time and people can join the broadcasts via mobile applications. There is an organizer asking questions and giving answers. The game mostly consists of 12 questions where the difficulty level increases gradually. There are three options for each question and there is only one correct answer. Those who answer all 12 questions correctly share the award. The competitor is automatically disqualified in the first wrong answer. The money in the prize pool is shared equally to the winners and the money is transferred by PayPal. If everyone is disqualified before coming to the final question, the prize is not given to anyone and transferred to the next competition. Each question should be answered within 10 seconds after it appears on the screen. This time limit prevents cheating by making it harder to take advantage of Google. However, this measure does not prevent people from trying this path, as will be seen in the Google Trends chart below.


Google Trends
Keşfedin
Picturephone
Arama terimi
+ Karşılaştırın
Türkiye
Son 12 ay
Tüm kategoriler
Google Web Arama
Zaman içinde gösterilen ilgi
100
75
50
25
8 Tem 2018
28 Eki 2018
17 Şub 2019
9 Haz 2019

the 7th question of march 14th's 8:30 pm quiz round was a question on "picturephone"

Figure 5. *Searching the word 'picturephone' in Google Trends on 14.03.2019(trends.google.com.tr)*

Some given numbers below will explain the popularity of the trivia game in Turkey (http://gossipdergi.com, 26.11.2018)

Number of players: 4,8 million

Downloading for per day: 40-45K

The largest amount won: 20.016,54₺

Total amount of given prize: over 1 milion ₺

Average of concurrent players: 400K

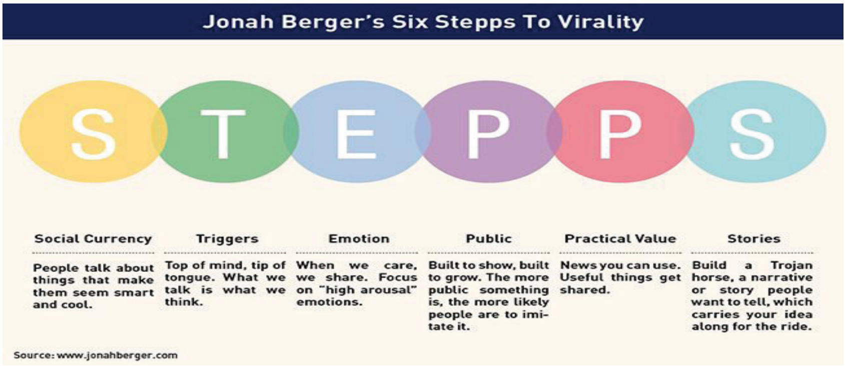
According to all these verifications it can be said the live trivia show "Hadi" made a big noise and became popular largely. It is obvious that the viral effect of show is very influential on this success. So how did "Hadi" turn into one of the most viral apps of all time? Of course, some factors related quiz show provide higher virality. Firstly, it is designed for mobile like a well-known TV game format. Familiarity is an important feature for players. Hence people may feel very comfortable and trust the app they have installed. Secondly, two celebrities Müge Boz and Merve Toy host the Show. Celebrity endorsements are recognized marketing strategy that is used since the late nineteenth century to attract the audience (Erdoğan, 1999). Since celebrities are generally liked, consumers also tend to be more motivated to assess what kind of object a celebrity is endorsing

(Knoll and Jörg Matthes, 2017:57). Thirdly it gives large enough prize to participants. The desire to make a lot of money is an effective factor that motivates people (Lawler,1981).

5. THEORETICAL FRAMEWORK

5.1. JONAH BERGER'S STEPPS THEORY

Jonah Berger is a proficient on marketing and he also works a professor in the University of Pennsylvania. Berger analyzed thousands of pieces of viral content to understand what compels people to share information with their network. Then he wrote a book called "Contagious: Why Things Catch On" which exposed the "secret formula" of making the things go viral. According to Berger (2016), there is no special method to produce a very successful marketing message. It is possible to do this with techniques and strategies that increase the chances of the marketer (Malinen, 2018: 19).Berger reveals that the success of viral content can be attributed to just six elements, or "STEPPS". STEPPS is the acronym to the following characteristic features of the top viral achievements: Social Currency, Triggers, Emotions, Public, Practical Value and Stories. These elements are displayed in Figure 2 and explained below:



Jonah Berger's Six Stepps To Virality

Social Currency	Triggers	Emotion	Public	Practical Value	Stories
People talk about things that make them seem smart and cool.	Top of mind, tip of tongue. What we talk is what we think.	When we care, we share. Focus on "high arousal" emotions.	Built to show, built to grow. The more public something is, the more likely people are to imitate it.	News you can use. Useful things get shared.	Build a Trojan horse, a narrative or story people want to tell, which carries your idea along for the ride.

Source: www.jonahberger.com

Figure 6. *Berger's STEPPS-model (www.jonahberger.com)*

a. Social Currency: Berger points out people would rather look cool than nerd, smart than dumb, or rich than poor in front of others because people care about how they look to others (Berger 2016: 22). A crucial side of social currency is remarkability. Sharing content is one of the ways of changing and improving others' opinion about itself (Malinen, 2018:19). For instance, when someone shares an academic article about the global warming on social media, people think that (s)he has environmental awareness.

b. Trigger: According to public relations literature, a trigger, or triggering event, is an event or occurrence that is likely to move those with a latent readiness to action (Jackson, 1998). By Berger's definition (2016: 23), triggers are something which make easy to remember about a product or idea, helping to ensure it stays top of mind. Triggers are usually visual and memorable. They can be embedded in mottos, logos or slogans of companies or brand's name. If a brand can associate itself with a common action or event it can really be beneficial for the brand. For example, a study showed that one grocery store played French music and saw an increase in the sales of French wine and when the store began to play German music they saw a spike in the sales of German wine (Di Michele, 2018: 18).

c. Emotion: According to Berger (2016), another reason why a message is shared is that it is related to emotions. If it is wanted to focus on generating feelings with story, products, ideas, etc, it should be required to focus on high arousal feelings that increase sharing. High arousal feelings and increased activity are characterized as a stimulating condition (Berger & Milkman, 2012: 2). High arousal feelings can be negative or positive. Positive high arousal feelings are awe, anger, excitement, amusement (Humor). The negative is anger and anxiety. People emotions actually affect their attitude to the things. Thus, if it is aimed at making a product go viral, it should be tried to induce the high arousal feelings that enforce people to action (Berger and Milkman, 2013: 20-21)

d. Public: The fourth element of viral content, according to STEPPS, is that it can be easily observed and highly accessible or open to the public (Pressgrove, McKeever and Jang, 2018: 3). Berger (24: 2016) assumes that making things more accessible makes it easier to imitate them, which increases their likelihood of becoming popular. Therefore, people need to make their ideas and studies more public. By designing products and initiatives that will put them at the forefront, it is necessary to create behaviour patterns that can be reproduced in various forms even after the product is sold or the idea is transferred to others.

e. Practical value: Berger examined the mechanics of value and the psychology of deals, but it's important to remember why people share that type of information in the first place in this element of steppes. According to him people are inclined to help one another (2016: 24). People give advice or send others information that will make them better off (Berger, 2016; 177). So if it can be shown people how some products or ideas will save time, improve health, or save money, they'll spread the word because people like to pass along practical, useful information

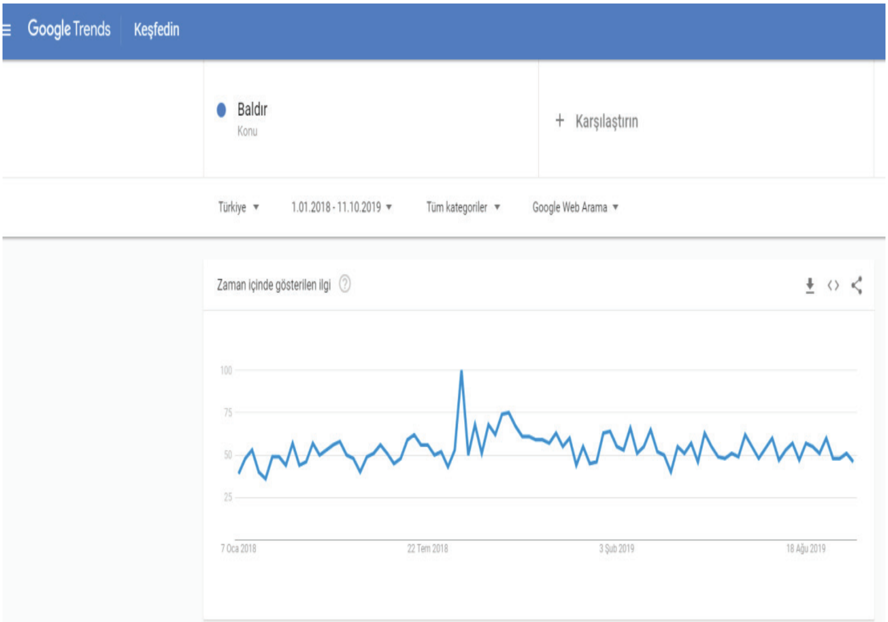
f. Stories: The final element in the STEPPS theory is stories. Stories can act as both lessons and entertainment, and as vessels for people to talk about things that are important to them (Pressgrove et al., 2017:3). Stories can be catchier and more interesting. The content produced on the basis of the story form has always been more successful than the content that provides plain information. According to Berger, a story has a big impact on people willingness to share it (Berger,2016: 117).

6. JONAH BERGER'S STEPPS THEORY AND "HADI"

If we try to explain "Hadi live" viral successes we say several reasons, by the light of the Jonah Berger's STEPPS theory. "Hadi live" that has become extremely popular since last year is a live trivia show which consists of the typical viral content elements, such as practical value, social currency, public, and emotions (Berger, 2016: 21-25). "Hadi" and practical value: "Hadi" is a free trivia app which gives its followers a chance to win real money and as a prize this Money is reachable. According to Wilson's six elements theory people like free things (Wilson, 2000: 232). So, chance to win real money and entirely reachable prize refers to practical value of the application

6.1. "HADI" AND SOCIAL CURRENCY

Usually there are a lot of people who play "Hadi" and are eliminated without reaching the last question and so are not able to win any prize. Nevertheless, they still get to know new interesting things and facts that they can share with friends, which refers to the social currency. For exaple one of the "Hadi" play the question "what is called the part of the leg from hip to string" was answered as 'calf' (baldır in Turkish) by the number of 191.216 competitors and they were eliminated (http://www.milliyet.com.tr). And then the word 'baldır' was viral in digital platforms like *Ekşi Sözlük*, *Instagram* and some digital national newpapers. Then people wanted to know the meaning of 'baldır' and why poople talked about it. After "Hadi" show's question in August, the word 'baldır' entered Turkey's agenda. It can be seen in the Google Trends graph below.

