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EXAMINING CONSUMERS' DECISION-MAKING STYLES IN THE CONTEXT OF BEHAVIORAL ECONOMICS

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ABSTRACT

EXAMINING CONSUMERS' DECISION-MAKING STYLES IN THE CONTEXT OF BEHAVIORAL ECONOMICS

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Behavioral economics emerged as a critique of the homo economicus concept accepted in traditional economics. Contrary to traditional economics, behavioral economics, which argues that individuals can not always make rational decisions, argues that individuals can make irrational decisions by making a number of cognitive errors while making decisions. When it comes to consumer decision-making styles, although Sproles and Kendall's consumer sytles ınventory (CSI) is an accepted scale for determining consumer stylesi it has been observed that different results are obtained when applied to different cultures.

In this study, it is aimed to explain consumer decision-making styles (CDMS) in the context of behavioral economics. In the first chapter of the study, traditional economics and the concept of rational people, the history of behavioral economics, the Prospect Theory, which is the cornerstone of behavioral economics, and the basic cognitive biases and heuristics in behavioral economics are discussed. In the second part of the study, the consumer and the decision- making process of the consumer were emphasized, the CSI was mentioned and the literature review on the CSI was included. In third chapter of the study, the data obtained through the questionnaire were analyzed and interpreted.

For aim of study, firstly nine questions about behavioral economics approaches prepared by the hypothetical selection method were asked to the participants. Than determined consumer decision-making styles for consumers in Turkey. At this stage, due to the existence of studies proving that consumer styles differ culturally, it was preferred to use CSI, which was previously developed with a sample of consumer in Turkey. Finally, the answers given to the questions involving behavioral economics

concepts and the consumer profile data reached were analyzed and interpreted together.

Keywords: Behavioral Economics, Heuristic Biases, Cognitive Biases, Consumer Decision Making Styles, Consumer Styles Inventory

ÖZ

DAVRANIŞSAL İKTİSAT BAĞLAMINDA TÜKETİCİ KARAR VERME TARZLARININ AÇIKLANMASI

AYŞEGÜL AKYILDIZ

Davranışsal ekonomi, geleneksel iktisatta kabul görmüş homo ekonomikus kavramının bir eleştirisi olarak ortaya çıkmıştır. Geleneksel iktisadın aksine bireylerin her zaman rasyonel kararlar alamayacaklarını savunan davranışsal ekonomi, bireylerin karar verirken bir takım bilişsel hatalar yaparak irrasyonel kararlar verebileceklerini savunur. Tüketici karar verme tarzlarına gelindiğinde ise, Sproles ve Kendall'ın Tüketici Tarzı Envanteri (TTE) tüketici tarzlarını belirlemek için kabul gören bir ölçek olmasıyla birlikte farklı kültürlerde uygulandığında farklı sonuçlar elde edildiği gözlemlenmiştir.

Bu çalışmada tüketici karar verme tarzlarının davranışsal ekonomi bağlamında açıklanması amaçlanmaktadır. Çalışmanın birinci bölümünde; geleneksel iktisat ve rasyonel insan kavramı, davranışsal ekonominin tarihçesi, davranışsal ekonominin mihenk taşı olan Beklenti Teorisi ve davranışsal iktisadın temel bilişsel ve sezgisel önyargıları ele alınmıştır. Çalışmanın ikinci bölümünde; tüketici ve tüketicinin karar verme süreci üzerinde durulmuş, TTE' den bahsedilmiş ve TTE ile ilgili literatür taramasına yer verilmiştir. Çalışmanın üçüncü bölümünde ise anket aracılığıyla elde edilen veriler analiz edilmiş ve yorumlanmıştır.

Çalışmanın amacı doğrultusunda öncelikle katılımcılara davranışsal ekonomi kavramlarına ilişkin varsayımsal seçim yöntemiyle hazırlanmış dokuz soru sorulmuştur. Daha sonra Türkiye'deki tüketiciler için tüketici karar verme tarzları belirlenmiştir. Bu aşamada tüketici tarzlarının kültürel olarak farklılık gösterdiğini kanıtlayan çalışmaların var olması nedeniyle daha önce Türkiye'deki tüketici

örneklemi ile geliştirilmiş olan bir TTE'nin kullanılması tercih edilmiştir. Son olarak davranışsal ekonomi kavramlarını içeren sorulara verilen cevaplar ve ulaşılan tüketici profili verileri birlikte analiz edilerek yorumlanmıştır.