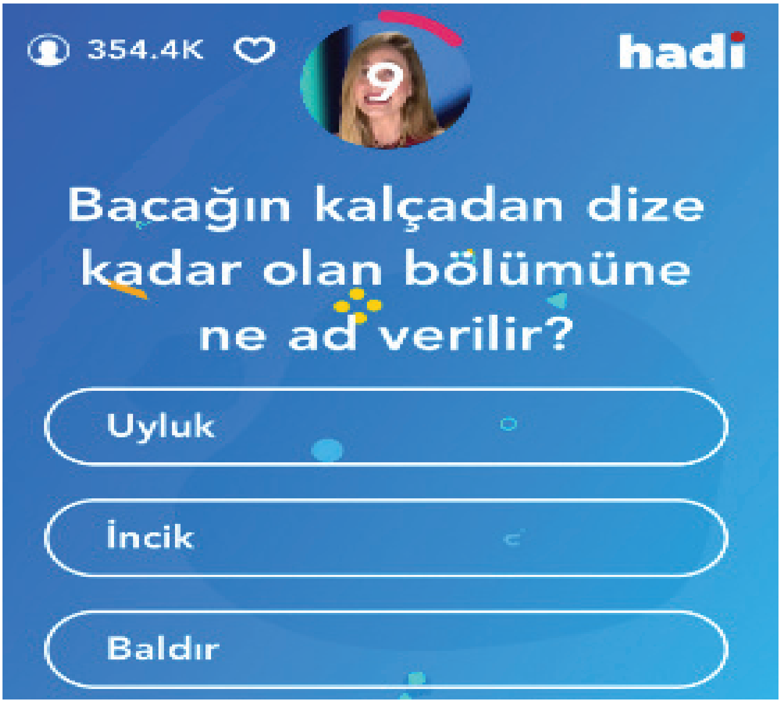

Google Trends
Keşfedin
+ Karşılaştırın
100
75
50
25
7 Oca 2018
22 Tem 2018
3 Şub 2019
18 Ağu 2019

Baldır
Konu

Türkiye ▾ 1.01.2018 - 11.10.2019 ▾ Tüm kategoriler ▾ Google Web Arama ▾

Zaman içinde gösterilen ilgi

Figure 7. *Google Trends graph about Turkish word of "baldır" (*https://trends.google.com.tr*)*


354.4K
9
hadi

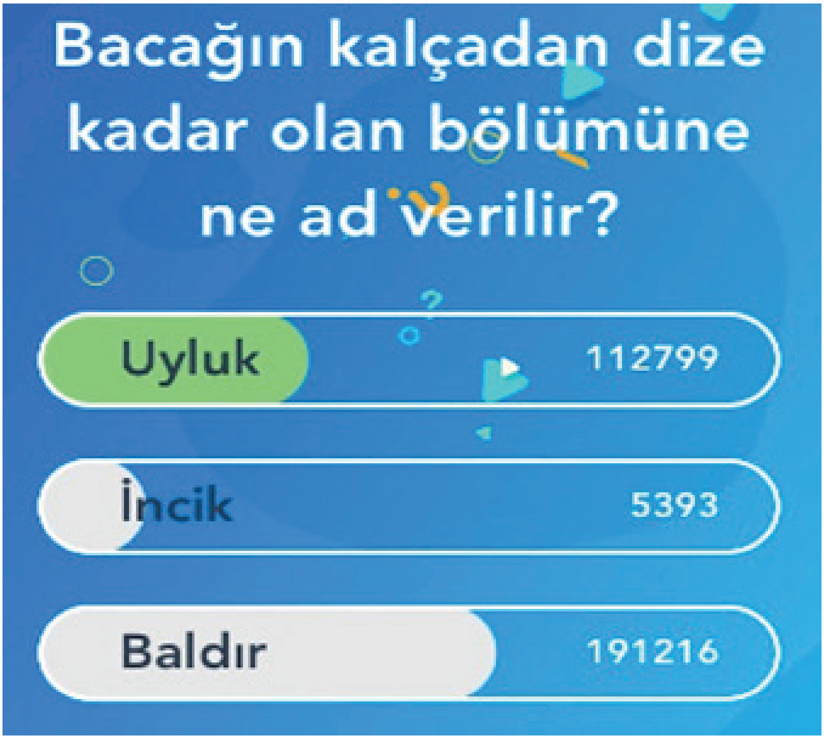
Bacağın kalçadan dize kadar olan bölümüne ne ad verilir?

Uyluk

İncik

Baldır

Figure 8. *"Hadi" 's question "what is called the part of the leg from hip to string (*www.cevaplar.mobi*)*



Bacağın kalçadan dize kadar olan bölümüne ne ad verilir?

Uyluk	112799
İncik	5393
Baldır	191216

figure 9. *Response rate* (www.cevaplar.mobi)

About one mount after the question was asked again but this time people knew the wright answer thank to social media, digital newspaper and platforms and there were only a few people eliminated.

6.3. "HADI" AND EMOTIONS

People desire to share the emotions (Berger 2016, 31- 32). Because of loving to share emotions, a lot of people share to their close friends during the game with that they feel i.e. excitement, feel of competition, sense of confidence or happiness of the win. Progressive difficulty of questions creates excitement to the competitor. Everyone loves bragging with their success, that's why there is a Leaderboard. On the show, number of players being on live and percentage of people answering questions to progress to the next round are being given during the competition. Thus, the numbers make it more exciting for participants. Moreover, the game gives extra chance to make a mistake in the game. Using a 'life' to continue the game is the crown jewel of "Hadi" 's growth. Who doesn't want to get a second chance? Extra life gives the competitor a sense of confidence The competitors can refer their friends to get a 'life' or get referral code from official Instagram account or via some apps like *Bip*, *Fizzy* or *Dergilik* for continuing the game (https://www.haberturk.com).

6.4. HADI AND PUPLIC

This gaming app becomes even more popular when celebrities lead the game. Firstly two celebrities *Müge Boz* and *Merve Toy* host the Show. Sometimes some famous people are invited to show for hosting like *Alex De Souza*. A celebrity host can add legitimacy to the show thus competitors tend to be more motivated for the show.

7. CONCLUSIONS

“Hadi” is a fabulous example of viral marketing. By using viral marketing techniques, “Hadi” obtains customer habits gain a significant competitive advantage “Hadi” ’s success can be clarified by the Nir Eyal “Hook Model” that he annotated to explain the why the game is such an addiction. Nir Eyal describes the process of building a habit-driven strategy as the Hook Model.

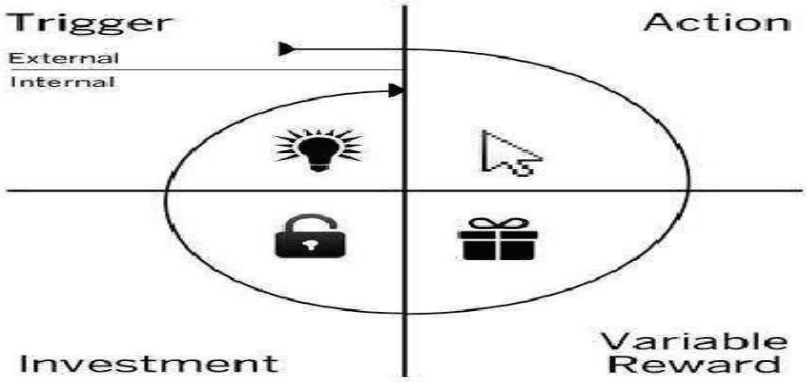
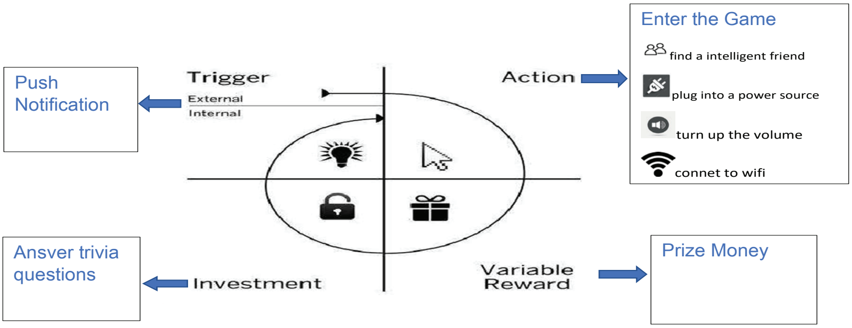


Figure 10. *Nir Eyal’s “Hook Model” (https://www.academia.edu/36947601/ OceanofPDF)*

According to the Hook Model, it is what triggers ‘triggering’ behavior, and there are two types of trigger, internal and external. ‘Action’ occurs in the hope of a reward. ‘Variable Reward’ means rewarding users differently at each step and strengthening their motivation for each new action. “Investment” is an action to improve the service for the next issue (Eyal & Hoover, 2014).


Push Notification
Trigger
External
Internal
Action
Enter the Game
find a intelligent friend
plug into a power source
turn up the volume
connet to wifi
Ansver trivia questions
Investment
Variable Reward
Prize Money

Source: https://medium.com/

The Hook model adapted for "Hadi Live Show "

Figure 11. The hook model adapted for "Hadi Live" quiz show (https://medium.com.)

"Trigger" for "Hadi" is push notification. Push notification messages are sent fifteen minutes before the competition for reminding competitors starting time of show. "Action" for "Hadi" includes some directives which are given before show start. After push notification the competitor is exposed to a teaser video that includes the things to do before the show start. "Investment" for "Hadi" is answer trivia questions. "Hadi" contest consists of 12 questions, in which the difficulty of each question increases in turn. Each question consists of three options to answer only where one is correct. Wins the game that answers 12 questions. Supporting the viral part of "Hadi", a complex marketing activity is the basic requirement for success and popularity. In this context, different marketing approaches are put into effect. One approach is to collaborate with big brands that are advantageous for both companies. In order to win a prize, gamers learn a lot of information about the company/brand in cooperation. The app also gets additional investments. The remaining examples of viral marketing are Social Media Marketing, leading invited celebrities, sufficient dissemination environment (Appstore and Play Market) and bonus/reward system for invited friends. Therefore, "Hadi" creates customer habits gain with its nature and supportive marketing activities.

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Chapter 18

EVALUATION OF EFFICIENCY AND TOTAL FACTOR PRODUCTIVITY OF SELECTED TEXTILE COMPANIES IN TURKEY

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Introduction

The textile sector was first born due to the basic needs of people such as dressing, covering and protection, and the production and trade volume of the textile sector in the economy has increased gradually over the centuries. After the industrial revolution, this sector not only produced clothes, curtains, carpets, but also started to produce a wide variety of products in the military, medical and automotive sectors, with rapid developments in science and technology in the 20th and 21st centuries. It is seen that the textile sector plays a driving role in the economic development of many countries. Countries like Japan, Republic of Korea, Turkey and China, thanks to the textile industry, they have achieved breakthrough moves in the industry and the development of industrial cultures. Today, Turkey, India and China, as well as European countries such as Germany and Italy and US in North America, continue to be an important actor in the textile trade (UIB, 2018).

The textile sector has had a positive impact on the welfare and development of the countries due to the added value created and the high share of exports. Textile sector has become one of the basic sectors for these countries, especially due to the low labor and production costs of developing countries. In addition, developed countries are trying to protect their positions in this sector due to the production and modernization of the machinery lines of the textile industry and their R&D activities and continue to be important markets in the sector. The textile and garment industry covers production processes such as fiber preparation, yarn, weaving, knitting, dyeing, printing, finishing, cutting, sewing. The part from fiber to yarn and manufactured fabric is evaluated in the textile sector, and the process from the fabric to clothing is evaluated within the apparel sector. Although the textile and apparel sectors are located in different sections of the “Nomenclature statistique des Activités économiques dans la Communauté Européenne” (NACE) in the European Community, they are generally evaluated together due to their close relations with each other(IAOSB, 2012).

Turkish textile and apparel sector, due to having cheaper production factors compared to other competing countries and because of the close geographical location of Turkey with Europe, has its advantages. Besides Turkey, to respond quickly to demand feature, and because of the ability to adapt to changing market conditions, it was able to maintain its position on the European market. Due to globalization, increased competition, shrinking opportunities in international markets, failures in strategic long-term planning, the main sectors of the textile and garment industry of Turkey’s economy, have revealed the necessity of restructuring (Aras, 2006).

Thanks to the Customs Union Agreement signed with the EU in 1995, the Turkish textile sector gained the right to export to the EU without quota. In addition, compliance obligations under the EU's Common Commercial Policy, Textile Restriction Agreement between the EU and third countries have also started to be implemented in Turkey. These quotas were maintained until 2005 and after 2007, with the removal of quotas applied to China by the EU within the scope of the World Trade Organization Textile and Clothing Agreement, Turkey, losing the advantage of cheap labor in the EU market, it has come to compete on flexible production, product development, innovation and branding where it cannot compete in terms of cost against China (Çevik, 2015).

The contribution of the textile industry to the economic system and the economic development of a country cannot be denied. Therefore, textile production and performance measurement have always had a major impact on the country's economic growth. It is important to look for tools to analyze the efficiency of the textile factories activities and to improve the service of them. One of the most important ways to measure textile factory performance is measerment of these factory's efficiency, and one of the most important approaches to measure the efficiency of these factories is the data envelopment analysis method (Verma, Kumavat & Biswas, 2015).

In highly competitive environments that characterize the textile industry, evaluation of effectiveness has recently become an important topic in the business world (Coll, Blasco, Molina ve Martinez, 2011). Increased efficiency and productivity, are essential to meet the emerging challenges of global competition (Bhandari & Ray, 2012)

In this study, Data Envelopment Analysis and Malmquist productivity index methods were used to measure changes in technical efficiency and total factor productivity. The analysis will also include investigating the sources of changes such as efficiency differences and pure technical efficiency and scale efficiency change.

Efficiency

In today's world, competition forces firms to use their resources most effectively. Measures such as efficiency and productivity analysis that businesses use to use scarce resources effectively and compete, determine the deviations of the firms from their target plans and their situation against their competitors. The fact that every entrepreneur or manager needs to be based on sustainable competitiveness while planning an effective production process, requires monitoring of the inputs used in the production units and analyzing the indicators such as the profitability rate and market share resulting from resource savings. To achieve this, firms should relatively evaluate their efficiency in the industry in which they compete and identify companies that should be referenced in order to take part in the efficiency frontier (Kayalı, 2009).

The efficiency of a firm (or an industry) is related to its performance in the use of resources and is a relative concept. Efficiency is the degree of reaching a goal in general. In other words, it is a criterion that shows whether it is sufficient to reach the goal or not. Efficiency in terms of firm, shows the production factors of a company or the realization degree of the production program that determined previously. The degree of efficiency or competence can be determined by the following equation:

Efficiency = standard performance / actual performance

If the efficiency rate is below "1", it means that the efficiency did not happen as desired or as expected. The goal for a sufficient or effective performance is that the efficiency rate reaches "1". Increasing efficiency aims to maximize business outcomes in all possible ways (economic, social, technological, etc.)(https://www.ekodialog.com/Konular/etkinlik_nedir.html).

The concept of economic efficiency is explained by the concepts of Pareto efficiency or Pareto optimality. The Pareto efficiency that first developed by the Italian economist Vilfredo Pareto in the 19th century, is a very clear definition of activity. According to Pareto, if a change improves the situation of some individuals without worsening the status of other members of the society, economic efficiency is provided. If a change increases the welfare of some individuals without reducing the welfare of others, the welfare of the society will increase and thus the society will achieve economic efficiency. When society achieves economic efficiency or Pareto optimum, no new regulation in change and production makes one better, without making the other worse. Kopman, on the other hand, combines the concept of production efficiency with the Pareto Optimum. Pareto-Kopman efficiency; If it is not possible to develop any input or output without worsening some of the inputs or outputs, the company or firm that produces is fully efficient.

Economically, a company's technical efficiency is defined as producing maximum output (s) using a specific input level or using minimum input (s) to produce the given output level. The technical effectiveness reflects the manufacturer's ability to prevent waste of resources, given the restrictions faced by all companies in a group.

The first theoretical discussion on measuring technical efficiency was proposed by Debreu (1951) and Koopmans (1951). Later Farrell (1957) developed this and introduced various concepts of activity. Farrell (1957) introduced a new definition that evaluated efficiency and productivity at a micro level, rather than a macro approach. He argued that a pieced linear production frontier should be determined for efficiency measurement instead of the regression line based on economically average performance values. The efficiency criterion based on contractions or dilatations in the form of rays radiating from ineffective observations to the production boundary, the views that the production frontier will be determined by the most pessimistic pieced linear data envelopment and that this limit can be reduced to two states (the slope is not positive and no observation between the frontier and the origin) can be disconnected from the classical efficacy and efficiency approaches. Farrell argues that the overall efficiency of decision-making units is equal to the product of the two components. It is a requirement of the rationality principle that Firms who known as economic decision making units, achieve their goals at the lowest cost. To measure the overall economic success of firms, a series of related efficiency concepts have been developed. The success of a company in producing at minimum cost level is called cost efficiency. Farrell has divided economic efficiency into two: technical efficiency and allocative efficiency.

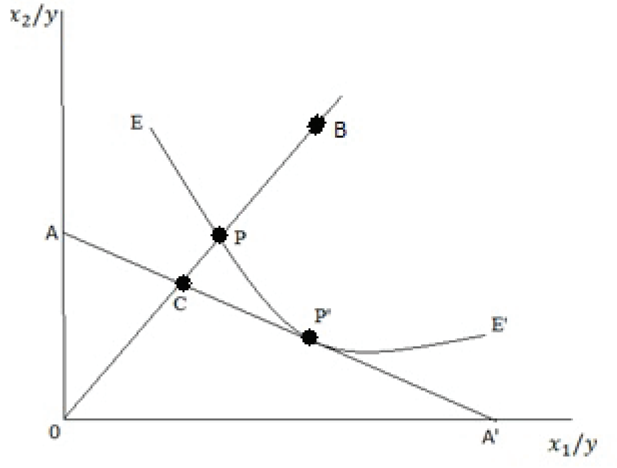
Economic Efficiency = Technical Efficiency × Allocative Efficiency

Technical efficiency is the success of producing the most possible output using the input combination in the most efficient way. Within this framework, technically effecient decision making units should be located on the production frontier. It can be said that the decision making units that fall under the production frontier, waste resources. Allocation efficiency, on the other hand, is defined as the success of an economic unit that uses more than one input in choosing the most appropriate input combination considering the input prices. In explainning the allocative efficiency, considering the input costs for a decision-making unit, the lowest cost input composition (optimum factor combination), isoquant curves and equivalent cost lines that will achieve a constant output level are used.

In Figure 1 a set of production possibilities with two inputs (x1, x2) and single output (y) is discussed. According to Farrell, in such a case, the production function is shown as y = f (x1, x2). This production function is shown as y = f(x1/y, x2/y) to form the frontier of technology. According to Figure 1 the company produces the unit output at point B, and EE isoquant curve shows the minimum input combinations (the maximum performance frontier) needed to produce a certain amount of output. With the help of this curve, technical efficiency (TE);

$$TE = OP / OB \qquad (1)$$

Figure 1: *Technical and Allocative Efficiencies*



Source: *Farrell, 1957*

If input prices are known, the equivalent cost line (AA') can be drawn. Thus allocation efficiency (AE);

$$AE = OC / OP \quad (2)$$

and economic efficiency (EE) will be as given in the equation below:

$$EE = TE \times AE = OP / OB \times OC / OP = OC / OB \quad (3)$$

In order for the company to work efficient, it should decrease the amount of input up to point P without reducing the amount of output. Accordingly, the rate of reduction in inputs is up to PB / OB. Technical efficiency value can take values between 0 and 1. If it takes the value 1, the company has full technical efficiency. If it gets 0, the company is technically inefficient. A company engaged in production at point P is technically efficient. Because the company is located on the efficiency frontier. However, the firm cannot have allocative efficiency at point P. Accordingly, CP distance refers to the rate of reduction in costs in case the company produces at the P' point which has both technical and allocative efficiency instead of producing at P point which is technically efficient but does not have allocative efficiency.

Another criterion used to measure the performance of the company or industry is the scale efficiency. Scale efficiency is expressed as the closeness to the most efficient scale size. Whith given price and technology level, the success in producing using optimum input is defined as "scale efficiency".

Both parametric methods and nonparametric methods are used to measure efficiency. The most used method in parametric methods is stochastic frontier analysis method. In nonparametric methods, estimates are made using linear programming technique. The most important and more frequently used non-parametric method is Data Envelopment Analysis (DEA).

Productivity

Productivity, in the most general way, means producing the resources by using the resources in the best way, without being wasteful, expressing the relationship between the various factors (inputs) introduced into the production process and the products (outputs) obtained at the end of this process (Yükçü & Atağan, 2009)

In cases where an output is produced using an input in the production process, the ratio of output to input is defined as productivity.

where an output is produced using an input in the production process, the productivity that can be calculated with the ratio of the output to the input loses its validity in multiple input and output production processes. It loses its validity in multiple input and output production processes. In this case, all inputs and outputs of the production process must be expressed with a single index. Thus, Total Factor Efficiency (TFV) can be calculated by including all factors of production in the productivity measurement (Öncü & Aktaş, 2007)

The change in total factor productivity, which is one of the productivity types that includes all the factors involved in the production process, is one of the important criteria that are handled in measuring the performance of the company or industry. The change in TFV is divided into two parts as the change in technical efficiency and technological change (Deliktaş, 2002). The advantage of total factor productivity is based on the ability to explain productivity for all inputs used in the production process. Total factor efficiency can also reflect technological progress in a country (Jajri & Ismail, 2006)

Total factor productivity (TFP) is also defined as the share of the increase in real production, which cannot be attributed to increased labor and capital inputs, which are the two main factors of production. In this context, increased productivity makes it possible to measure production productivity gains. this means that it can only be seen as an indicator of technological progress in the mid and long term (Kalai & Helali, 2016)

Malmquist Productivity Index

In this study, the Malmquist Index was used to evaluate the total productivity growth of production factors and Separation them into technical and technological efficiency changes. This index is defined based on the distance function. Despite the production technology with multiple inputs, the distance function allows the decision maker to determine the technical efficiency of the input variables without the cost minimization and profit maximization default. The distance function is affected by two factors, the values of the input variables and the values of the output variables. This function determines the proportion of input vectors for a given input vector for a decision unit.

If the production function is $y = f(x)$, where y is the maximum output level, then it can be obtained on the basis of a given vector of inputs x.

If it is assumed that this production function is technically capable of replacing inputs, then $L(y)$ will be the set of all input vectors that can produce the value of y, so this set can be defined as follows:

$$L(y) = \{X: y \geq f(x)\} \tag{4}$$

Where $f(x)$ represents the technology of production of all decision-making units.

Accordingly, Shepherd (2015) defines the distance function of production inputs as follows:

$$D(X, y) = min\{\theta: \theta X \in L(y)\} \tag{5}$$

The distance function (θ coefficient) denotes the possibility of reducing inputs to produce a certain amount of y, and x is the vector that represents the factors of production used for the amount of output y for a decision unit. So x will represent the minimum input needed to produce a certain amount of output y. Sheffard proved that the distance of the x vector represents the input vector of the target decision unit to produce a certain value of y. This function is also sometimes represented as $\theta(X, y)$. Simply, it is easy to extract the following features from the distance function:

a. The distance function of the factor of production relative to x is homogeneous.

b. If x belongs to the set $L(y)$, then $\theta(X, y) \leq 1$.

c. If x lies on the isoquant curve (efficiency frontier), then $\theta(X, y) = 1$.

d. The distance function of the production factor is non-descending relative to x and ascending relative to y.

Accordingly, the input-oriented Malmquist Index can be defined as below (Malmquist, 1953):

$$M_{t,t+1} = \left[\frac{D_i^t(y^t,x^t)D_i^{t+1}(y^t,x^t)}{D_i^t(y^{t+1},x^{t+1})D_i^{t+1}(y^{t+1},x^{t+1})}\right]^{1/2} \qquad (6)$$

In this model,

$M_{t,t+1}$: Malmquist Productivity Growth Index for a decision unit in year t + 1 relative to year t.

$D_i^t(y^t,x^t)$: DMU efficiency or distance function in year t compared to efficiency frontier of year t

$D_i^{t+1}(y^t,x^t)$: DMU efficiency or distance function in year t compared to efficiency frontier of year t+1.

$D_i^t(y^{t+1},x^{t+1})$: DMU efficiency or distance function in year t+1 compared to efficiency frontier of year t.

$D_i^{t+1}(y^{t+1},x^{t+1})$: DMU efficiency or distance function in year t compared to efficiency frontier of year t.

x^t : Input vector of decision unit in year t

y^t : Output vector of decision unit in year t

In the Malmquist model, the efficiency frontier for each year is defined as that year's technology available. The components of this model will be calculated by the CCR secondary model as follows (Charnes, 1978):

$$minY_{o} = \theta \qquad (7)$$

s.t

$$\sum_{j=1}^{n} \lambda_j Y_{ij} \geq Y_{io} \longrightarrow i = 1,2,\dots,s$$

$$\sum_{j=1}^{n} \lambda_j X_{ij} \geq \theta X_{io} \longrightarrow i = 1,2,\dots,m$$

$$\lambda_j \geq 0 \longrightarrow j = 1,2,\dots,n$$

Whenever the BCC secondary model is used instead of the CCR secondary model to calculate the Malmquist model components, the distance function or maximum efficiency based on variable returns to scale will be as follows (Banker et al, 1984):

$$minY_{o} = \theta \qquad (8)$$

s.t

$$\sum_{j=1}^{n} \lambda_j Y_{ij} \geq Y_{io} \longrightarrow i = 1,2,\dots,s$$

$$\sum_{j=1}^{n} \lambda_j X_{ij} < \theta X_{io} \longrightarrow i = 1,2,\dots,m$$

$$\sum_{j=1}^{n} \lambda_j = 1$$

$$\lambda_j \geq 0 \longrightarrow j = 1,2,\dots,n$$

In two models above:

X_{ij} and Y_{ij} are the input and output values of the unit j respectively.

X_{io} and Y_{io} are the input and output values of the target unit respectively.

λ_j : Secondary variable belongs to unit j constraint.

m: The number of input variables

s: The number of output variables

n: Number of decision-maker units (DMU)

Adding y to model 7 and 8 has made them a VRS or variable returns to scale model. In Malmquist's model, the value of $[D_i^t(y^t,x^t)]^{-1}$ is the distance function based on technology at period t in the input and output vectors of t period, obtained by solving model 7 in CRS mode or model 8 in VRS mode, and z represents distance function. $[D_i^{t+1}(y^{t+1},x^{t+1})]^{-1}$ represents the distance function based on t + 1 period technology and t + 1 period inputs and outputs obtained on model 7 or 8. $[D_i^{t+1}(y^t,x^t)]^{-1}$ represents the distance function based on t + 1 period technology and inputs and outputs of t period and finally $[D_i^t(y^{t+1},x^{t+1})]^{-1}$ represents the distance function based on t period technology and inputs and outputs of t+1 period which is similarly obtained by model 7 or 8.

To measure total productivity changes, Farrell (1957) used the multiplication of the changes in the technical efficiency and the technological efficiency changes (Malmquist Productivity Index) and defined it as the Malmquist Total Productivity Index:

$$PI_{t,t+1} = \frac{D^t(y^t,x^t)}{D^t(y^{t+1},x^{t+1})}\left[\frac{D^t(y^t,x^t)D^{t+1}(y^t,x^t)}{D^t(y^{t+1},x^{t+1})D^{t+1}(y^{t+1},x^{t+1})}\right]^{1/2} \quad (9)$$

In this model, the expression $\frac{D^t(y^t,x^t)}{D^t(y^{t+1},x^{t+1})}$, which shows the growth of the technical efficiency of the t + 1 period relative to the efficiency frontier of the year t based on the t-period technology, is added to model 6. Adding efficiency growth to the Malmquist Productivity Index will show a change in total productivity (Färe et al., 1994).

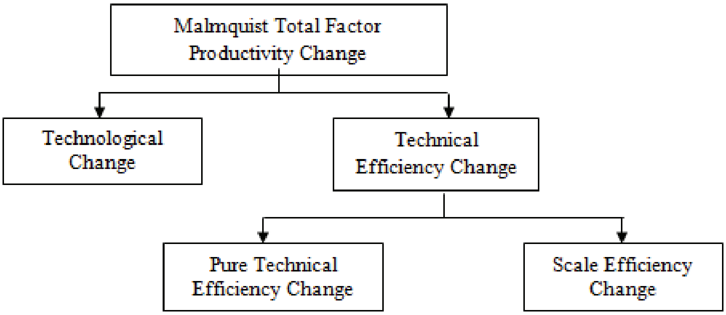
In order to determine the improvement or regression of technical efficiency and technological changes in the total productivity model of Malmquist, the following relationships are used which are the components of the Malmquist total productivity model.

$$Ech = \frac{D^{t+1}(y^{t+1},x^{t+1})}{D^t(y^t,x^t)} \quad (10)$$

$$Tech.Ch = \left[\frac{D^t(y^t,x^t)D^{t+1}(y^t,x^t)}{D^t(y^{t+1},x^{t+1})D^{t+1}(y^{t+1},x^{t+1})}\right]^{1/2} \quad (11)$$

Equation 10 represents a change in technical performance and equation 11 represents a technological change. Multiplying these two terms shows the net change in total productivity. In other words, the number 1 for each of the above statements indicates no change, and numbers greater than 1 as an improvement in the index and a number less than 1 indicate a decline in the index for the target decision unit. Malmquist index decomposition is shown in Figure 2.

Figure 2: *Traditional Malmquist Productivity Decomposition*


Malmquist Total Factor Productivity Change
Technological Change
Technical Efficiency Change
Pure Technical Efficiency Change
Scale Efficiency Change

Source: *Li & Chunlu, 2010*

The change in technical efficiency can be differentiated into change in pure technical efficiency and change in scale efficiency within the scope of variable returns to scale. Pure technical efficiency refers to the technical efficiency value without any assumptions about returns to scale. Scale efficiency exists when a firm operates at a constant returns to scale (Kayalı, 2009). Pure technical efficiency is defined as the ability of the decision making unit to produce the highest possible output by using the input combination in the best way, and scale efficiency is defined as the ability to produce at the appropriate scale (Erdumlu & Sarıçam, 2013)

Literature Review

Some of the domestic and international studies measuring technical efficiency and total factor productivity in the textile industry have been examined.

Taymaz and Saatçi (1997), according to the findings of their study on technical change and technical efficiency in three sectors: textile, cement and motor vehicles, showed that there are significant cross-sectoral differences in technical exchange rates and facility level, in factors affecting technical efficiency. They said that inter-agency relations between firms increase the effectiveness of user firms in the textile, cement and motor vehicle industries, and the source of ownership and technology are also important determinants of efficiency at the facility level. Kayalıdere and Kargın (2004) investigated the efficiency of companies in the textile and cement sectors listed on the Istanbul Stock Exchange in 2002. . In the study, an analysis using net sales and net profit as output, number of employees and total assets as output, a second analysis was conducted where the number of employees and tangible fixed assets were used as input and net sales and net profit used as output. By trying to calculate potential improvement rates, they tried to determine how they should make the input-output amounts efficient and productive compared to the efficient companies in the sector. Aras (2006) conducted the efficiency and risk analysis of the Turkish textile and garment industry for a period of 12 years. According to the findings of the study using data envelopment analysis, although improvements have been observed in the recent period, the Turkish textile and apparel industry did not provide full efficiency for the study period. According to the efficiency analysis findings of public companies, their efficiencies are above the industry average in some years. The overall result for both working groups is the decrease in the efficiency level of the sector after the economic crisis. Çetin (2006) tried to analyze the efficiency of the companies operating in the Istanbul Stock Exchange (ISE) textile sector using Data Envelopment Analysis (DEA). As a result of the research, efficient companies were identified and the feature of being a reference to other companies in the sector was determined. Kayalı (2009) shows the technical efficiency values of the 29 companies operating in the textile products sector in terms of profitability and pure technical and scale efficiency values, which are components of technical efficiency. The number of employees equity and net assets used as input and net sales and net profits used as output. The results of the analysis revealed that the textile industry's efficiency score is equal to 57%. Using data envelopment analysis, Öge and Ayrancı (2010) have calculated their technical activities for the 1997-2008 period, which constitute the Textile Sector Index within the Istanbul Stock Exchange (ISE). In order to calculate the relative technical efficiency of businesses, "total asset size" and "equity" are considered as inputs. The outputs were "net profit" and "net sales". In the period discussed, the results of the efficiency of textile companies have entered a downward trend and followed a fluctuating course during the economic crisis. Yenilmez and Girginer (2012), using output oriented CCR (Charnes, Cooper and Rhoders) models consisting of 3 inputs (net assets, number of workers, production quantity) and 1 output (export) analysed the efficiency of the textile companies exports operating in Eskişehir Organized Industrial Zone between 2008-2009. The result of the analysis is that inefficient companies should decrease their production amounts or increase their exports in order to reaching the efficiency. Sarıçam and Erdumlu (2012), analyzed the efficiency of textile and apparel companies operating in the Istanbul Stock Exchange (ISE) during 2003-2008 by data envelopment analysis. It is concluded that the average efficiency scores in the apparel industry are higher than the textile industry and the two industries together. Yayar and Çoban (2012) analyzed the efficiency of 25 companies operating in the textile and clothing industry, which entered the ISO 500 in the period 2008-2010, using Data Envelopment Analysis. According to the CCR model, 4 companies were efficient in the weaving industry and 2 firms in the garment industry, while 11 firms were found efficient in the weaving industry and 4 firms in the garment industry according to the BCC model. Erdumlu (2016) evaluated the efficiency of the Turkish textile, garment and leather industry using data envelopment analysis in two stages, which are defined as profitability and marketability. The findings revealed that the textile, garment and leather industry can be taken as a reference for marketability performance. Doğan and Ersoy (2017) tried to determine the efficiency level of a textile company operating in the Aegean Region for the past sixteen years by using data envelopment analysis method. As a result of the analysis, it has been concluded that the enterprise has been efficient in 7 of the 16 years since its inception. Akın (2018) calculated the efficiency and total factor productivity changes of 17 companies registered in the Borsa Istanbul (BIST) in the weaving industry for the period 2013-2017. Göral, Çağlıyan and Gelmez (2018) try to measure the Total Factor Productivity of the textile enterprises, which were listed in the ISO 500 Big Industrial Enterprises list in 2016, between 2014-2016 by analyzing Technical Efficiency Changes and Technological Changes. According to the results, it is determined that there is a decrease in the Total Factor Productivity of the enterprises. In addition, it was concluded that the decrease in the Total

Factor Productivity of the enterprises was caused by the inability to realize the technological changes in time, and despite the positive situation in the technical efficiencies of the enterprises, it did not prevent the decrease in the total factor productivity. Perçin and Ustasüleyman (2007) measured the relative effectiveness of textile and food companies, considering the 2002 data. Using the Malmquist TFP index, changes in firms' productivity and efficiency components were examined in the period 2000-2002. As a result of the analyzes, it was observed that the decrease in the efficiency of food companies was less than that of textile companies as of 2002. In addition, it was concluded that the most important reason for the decrease in the productivity of the textile and food companies during the period of 2000-2002 was the negativities arising from technical change.

Ahmad and Kalim (2016) suggested that the Pakistan textile industry could not benefit from the quota elimination of the Pakistan textile industry in terms of pre-quota and post-quota elimination status and that the productivity remained almost sluggish throughout the period. Zhu (1996) used data envelopment analysis / assurance area methods to evaluate the efficiency of the 35 textile factories of Nanjing Textile Company (NTC) in China. The results show that within two consecutive years of analysis, collective units performed better than state-owned units. Samad and Patwary (2003) tried to estimate technical efficiency for the textile industry in Bangladesh. For this purpose, they used translog stochastic frontier production function model for a period of 6 years. The overall average technical efficiency for Bangladesh's textile industry is estimated to be 80%. Thang et al (2006) studied the determinants and development of the technical efficiency and productivity of the Vietnamese textile and garment industry in the 1997-2000 period. According to the results obtained, the average technical efficiency of these sectors are relatively high, but the technical efficiency differs significantly in terms of ownership, location, size, age and export. While the most efficient firms in the textile sector are old, medium-sized, private, south-centered, export-oriented firms, the old, medium to large, private or foreign-invested south-based garment firms have the highest technical efficiency. Bhandari and Maiti (2007) have used translog stochastic frontier production functions in accordance with firm-level cross-section data for each of the selected five years to estimate the technical efficiency of Indian textile companies. They stated that the average technical efficiency varied between 68-84% over these years, and individual technical efficiencies varied with firm-specific characteristics such as size and age, and public sector firms were relatively less efficient. Vixathep (2011) demonstrated that the efficiency gap in garment companies in Laos has widened over the studied period, partly due to the increasing competition in the global garment industry, and that efficiency development and productivity growth are only evident at the firm level. Coll et al (2011) examines the technical efficiency of the Spanish textile industry for the period 1995-2005 by estimating a stochastic production function. Empirical findings showed that most of the textile groups operated in a high level of efficiencies in the first half of the period. In the second half, there was an increase in ineffectiveness, perhaps as a result of the sector's impending liberalization (on January 1, 2005). Zhang and Yao (2014) used regional panel data between 2000-2012 using the DEA-Malmquist index method for total factor productivity analysis of the Chinese textile and apparel industry. The results show that the total factor productivity of the Chinese textile and apparel industry grew by an average of 9.5% annually, and technological progress with 8.4% annual growth is main source of overall factor productivity growth. Mahmood (2012) calculated the technical efficiencies of the textile manufacturing industries in Pakistan using 5 digit industry data, using the Data Envelopment Analysis technique, under constant returns to scale (CRS) and variable returns to scale (VRS) assumptions. It has been found that imported raw materials and machinery have a positive effect, while non-industrial costs negatively affect technical efficiencies. Bhandari and Ray (2012) conducted a study that enabled the companies in the Indian textile industry to determine their technical efficiencies levels in different years and the contribution of technological differences between a group of companies to the extent of the overall technical efficiencies. The study found that by altering the input mix appropriately, even if there is no increase in allocation efficiency, the average production cost in the textile industry can be significantly reduced by 40% or more. Usman et al (2014) measured the technical efficiencies of 100 textile companies in Pakistan for the period 2006-2011 using data envelopment analysis. According to the results, it is seen that the sector is close to efficiency, and the average values of technical efficiency scores are 0.82 and 0.86 under constant returns and variable returns to scale, respectively. Feng, Zhang and Xu (2017) selected 26 provinces, municipalities and autonomous regions in China from 2004 to 2014, using the data envelopment analysis Malmquist productivity index method to analyze technical efficiency change and technological progress change. According to the results, it was concluded that there are significant differences in the total factor productivity of China's textile industry and the growth of the total factor productivity in China's textile industry is mainly due to the development of the Technical efficiency change index. Kapelko and Lansink (2015) showed that despite the decreases in technical and scale efficiencies, there was a relatively small overall efficiency increase for both textile and clothing companies due to positive technical change. Joshi and Singh (2010) made a total factor productivity estimation using the data envelopment analysis based Malmquist Productivity Index approach in the Indian apparel industry over the period

2002-2007. According to the findings; The Indian apparel industry reached an average total factor productivity growth rate of 1.7 percent per year on average during the working period. It has also been observed that small-scale companies are more efficient than medium and large-scale companies. Rakhmawan, Hartono and Awirya (2015) found that in the 2004-2008 period, the average productivity level of Indonesian textile industry and textile products was about 40% and the average productivity growth rate increased by 2.4%. Le and Wang (2017) using the Malmquist efficiency index, concluded that technological change is decisive for productivity increase and undeveloped technology is a major obstacle for the industry. Gambhir and Sharma (2015) calculated the productivity performance of the Indian textile manufacturing industry with the Malmquist productivity index, using panel data from 160 companies for the period 2007-2008-2012-2013. Regarding productivity gain resources, technology change and scale efficiency are seen as the main factors. The results showed that medium-sized companies performed better in the working period in the term of productivity. Naz, Khan and Syyed (2017) analyzed the productivity performance of Pakistan's textile manufacturing industry using firm-level panel data from 64 companies for the period 2011-2015. It has been found that technical efficiency and technological change have a positive effect on the productivity of the composite and woven textile sectors, and in general, the textile industry has no contribution to productivity growth. Goyal, Kaur and Aggarwal (2017) measured the overall technical efficiency, pure technical efficiency and scale efficiency in the Indian textile industry using section data from 101 companies for 2014-2015. Empirical results have shown that the overall technical inefficiency level in the Indian textile industry is about 16.44%, and points of 11.79% are mainly attributed to their managerial ineffectiveness rather than improper selection of scale size.

Findings of the Study

The main aim of this study is to examine the efficiency and productivity of 16 textile companies selected from the first 1000 companies between 2010-2018 in Turkey. The data required for the study were obtained from the Istanbul Chamber of Industry (ISO) website. The textile companies included in the study are especially the companies whose data are complete in the period examined, and the companies with missing or incorrect data are excluded from the analysis.

In this study, Net Sales Value of firms was used as output. The number of active employees in the firm for each year in the period under consideration, as well as annual equity data of the firms as capital variable, was used as input variables.

The study was conducted and examined in two stages. Firstly, the efficiency level of the firms in the period under consideration was examined. In this context, with the assumption of an input-oriented model, the efficiency scores of the firms were obtained and their returns to scale status were examined. In terms of comparison, technical efficacy scores were calculated with both constant returns to scale and variable returns to scale. In the second stage, productivity and technological developments of these firms in 2010-2018 period were examined by using Malmquist factor productivity index. In the study, Data Envelopment Analysis, which is one of the methods with linear program, is taken into consideration and estimations are made with the DEAP 2.1 package program.

The technical efficiency results of the companies are shown in Table 1. Looking at the table, the variable returns to scale (VRS) technical efficiency scores was higher than the constant returns to scale (CRS) technical efficiency scores in all companies except for only 3 companies.

Table 1:*Technical and Scale Efficiency Results of Textile Firms*

Firm	**CRSTE**	**VRSTE**	**SE**	**Scale Type**
SARAR GIYIM	0.637	0.655	0.972	drs
GAMATEKS TEKSTIL	0.656	0.675	0.971	drs
UNITEKS TEKSTIL	0.627	0.639	0.981	drs
KORTEKS MENSUCAT	0.682	0.696	0.980	drs
ORTA ANADOLU TIC.	0.799	0.836	0.956	drs
MENDERES TEKSTIL	0.785	0.787	0.998	drs
AKIN TEKSTIL	0.775	0.790	0.981	irs
KUCUKCALIK TEKSTIL	0.848	0.854	0.993	irs
KIPAS-KAHRAMAN-MARAS	1.000	1.000	1.000	crs
YUNSA YUNLU SANAYI	1.000	1.000	1.000	crs
SOKTAS DOKUMA	1.000	1.000	1.000	crs
OZDILEK EV TEKSTIL	0.965	1.000	0.965	drs
MATESA TEKSTIL	0.851	0.965	0.881	drs
AYDIN MENSUCAT	0.954	1.000	0.954	drs
GURTEKS TEKSTIL	0.811	1.000	0.811	drs
MEM TEKSTIL	0.757	0.894	0.847	drs
Mean	0.822	0.862	0.956	-

Source: Research Findings

On the other hand, only three companies were fully efficient with the CRS assumption, while the number of fully efficient companies rose to six with the VRS assumption. With the assumption of CRS, the lowest efficiency belongs to UNITEKS company with 62.7% and the highest efficiency belongs to KIPAS, YUNSA and SOKTAS companies with 100%. With the VRS assumption, the lowest efficiency score belongs to UNITEKS company with 63.9%, while the highest effectiveness belongs to KIPAS, YUN-

SA, SOKTAS, OZDILEK, AYDIN and GURTEKS companies with 100%. As a result, with 86.2% the average VRS technical efficiency is higher than the average CRS technical efficiency (82.6%). This shows that the production scale in companies is important.

Considering the scale efficiency scores, only KIPAS, YUNSA and SOKTAS firms reached the optimal scale, while other firms did not operate on the optimal scale. Apart from these firms, only AYDIN and KUCUKCALIK firms exhibited increasing returns to scale, while other firms emerged as a result of decreasing returns to scale. As a result, firms achieved an average scale efficiency of 95.6%.

Factor productivity results of the companies examined are shown in Tables 2, 3 and 4. Considering the results in Table 2, while the average technical efficiency of KIPAS company remained constant, the average efficiencies of UNITEKS, MIDDLE ANATOLIA, YUNSA, SOKTAS and AYDIN firms decreased and the average technical efficiencies of other firms increased. On the other hand, only YUNSA experienced a 2.6% decrease in technology and a positive technological progress has occurred in all other companies. Considering the changes in total factor productivity, productivity increase has occurred in all companies except SOKTAS and YUNSA. The technical efficiency decrease of 2% in the SOKTAS company could not be fully compensated by the 0.8% increase in technological development and as a result, the factor productivity of this company decreased by 1.2%. In YUNSA firm, there was a 4.4% and 1.6% decrease in both technical efficiency and technological development, respectively. This reduced the firm’s productivity by 5.9%. In the period under consideration, MEM company achieved the highest productivity rate increase (10.6%) with 3.5% technical efficiency increase and 6.8% technological progress. The lowest productivity increase in this period belongs to KIPAS company with 0.8%.

Table 2: *Changes in Firms’ Technical Efficiency, Scale Efficiency, Pure Technical Efficiency and Total Factor Productivity.*

Firm	**EFFCH**	**TECHCH**	**PECH**	**SECH**	**TFPCH**
SARAR GIYIM	1.024	1.025	1.020	1.003	1.049
GAMATEKS TEKSTIL	1.038	1.044	1.035	1.003	1.084
UNITEKS TEKSTIL	0.999	1.040	1.018	0.982	1.039
KORTEKS MENSUCAT	1.010	1.010	1.042	0.969	1.020
ORTA ANADOLU TIC.	0.982	1.042	1.019	0.971	1.031

MENDERES TEKSTIL	1.016	1.018	1.024	0.993	1.034
AKIN TEKSTIL	1.032	1.019	1.030	1.002	1.052
KUCUKCALIK TEKSTIL	1.005	1.034	1.020	0.986	1.040
KIPAS-KAHRAMANMARAS	1.000	1.008	1.000	1.000	1.008
YUNSA YUNLU SANAYI	0.956	0.984	0.975	0.981	0.941
SOKTAS DOKUMA	0.980	1.008	0.981	1.000	0.988
OZDILEK EV TEKSTIL	1.001	1.058	0.997	1.004	1.059
MATESA TEKSTIL	1.020	1.035	1.004	1.016	1.056
AYDIN MENSUCAT	0.986	1.045	0.981	1.005	1.030
GURTEKS TEKSTIL	1.027	1.023	1.000	1.027	1.050
MEM TEKSTIL	1.035	1.068	1.014	1.021	1.106
Mean	1.007	1.029	1.010	0.997	1.036

Source: Research Findings

One of the factors affecting the factor productivity change is the scale efficiency change. The amount of this variable is defined as the ratio of the efficiency change to the pure technical efficiency change. This means that technical efficiency change consists of pure technical efficiency change and scale efficiency changes. Analyzing the changes in the scale effectiveness in Table 2, the scale efficiencies has changed in all firms except KIPAS and SOKTAS firms. However, it should be noted that since firms generally operate close to the optimal scale, the decrease or increase in scale efficiency is not much.

Considering the results in Table 3, although the highest average technical efficiency increase was 91.3% in 2012, the average factor productivity in this year decreased by 25.6% since there was a 61.1% decrease in the technological progress of that year. However, despite the 29.3% decrease in the average technical efficiency in 2013, the 86.3% increase in technological progress caused a 31.8% increase in productivity this year. While the highest productivity decrease was experienced with 30.9% in 2017, the highest productivity increase was 93.8% in 2011. The least productivity increase in the period under consideration came in 2015 with 14.9%.

Table 3: *Annual Technical Efficiency, Scale Efficiency, Pure Technical Efficiency and Factor Productivity Changes Made by all Firms*

Year	**EFFCH**	**TECHCH**	**PECH**	**SECH**	**TFPCH**
2010	-	-	-	-	-
2011	0.519	3.735	0.883	0.588	1.938
2012	1.913	0.389	1.224	1.563	0.744
2013	0.707	1.863	0.884	0.800	1.318
2014	0.704	1.016	0.890	0.761	0.714
2015	1.532	0.750	1.212	1.264	1.149
2016	1.133	0.708	0.860	1.317	0.802
2017	1.020	0.678	1.214	0.840	0.691
2018	1.213	1.265	1.005	1.207	1.534
Mean	1.007	1.029	1.010	0.997	1.036

Source: *Research Findings*

Looking at the changes in the annual scale efficiency in Table 3, the year with the most scale problem was 2011. In this year, scale efficiency decreased by 41.2%. Similarly, the year in which the best scale assessment was made in 2012 with an increase of 56.3%. Scale efficiency, in general, fell by an average of 0.3% over the period under consideration.

In Table 2 and Table 3, if we look at the Average Total factor efficiency, 3.6% productivity increase has occurred with 16 companies examined between 2010-2018. This is mainly due to an average 0.7% increase in efficiency and an average 2.9% technological improvement.

The results of how much and how firms are effective on factor productivity are shown in Table 4.

Table 4: *Percentage Changes in Technical Efficiency, Scale Efficiency, Pure Technical Efficiency and in Factor Efficiency*

	EFFCH	TECHCH	PECH	SECH	TFPCH
Maximum	1.038	1.068	1.042	1.027	1.106
Minimum	0.956	0.984	0.975	0.969	0.941
Mean	1.007	1.029	1.010	0.997	1.036
Firms with Positive effects (%)	63%	94%	62.5%	50%	87.5%
Firms with Negative effects (%)	31%	6%	25%	37.5%	12.5%
Firms with no effects (%)	6%	-	12.5%	12.5%	-

Source: *Research Findings*

Considering the results, it is seen that firms have 63% positive effect and 31% negative effect in technical efficiency changes. 6% firms' technical efficiency remained constant, so they had no affect on change in average total technical efficiency. 94% of companies had a positive effect and only 6% of them had a negative effect on technological progress. Similarly, considering the results of the Table 4, 50% of firms had positive effects on scale efficiency change and 37.5% had negative effects and 12.5% did not affect scale efficiency change. Finally, firms had 87.5% positive effects on total factor productivity changes, while 12.5% had negative effects.

Conclusion

In this study, using Malmquist factor productivity index and data envelopment analysis, efficiency and productivity analysis of the 2010-2018 period, the textile companies within the top 1000 companies in Turkey were made. Accordingly, 16 companies were selected. While using Net Sales Values of firms as the only output in the study, 2 variables were used as input, number of active employees and equity data of companies. The study was carried out in two stages. At the first stage, the technical and scale efficiency values of the firms were examined and in the second stage, the changes in the technical efficiency, scale efficiency and factor productivity of the firms during this period were discussed.

It was revealed that the firms' CRS technical efficiency values in 2010-2018 period were lower than the VRS values. With the 16 firms included in the analysis as of the period, the average technical efficiency was 86.2% under the variable returns to the scale, while this value was 82.2% with the constant returns to the scale. This indicates that firms are in a good condition in terms of resource use. In addition, in this period, only 3 firms have achieved the optimal scale and other firms have obtained the result of operating outside the optimal scale. However, it was also revealed that companies that do not operate at an optimal scale, are also close to the optimal scale.

Considering the productivity results in 2010-2018 period, 3.6% increase in average total factor productivity was observed. The reason for this is that companies generally have an increase in both technical efficiency and technological development. Considering the changes in the productivity of the firms, there was an increase in productivity in all firms except YUNSA and SOKTAS firms. In SOKTAS, the technological development change remained nearly constant and the decrease in productivity (1.2%) was completely related to the decrease in technical efficiency. During the period, average total productivity increased by 3.6%, with 16 firms. According to the changes in the technological development of this period, technological decrease has been observed only in YUNSA, and has increased in all other companies. The year with the highest productivity growth was 2011 with 93.8%, while the year with the highest productivity decline was 2017 with 31.9%.

Analysis of the total factor productivity change shows that the change of this variable depends mostly on technological changes. This emphasizes that technological development is more important for production than increase of production factors. The importance of this variable becomes more important especially in companies that experienced a decrease in technological development in the period under review. Updating of machinery and equipment, using qualified and expert labor force and benefiting from foreign capital and foreign Technologies, play a very important role in the technological development of companies. The relations of higher education institutions with the industries and the graduation of students according to the needs of production units are also important in this process. The attraction of foreign capital in these industries requires some difficult laws in the country to change, business areas to be improved as well as facilitating partnership with foreigners. In addition, foreigners' coming to the country may be important in terms of providing the necessary machinery and equipment and providing support services and also in terms of technological development and improvement.

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Chapter 19

ROLE OF MANAGEMENT INFORMATION SYSTEMS INCLUDING ACCOUNTING INFORMATION SYSTEM IN FACING TOURISM CRISIS; AN EMPRICIAL STUDY IN ADEN HOTELS

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1. Introduction

The tourism and hotel industry has developed considerably in the past two decades, and the growth rate varied significantly from country to country and from year to year. These countries have long experience in the tourism and hospitality industry, and in other hands, this countries not forget another side its an important fields maybe will facing in any time without any introductions it's "crises, natural disasters, & conflicts", but in the recent years the tourism and hotel industry beginning to take care the management of crisis, though depending on continuously researches that study crisis and what successful ways in facing this situations and their effects. According to (Nathan et al, 2004, 459) with rapid changes in management information systems "MIS" the applications and developments in "MIS" technologies that are continuing to become more affordable and easier to use "MIS" has evolved to become an integral component of an organization's business strategy, and the information systems are not a subset of strategy it is the business strategy. Therefore, the main goals of hotel's organizations are not only for providing the growth opportunities in tourism markets (Current, & Future), but first to build a good organizational structures capable to facing the crises and management it, that happen at any time through, First, minimize the gap between management and subordinates in crises situations, Second, depending on marketing research to collect all important informations about the external environment in period of crisis and beyond, to study this informations to explain the picture for high management in hotel's organization to benefit from these new informations to determine the new goals, and after that to formulate the alternative strategies and use it specially in crises situations, Third, build a good reputation in the tourism market (Internal & External) through used direct advertising in the period of crises and beyond. And finally, to persuading the tourists and customers about the service quality that offers. Also, the effective and efficient for "MIS" to exchange new information between management levels and subordinates in special situations to clarify (responsibilities, policies, expectations and strategies) (Pittaway, Carmouche & Chell, 1998, 408; Chathoth & Olsen, 2002, 1; Connelly & Ruark, 2010, 746). Therefore, typically there is not a single leading organization but rather many organizations that produce relevant data and information in many respects data and information suffer from the same lack of integration, in order to overcome this fragmentation to facilitate greater access and improved sharing of information a recent trend has been the development of "networked and interoperable" systems, this approach, whereby datasets are held by their original custodians and the internet is used to provide remote access to the data and services which allow interrogation of this data in the correct time (Stojanovic, Green, & Lymbery, 2010, 805).

Therefore, we conclude that the role of management information systems concentrated in providing all modern & accurate informations to managers in the organizations about the “Internal, & External” environments specially at crisis’s period, that accidents happen when the organizations face change in one or more situations contains problems, for instance “wars, & civilian conflicts” and that push the organizations to stay “study, research & ready” to Re-Change some “Plans, Goals & Strategies” to facing this emergency situations.

From point of view of (Lee et al, 2012, 12743) the accidents occur in our daily life, and the severity crises grows in scales such as the “9/11, disaster, sars and tsunami”. The relationship between Accounting Information System and Management Information Systems:

Management Information Systems (MIS) aim to provide financial and non-financial information about historical, current or future variables related to the problem under study. The necessary data is collected to produce the information from sources within the facility or from the external environment surrounding it, where that information is disseminated formally and in the right time to managers to help them make decisions.

Some believe that the accounting information system (AIS) is part of the management information system where the role of (AIS) is limited to measuring historical accounting information for the purpose of preparing reports to external parties.

Others believe that the accounting information system is the basis and that the management information system is just part of it, given that the role of (AIS) extends to include providing the necessary information for planning, monitoring and making management-related decisions.

Some others believe that each of (AIS) and (MIS) is independent of each other and that each has its functions except the fact that there is an overlap between these two systems (Alikhani, Ahmadi, Mehravar, 2013).

The particular aims of this study are to Clarify the kinds of effects to management information systems in the management of the crisis, and their effectiveness in helping to Yemeni hotel organizations in facing the crises. And second, Clarify the ability of Yemeni hotel organizations to predict the crisis, and what measures were taken to deal with it before, during and after the crisis through depending on use management information systems in his business, through providing truth and important information about the situation of crisis for decision-makers to enable them to make strategic decisions in order to confront crises that occurrence or expected to occur. The problem for our study it’s the Yemeni hotel organizations working under hard situations and passes in crucial times, and this means an increased probability of exposure these organizations to the crises that threaten its potential to stay to work in the Yemeni hotel markets. Moreover, what dimensions the efficient of management information systems inability the Yemeni hotel's organizations on facing and manage the crisis. While the importance of this study to concentrate to determine the effect of management information systems in facing the crises that happened in any "Place & Time" and what can the hotel's management work at these situations minimize their effects on businesses of Yemeni hotel's industry. Also, to find successful ways to exit from this situations as quickly and early as possible to stay works in the tourism market and seeking to build a good reputation from the view of his customers "Currents & Futures" at crisis's period and beyond.

2. Conceptual Background

2.1. Management Information Systems.

There is a huge difference between management information systems and regular information systems according to the objectives and tasks performed by these systems in organization.

According to Sorensen et al (2010,38), MIS is a small branch of large planning activities and is, therefore, general and comprehensive control of the human application, the use of technology and all the work of the institution. The role of information in the activities of organizations has been reflected in general and clearly (Alter, 1999, 37). As Javadi & Dastjerdia (2011, 1297) explained that there are two important types of management information systems of the Organization, a system that supports information and works to address and a system interested in making administrative decisions at the three levels of senior management and middle and supervisory. From viewpoint of (Ansoff & McDonell, 1990, 66; Curtis, 1995, 41; Thompson, 1997, 336; Druker, 1988, 4) explained each information system contains important elements that play a role in a compromise in its duties and assist in understanding how information systems work and these elements it's:

1. Collect data, in this process to obtain data and information sources taking into account the availability of (health, precision, thoroughness, flexibility, appropriate cost, relative value) of such information, as well as to provide the organization with information on future trends and prospects for the environment through reliance on marketing research to monitor the internal and external environment.

2. Data processing, the data is transferred with no moral value to value through data (classification, selection, analysis, processing) to the data

obtained from the external environment in order to be ready for use in the future.

3. Update and retrieval of information, in this process, is to benefit from the information gathered, classified and analyses the external environment for the purpose of benefiting in time of need after information is updated periodically by deleting information that does not possess the desired value and add new ones to suit the changes in the external environment.

4. Output, output value derived in their ability to influence on the taken decisions since that output "data" if it does not lead to a better resolution or influence on this information will have a negative value, it means that the importance of administrative information systems is to provide appropriate information for decision-makers.

Finne (2000, 237) concluded that MIS revolves around three main points, the first is the integration of models in the information system software, the second provides senior management with a great deal of information to make effective and successful decisions, and the third provides strong languages for users of the system so that they can solve administrative problems, which information system can be developed within Organization according to new concepts and variables. According to (Bistric, 2006, 215; Tripathi, 2011, 58) shows that "MIS" contributes to the effective role of providing effective and useful information to make critical decisions that support the performance of the organization.

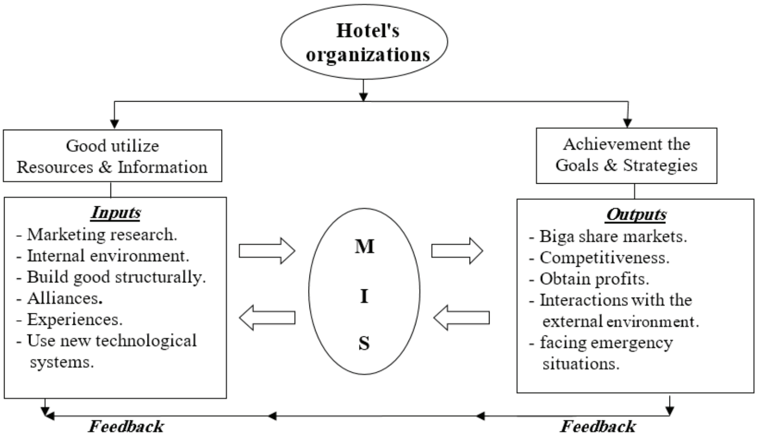
From point of view of (Bistricic, 2006, 215) who defined management information system as "a system in which people and means of information technology (computers, programmers, a communication network) follow determined procedures to timely deliver certain data information to those who need them".

According to UNESCO (2009, 2), the management information system is "organized information and documentation service that systematically collects, stores, processes, analyses, reports and disseminates information and data". (Kotler, 1997, 109) defined the management information system is "a system composed of personnel, equipment and procedures for the classification, analysis and distribution of information required and the precision required for decision- makers".

As (Alter, 1999, 3) defined that "a system that uses information technology to access the information, transport, storage, retrieval, and processing, thus supporting other business systems". From the point of view of (O'Brien, 1997, 56) the information system is "the system in an orderly way of processing information on past, present and future internal operations and external environment variables to true and time to assist decision-makers". And from our view, we can definition management information system" this system is designed to collect, organize and process the data after analysis and then stored and retrieved quickly and me to support decision-making in the organization to achieve its goals". Any information system should provide information about the internal and external environments (Radford, 1978, 12).

From the point of view (Adekeye, 1997, 325), "MIS" is a safety valve for all administrative processes within the organization. The information provided by MIS creates awareness among agencies and develop future plans that face any negative risks in the future (Adeo et al, 2010,12). With regard to the organization of hotels in Turkey, it makes great use of information technology and Internet service to provide excellent service to customers, as the tourism market in Turkey carries out important activities related to information technology, and is interested in supply management mainly and create a competitive advantage among international organizations (Ulengim & Uray, 2004, 11). We conclude from all views to writers that explain the management information systems it's a good tool to help the managers in all organizations, therefore, the managers in Yemeni hotels take care to important of "MIS" to facing any problems or crises that occurrence or expected to occur in any time through "collect, analyses, & process" the data & informations about this situations, to less the costs & loses in resources, time, marketplace, marketing efforts, & finally organization's reputation in view of his customers. We will explain the center of management information system in hotel's organization in the following figure:

Figure 1*:Explain the location of management information the system in hotel's organizations.*


Hotel's organizations
Good utilize Resources & Information
Achievement the Goals & Strategies
Inputs
- Marketing research.
- Internal environment.
- Build good structurally.
- Alliances.
- Experiences.
- Use new technological systems.
M I S
Outputs
- Biga share markets.
- Competitiveness.
- Obtain profits.
- Interactions with the external environment.
- facing emergency situations.
Feedback
Feedback

Source*: The researcher designs it*

2.2. Accounting information system

The definition of an accounting information system is that essential and important part of the organization's administrative information system that inventory and compiles financial data from sources inside and outside the organization, then it runs this data and converts it into useful financial information for users of this information outside and within the organization (Trigo, Belfo, Estébanez, 2016).

The accounting information system is also known as one of the components of the administrative organization that specializes in collecting, classifying, processing, analyzing and communicating the appropriate financial information to make decisions (Trigo, Belfo, Estébanez, 2016).

The accounting information system is one of the branches of management information systems and the relationship lies between them that the accounting information system provides only financial information and deals with all commercial transactions while the management information system focuses on non-financial information.

There is a relationship that shows that the accounting information system consists of a financial accounting system and management accounting system. As the management accounting system provides services to managers and internal users only in the organization, while the financial accounting system is concerned with providing services to shareholders and external users.

There are overlapping characteristics in the tasks between the management information system and the accounting information system. The task of the management information system is to provide information to managers to make decisions. This information may be of a financial nature or that this information is related to changes in productivity or stock, while economic information in the management information system is general accounting information. That is, the relationship between them in the tasks is complementary.

The two systems are affected by a group of people and working machines in addition to a set of procedures, and the two systems consist of subsystems based on providing information for both systems in full harmony, and the main goal of providing information between the two systems is to improve the decision-making process and work to increase effectiveness and efficiency, where the account management provides Information directly to the management information system and indirectly provides information to external users, financial accounting provides information directly to external users, and the management information system indirectly.

For managers and internal users, the accounting information system provides information to other external users, and work to increase the number of users, and the accounting information system uses financial data while the management information system uses non-financial data in addition to financial data, and this is the fundamental difference between the two systems (Alikhani, Ahmadi, Mehravar, 2013).

2.3. Tourists Hotel & Classifications Criteria.

The development that happened in recent years in the needs of people, it made peoples shifting from mass tourism to individual tourism, and that push the tourism & hotel industry to differentiation in all his activities that offered, for instance, means of accommodations “Resorts, Hotels, Villages holidays” that closely linked with job tourism sector, and it changes according to the nature of activities in tourism destinations. According to Hajiluca et al (2009, 5) explained the hotel’s organization classification within the following: First, the level of comfort “Luxury (4&5) stars, medium level, and modest class”. Second, the location of the territory “the season, mountain, in treatment areas, in cities center or periphery, possibly towards the airport, and along the road”. Third, the purpose functional on time of stay of guests “transit, and special purpose”. Fourth, the operating systems “open permanently, seasonal”. Fifth, the form of exploitation “individual service, association voluntary hotel chains, and companies or groups (integrated hotel chains)”. Sixth, the form of ownership “personal property, private, state property, cooperative, public property, public ownership of international concern, and joint ownership”. Seventh, the size hotels “small, medium, and large hotels”. Eighth, the target market” trade, interest, and vacation”. Ninth, the standards of service and facilities offered “full-service hotels, economic hotels, and self-catering hotel”. As (Aryee, 2011, 10) noted that people who travel to any country need a hotel to relax and rest while spending their tourist purposes.Hotels are the most important tourist supply in the hospitality sector (Karppinen, 2011, 11). As the Ministry of Tourism of Yemen seeks to implement the world criteria to classify the tourist’s hotels in Yemen (Caribbean tourism organization,2002,4; Aryee, 2011, 12; Karppinen, 2011,16).

We conclude from the hotels classification above that interest in hotels in various categories is an important point for the success of tourist destinations and repeat visit through tourists (Kandampully, Juwaheer, & Hu, 2011, 23). Tourism and hospitality sector is one of the vital sectors that develop countries. The element of service is the key element in the hotel sector and this element is to achieve customer satisfaction (Chand, 2008, 100).

2.4. Management of Crisis

The tourism and hotel industry has been hit by a host of problems and crises and has experienced many disasters, whether they are man-made crises such as terrorism, security and political instability, or by nature such as volcanoes, earthquakes, etc. From point of view of (Tavitiyaman et al, 2008, 27) who defined a crisis the crisis is a successive bad event affecting companies and damage their profitability and lack of continuity, such as fires. As to (Ritchie, 2004, 670) a crisis is defined as a general disorder that adversely affects the system as a whole, destroys any infrastructure and also threatens public order. From the viewpoint of (Anderson, 2006, 1290) disasters and crises are defined as a sudden and unexpected real challenge. The real role of any organization comes to meet this challenge and overcome it. All these crises and events are threats that hinder organizations in the exercise of their work (Okumus, Altinay & Arasli, 2005, 95; Chen, 2011, 203). And explained the management of crisis refer to the process of identifying and planning what and how to respond to a crisis, and of following up on the plans if any crisis does occur, and the management of crisis has received much attention lately in the tourism and hospitality management fields due to recent unexpected events and developments such as "War on the Arab region, the Asian financial crisis, the occurrence of foot and mouth disease in the UK, the terrorist attacks on America on 09/11 and the bombing in Bali". Due to (Ritchie, 2004, 670) Whoever manages the crisis is a person of great efficiency and qualification. all officials in the tourism sector must study all the effects of crises and disasters and develop protection strategies in a thoughtful and tight (Paraskevas et al, 2013, 131). As (Ghaderi, Som, & Henderson, 2012, 80) Managers must have a preconceived perception of the crisis and how to deal with it according to clear and deliberate steps, to avoid significant damage,.These factors must be carefully diagnosed to understand the changes in tourism markets and deal with them effectively (Wang, 2009, 75). As (Anderson, 2006, 1291) There are clear signs of crisis recognition: First, imagine a confusing and exciting event, such as a danger to the structure of the organization and threaten the survival of the organization. Second, a stronger threat, especially when making short decisions, occurs suddenly. Third, imagine the inability to avoid significant damage. Fourth, radical and decisive change, this change carries a negative and positive connotation. Fifth, the volatility and instability of situations is of concern. According to (Ritchie, 2004, 671) suggested three main types of crises, the first is the sudden and immediate crisis where there is no warning. The organizations are unable to develop a proactive plan to avoid the crisis. Second the primitive crises and need strong strategies to reduce their acceleration. Third, permanent crises that last for days and up to years. From our point of view, we concluded that all plans and strategies in Yemeni tourism establishments should deal with all types of crises effectively and accurately to control the magnitude of disasters that may occur. From the point of view of (Salamn, 2011, 148) he identified five stages of the crisis which is :

1. *Predict*, where the crisis hit signs warning, as may be generated at the beginning of the so-called semi-crisis and is delimited including the decline in sales, the decline in production.

2. *Prevention*, including prevention phase measures and decisions a private organization can take to prevent the crisis.

3. *Containment*, and intended containment activities are undertaken by the management in order to minimize the negative impacts of the crisis, which begins phase suppression and absorption crisis through understanding and a broad perception, and careful review of the causes of the crisis and work to analyses several aspects.

4. *Healing*, after the process, is completed to contain the crisis, analyses and identify the most important causes for the occurrence, and work to overcome the negative effects, management of the organization returns to practice various activities after the crisis occurs routinely.

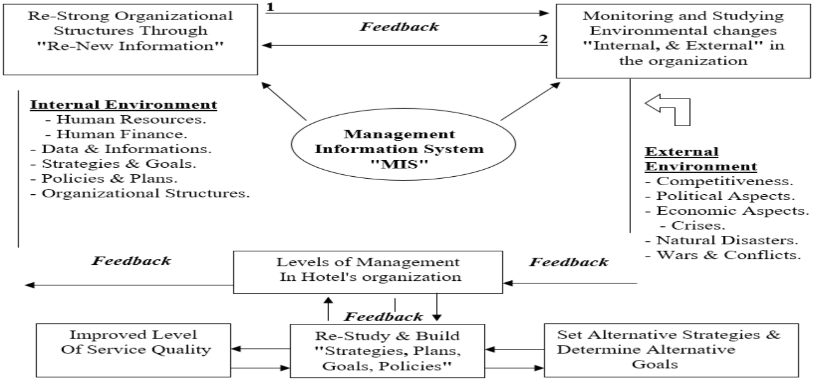
5. *Education*, after recovery from the management of crisis works organization or your team with management of crisis start with examining it in order to determine the main reasons that led to the crisis and the possibility to stand by and take advantage of the experience for the purpose of drawing up plans and strategies to face similar crises in the future.

Rousaki & Alcott (2006, 26) Refers to the possibility of three-dimensional crises and overcome them, First, the internal response of the organization and the speed of dealing with it by knowing the most important resources in crisis management and the quality of the appropriate strategy; Second, the media power of the organization. Third, the sudden crisis that may affect the organization.

2.5. The effectiveness of management information systems in the business of the hotel's organization at a crisis.

Nowadays the current business environment becomes more complicated. Therefore, managers in all hotels' organizations need to make fast decisions to allocate and use important resources efficiently and effectively. As a result of the technological advances witnessed in the world, hotel organizations in all countries of the world are dealing with changing work environments, and thus the rise of global competition between hotel organizations, crises and natural disasters, rapidly changing market trends have all increased the pressure on hotel's organizations to come up with effective responses to survive and succeed. From the viewpoint of Lee et al (2011, 406) the primary objective of providing "MIS" in organizations has been to support the "managers & employees", so they can perform their tasks better, especially in emergency situations. "MIS" is used to cope with the huge emergencies that afflict the organization, in addition to improving the organization's system to respond to real crises, and also help the flow of information abundantly between organizations and thus create a great awareness among individuals and departments and predict the occurrence of crises and how to deal with them and avoid mistakes (Aedo, 2010, 12). One of the priorities of effective management during the management of real crises is to study the effects of this crisis on all administrative departments within the company, and focus on the system of operations and information systems in addition to giving great importance to human resources management (Anderson, 2006, 1291). Due to (Gil, 2009, 105) as a result of the intensity of competition in different organizations and departments, managers need to provide them with accurate and comprehensive information to manage the organization and reach the goals set. Managers' perceptions of using "MIS" are very important, and the search for new information helps to create a strong information system for the company. There is a strong and important relationship between the tourism sector and "MIS". All activities of the tourism sector depend heavily on the provision of more information and data, and thus increase the effectiveness of management in tourism organizations, the activity of tourism organizations depends mainly on the information available to come up with strong tourism activities(Ramos & Perna, 2009, 278). According to (Adekeye, 1997, 325) "MIS" is the driving force of management. All managers in tourism organizations need to provide them with sufficient information to manage their tasks properly. Without this information, effectiveness in departments is reduced. Due to (Ranganathan & Kannnabiran, 2004, 284) observed MIS tasks and applications grow. The larger the workload, the greater the complexity and the wider scope of the implementation of the tasks, thus complicating the mission and function of the "MIS", especially with technological progress. The success of any administrative decision depends on the success of "MIS". It is an important and driving force for the success of all businesses in organizations, "MIS" has a significant impact on the functions in departments such as the Department of Marketing and Finance, etc., and these departments will not become more efficient without attention to "MIS". Therefore, the good decision of managers is made by this tool (Tripathi, 2011, 59). "MIS" contributes to provide great benefits to organizations and works on continuous coordination between departments and achieve reliability and review all the work in the organization (Reddy et al, 2009, 1). We conclude great importance to business "MIS" inside the works of Yemeni hotel organizations because the role of marketing research through “MIS” study the two environments to re-engineering all process structural and productions. After that give a clear picture to management in all levels” high, middle, low”, what is happening from the changes and volatility in Yemeni hotels markets, that now passes in period or a critical stage at their work’s history, and it’s pushing the based on this industry “hotel industry” to study these fluctuations carefully and extensively, to overcome the obstacles and difficulties that facing him in daily business under special situations “disasters & crises”. Because the success Yemeni hotel organizations & his managers in management of crisis based in essence on a set of the main pillar, through operations planning, coordination and policy development then provide alternatives and choose the most suitable ways to decision-making, face the reactions and the possible consequences the way to the restoration and optimize extraction results to exit the lessons learned for the benefit of future use in the prevention and management of any similar crises.

Figure 2*: Explain the business of MIS in Hotels organizations*


Re-Strong Organizational Structures Through "Re-New Information"
1
Feedback
2
Monitoring and Studying Environmental changes "Internal, & External" in the organization
Internal Environment
- Human Resources.
- Human Finance.
- Data & Informations.
- Strategies & Goals.
- Policies & Plans.
- Organizational Structures.
Management Information System "MIS"
External Environment
- Competitiveness.
- Political Aspects.
- Economic Aspects.
- Crises.
- Natural Disasters.
- Wars & Conflicts.
Feedback
Levels of Management In Hotel's organization
Feedback
Feedback
Improved Level Of Service Quality
Re-Study & Build "Strategies, Plans, Goals, Policies"
Set Alternative Strategies & Determine Alternative Goals

Source*: The researcher designs it.*

3. Procedures of study

3.1. Sample of study

The researcher distributed the questionnaires on a sample of management and some employees working in two luxury Yemeni hotels in Aden city. The sample of study contents four levels. First, the Top Management includes **“**General Manager & his Assistant**”**. Second, Middle Management includes **“**Department’s Managers & his Assistant**”** it’s (Human Resources, Public Relation, Financial, Legal and Reservation) and the response to choose just this departments in our study, because the core jobs of this departments stay work to less negative effects, high costs and the competitiveness with other Yemeni hotel’s organizations through study all changes in “Internal & External environment” in their hotel’s organizations to explain the picture for high management to help him in strategic decision-making through allow & give him the right to change in some laws just at crises to facing the negative effects for this situations and know him what the successful ways must follow it to management of crisis, or deal with it. Third, Low Management includes "supervisors". Fourth, contain Employees working in these departments, and distributed (120) questionnaires all hotel received questionnaires, while (98) questionnaires that it included in the data analysis, as (13) not received it, and (9) questionnaires was been neglected, because the answers not complete to some questions. In our study we choose two hotels working in Aden city, first (X) Hotel, second (Y) Hotel, & both these hotels are luxury hotels (five stars), and we illustrate above in the following table:

Technical Data Card For the Methodological Procedure Used :

Table 1: *Explain the technical data card for the methodological procedure used.*

Survey Type	"Questionnaire"
Questionnaire Type	"Structured into 15 Questions & 2 Variables"
Population	"Managers & Employees in Two Luxury Yemeni Hotels (Five stars in Aden city."
Sample Type	"Stratified"
Sample Size	"98 Managers & Employees"
Period of Study	"During Months in September 2019 - January 2020"

Source*: The researcher designs it.*

3.2. The instrument used in the study.

In the form of questionnaire for this study it has (15) questions, we used the statistics program "SPSS" to analyses the data for our study, and simple linear regression analyses to test our hypothesis, and used the Likert scale that contain from (3) points {Agree (3) degrees, Not Sure (2) degrees, and Not Agree (1) degree}. The final questionnaire contained from the following sections: Section (A) in this section questions described demographic characteristics the respondents who work in the hotels **"**sample of study**"** & this section contains (5) items.

The section (B) these questions about management information systems of the Yemeni hotel organization & this section contains (5) items**"** Independent variable**"**. And section (C) this section about management of crises and was measured by a (5) items scale "dependent variable**"** (Salaman, 2011, 164).

4. Results of Study

The following table number (2), summarizes the demographic variables, of the (98) respondents over half (62.24%) male, and (37.76%) were female. In terms of work experience (35.71% & 26.53%) had been in the hotels for (11-15) and (6 -10) years, it is then followed by the period (15) Years and More (20.41%). Only (8.16%) attained postgraduate qualifications. Most respondents (84.69% & 7.14%) had graduated from four-year universities and two years diploma. In addition, that a large number of the employees are graduates emerged and a large proportion, and this shows that the community working in these Yemeni hotel organization with educated society can go through continuous training on the use of technology and modern software, which could contribute to raising and develop their career performance in a standard time. In relation to organizational hierarchy, the fourth levels were distributed almost as planned, with First, the Top Management included "General Manager & his Assistant". Second, Middle Management includes "Departments Managers & his Assistant" (Human Resources, Public Relations, Financial, Legal, and Reservation). Third, low Management includes "supervisors". Fourth, it contains some Employees working in these departments, and levels in the ratio (4.08 %; 16.33 %; 4.08%; 75.51%). These ratios reflected the organizational composition of the population in these hotels, and we will explain this information in the following table.

Table 2 : *Explain the demographic variables to sample study*

Characteristics		**Frequency**	**Present "%"**
Gander	Male	61	62.24
	Female	37	37.76
Working in the hotel organization's "work experience" (years)	5 Years or Younger	17	17.35
	6-10	26	26.53
	11-15	35	35.71
	15 Years and More	20	20.41
Department of the current job	Human Resources	19	19.39
	Public Relation	20	20.40
	Financial	16	16.33
	Legal	14	14.29
	Reservation	29	29.59

Organizational Hierarchy	Top Management Level	4	4.08
	Middle Management Level	16	16.33
	Low Management Level	4	4.08
	Employment	74	75.51
Level of Education	Ph.D./Master	8	
	Bachelor	83	84.69
	Diploma	7	
** Respondents background **(N= 98)***		**98**	**100%**

Table 3:*The arithmetic mean and standard deviation and percentages for the sample on the response to the variable management information system*

No	Phrase	Agree	Not Sure	Not Agree	Arithmetic Mean	StD
6	The management information systems and their effectiveness provide future information for the hotel management that contributes to the crisis predictability expected to occur.	83%	4.3%	12.8 %	2.70	0.68
7	The management information systems and their effectiveness provide accurate information for the hotel management that contributes to the prevention of expected crises.	71.3%	17.0 %	11.7%	2.60	0.69

8	The management information systems and their effectiveness would provide comprehensive information for the hotel management contribute to crisis management.	73.4%	10.6%	16%	2.57	0.75
9	The management information systems and their effectiveness would provide quality information for the hotel management contribute to the transit crisis with the least possible losses.	79.8%	13.8%	6.4%	2.73	0.57
10	The information provided by the management information systems will contribute to determining the effects of the crisis and lessons learned.	70.2%	18.1%	11.7%	2.59	0.69
The aritmetic mean and standard deviation in general					2,64	0.33

N = ***98***

From the above table number (3), the arithmetic means of the sample answers about variable management information systems in Yemen's hotel organization (2.64), and standard deviation (0.33). That shows us the highly important to good utilizing from using all these techniques to help the managers in Yemeni hotel organization to determinates the goals, & desired strategies, reducing the costs and contact between Yemen's hotel organization and his costumers (Current, Potential, Foreign, & Internal) "Travel agent, tourists, etc", to reduce the gap between all of them, and then creating the loyalty to provide the achieving a new marketing opportunities through enter to a new markets or alliance with other Yemen's hotel organization to leader or capture the Yemeni hotel markets, and less the threats from another competitive in our tourism markets.

Table 4 :*The arithmetic mean and standard deviation and percentages for the sample on the response to the variable management of crises*

No	Phrase	Agree	Not Sure	Not Agree	Arith-metic Mean	StD
11	Information on the consent of users provides to the hotel management the opportunity to respond to crisis and reduce their effect.	79.8%	8.5%	11.7%	2.68	0.67
12	The volume of use provides indicators which through it we can provide information contributing to the increase in expectation of future crises.	74.5%	14.9%	10.6%	2.64	0.66
13	The user information system and its suitability for the administrative levels at the hotel would contribute to determining the type of crisis and treatments.	72.3%	8.5%	19.1%	2.53	0.79
14	The rapid response to emerging changes that occur in the hotel and its environment that will create the opportunity to predict the crises that occur for the purpose of processing and response.	76.6%	13.8%	9.6%	2.67	0.64
15	Maintaining the security and confidentiality of the information in the system used by the hotel management during crisis processing allows them to reduce the risk of the crisis and raised and how to address them.	70.2%	17.0%	12.8%	2.57	0.71
The arithmetic mean and standard deviation in general					**2.61**	**0.34**

N = 98

From the above table number (4), the arithmetic means of the sample answers about variable regulation of hotels (2.61), and standard deviation (0.34). We show that management information systems strongly affects in management of crises in the Yemeni hotel organization “sample of study”, that there is great interest by the Yemeni hotel management to adopt new technology as well as providing for senior management all the new and correct information about all variables in "inside, & outside" the Yemeni hotel organization, and give a big picture to decision-making in Yemeni hotel organization to facing the effects of crises and beyond it. Therefore, we show the management executive focused on collects all accurate data & information about the others hotel's organization, what doing this organization at the crisis, what the laws these organizations follow it at crisis situations & if these organizations found a new law at emergency situations. Moreover, the high management must be seeking to know what this law to utilize from using it in crisis situations. Finally, we see the managers in Yemen's hotel organizations they must be studied and stay study all experiences for other organizations that based in crisis, and what the successful methods follow it to outside from his crisis.

H: "There are a significant impact on the effectiveness of the management information systems in the management of crises."

Table (5*):** *The effect relationship of management information systems in the management of crises*

The coefficient of determination R2	Calculated F	Tabulated F	Calculated T	Tabulated T
0.69	20.32	5.22	14.15	1.97

Note: The Value of

- (F) at the abstract level (0.05).
- (T) at the abstract level (0.05).

Note from above table number (5), that the coefficient of determination (R2) reached (0.69), the value (F) calculated (20.32), the largest of the value of (F) tabulated the (5.22) and the value of (T) calculated for management information systems on management of crisis and was (14.15) which is more than the value of (T) Tabulated ((1.97 at significance (0.05). This means that there is direct influence to management information systems in management of crises in Yemeni hotel organization. and that push the managers in Yemeni hotel organization "sample of our study " to take care of important for a good utilizing from using the all new in the world of information systems that use from the tourism modern countries to measure, & evaluate the results at crisis's periods or beyond it that occur in business of hotel's organization & study this results to treatment the weakness in performance the Yemeni hotel organization & marketing threats in business these organizations, and after that changing it to strong in performance & marketing opportunities through enter in a new markets, or offer a new service to maintain our current customers, or attractive a new customers to facing the competitiveness in marketing environments. Therefore, all managers levels in Yemeni hotel organizations must be depending on management information systems to alignment between the internal environment through study the "data, goals, strategies, plans, human resources, finance resources, organizational structures" & external environment through study some changes in Yemeni markets environments its "technological, economic, political & legal" to facing the changes in these environments, to achieve the successful in Yemeni's hotel markets that have many from marketing opportunities through have more and more from tourism destinations and now based in crucial period in his business, and the data's conclusions leads us to accept our hypotheses study.

5. Conclusions

From the results of our study, we found a highly effective for management information systems in the work of Yemeni hotels organization, that push us to agree at our hypothesis. Therefore, the management and employee in the Yemeni hotels organization should use all the new technologies in daily activities and seeking to update it to maintain his share marketing within tourism markets (current & potential), through effective communication with his costumes, and build a new communications channels with new costumes "Travel Agent, Tourists, Visitors" (Local, Foreign, Current & Potential) especially at crisis, emergency situations.

1. The results showed that the management information systems contribute effectively to the development business of Yemeni hotel organizations, as contribute effectively in achieving the goals, plans, and strategies through saving time and resources at a crisis period.

2. The results showed that the management information systems have become an important tool to the Yemeni hotel's industry, and from his view, the management information systems are playing an important role in creating the success of these organizations to facing the crisis and managing it.

3. The management information systems can facilitate the movement of information, laws in hotel's organizations starting from high management and finally in employees pass in middle & low management, moreover, management information systems can easier to monitoring & implementation the important decisions.

4. The management information systems could provide accurate data to high managers to Re-Formulate strategies in new methods, depending on a study the resources "human & financial" to face the crises or emergency situations.

5. The management information systems playing an important role in the communication process between hotel's organizations and "Customers" in all period and especially at the crisis to know what happens around it in competitive markets.

6. There is a differentiation in the classification of crises and their stages and requirements management and phases management of the crisis, which refers to the presence of an actual need to study and understand the terms of crisis, to face this threat.

6. Recommendations

In light of the foregoing conclusions we reached we can put forward some recommendations that Yemeni hotel management "the study sample" should taken into account in confronting the crises and what correct scientific methods they should follow that will help them to get rid of the negative effects that appear in times of crisis, and perhaps beyond:

1. Yemeni Hotel management must take into account the increasing importance of management information systems, and according to the attributes of the important tools that help those administrations to know the challenges and changes that occur in the surrounding business environment, especially in times of crisis.

2. Hotel management that operate in the tourism market of Yemen, "the study sample", must take into consideration the formation of a working group specializing studying crises and stages and so-called "management team of the crisis," and is headed by the Director-General or the Executive Director of the hotel organization and a membership of the heads of departments (public relations, finance, legal & human resources) because of these departments vital and important role in the work of the Organization hotel.

3. Yemeni hotel Management must put the "management team of the crisis" into intensive training courses to build scientific and practical experiences that facilitate their work in how to study and deal with the crisis without confusion and unrest.

4. Yemeni hotel Organizations "the study sample" must take all that is new in the world of information systems, including network "Intranet" to ensure access to accurate information about the competing hotel organizations that working in the tourism market of Yemen to be a cofactor to the managers of the Hotel organizations in taking and making the right decisions.

5. The Yemeni hotel Management must take into consideration to study the experiences of the developed countries in tourism and

what are the ways and correct scientific methods that are taken by these countries to face the crises that they passed by.

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