Anahtar Kelimeler: Davranışsal Ekonomi, Sezgisel Yanlılıklar (Kısa Yollar), Bilişsel Yanlılıklar, Tüketici Karar Verme Tarzları, Tüketici Tarzları Ölçeği

PREFACE

Behavioral economics emerged as a critique of the homo economicus concept accepted in traditional economics. Contrary to traditional economics, behavioral economics, which argues that individuals can not always make rational decisions, argues that individuals can make irrational decisions by making a number of cognitive errors while making decisions. When it comes to consumer decision-making styles, although Sproles and Kendall's consumer sytles ınventory (CSI) is an accepted scale for determining consumer stylesi it has been observed that different results are obtained when applied to different cultures.

In this study, it is aimed to explain consumer decision-making styles (CDMS) in the context of behavioral economics. For aim of study, firstly questions about behavioral economics approaches prepared by the hypothetical selection method were asked to the participants. Than determined consumer decision-making styles for consumers in Turkey. At this stage, due to the existence of studies proving that consumer styles differ culturally, it was preferred to use CSI, which was previously developed with a sample of consumer in Turkey. Finally, the answers given to the questions involving behavioral economics concepts and the consumer profile data reached were analyzed and interpreted together.

Since the questions about the behavioral economics approach in the questionnaire are original, it is thought that this study will give an idea to future studies on a similar subject. Similarly, it is believed that using the scale experienced on consumers in Turkey in the consumer styles inventory will contribute to the literature and future studies by revealing the consumption profile of consumers in Turkey.

Firstly, I would like to express my sincere thanks to my respectable thesis supervisor Asst. Prof. Hatice Dilara MUMCU AKAN who shared her valuable views and experiences with me during the study process.

Many thanks to my dear family who supported me at every step, including this study, and made me feel lucky to be born in this family, and to my friends who stood by me and shared my stress and happiness with me.

Finally, I would like to thank the dear survey participants for their precious time.

AYŞEGÜL AKYILDIZ

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LIST OF ABBREVIATIONS

CDMS **:** Consumer Decision-Making Styles

CSI **:** Consumer Style Inventory

DMS **:** Decision-Making Styles

EKB Model **:** Engel, Kollat and Blackwell Model

EPS **:** Extensive Problem Solving

H-S Model **:** Howard-Sheth Model

LPS **:** Limited Problem Solving

INTRODUCTION

Behavioral economics, which originated in the 1950s emerged as a critique of the homo economicus concept accepted in traditional economics, has become more known with the Prospect Theory study of Kahneman and Tversky (1979). This study has brought many concepts to the field of behavioral economics. Kahneman and Tversky (1979) examined the decision-making behavior under uncertainty and risk, and revealed that the individual tends to risk-averse when it comes to gain, and to risk-seeking when it comes to loss. Contrary to traditional economics, behavioral economics, which argues that individuals can not always make rational decisions, argues that individuals can make irrational decisions by making a number of cognitive errors while making decisions. These errors, which include concepts such as the endowment effect and the anchoring effect, are handled with the concept of "heuristics and cognitive biases" in the behavioral economics literature.

When it comes to decision making, the Consumer Styles Inventory (CSI) developed by Sproles and Kendall (1986) comes to the fore in the consumer behavior literatur. However, the fact that the CSI was created with a sample of high school students in the USA caused the generalizability of this scale to be questioned at the universal level. In order to measure Consumer Decision-Making Styles (CDMS), the scale which emerged by testing its validity and reliability on a sample of Turkish consumers was used. This measurement model was developed by Dursun, Alnıaçık and Kabadayı (2010). Therefore, a larger sample of student and non-student adults was used in the model used in this study.

The first purpose of the study is to test main topics accepted in the behavioral economics literature such as the framing effect, anchoring effect, sunk cost fallacy and payment decoupling (which is discussed within the concept of mental accounting) for Turkish consumers. In order to achieve this aim, nine questions about behavioral economics approaches prepared by the hypothetical selection method were asked to the participants.

The second purpose of the study is to determine the decision-making styles of Turkish consumers. To determine consumer decision-making styles the scale developed by Dursun, Alnıaçık and Kabadayı (2010) has used. A nine-factor measurement model that consisting of 22 questions has used to determine the decision-making styles of the participants.

The final purpose of the sudy is to evaluate the results obtained within the scope of the two objectives mentioned above together. In other words, it is aimed to evaluate the answers of Turkish consumers to the questions posed within the scope of testing behavioral economics concepts and the decision-making styles of Turkish consumers. In order to make the said evaluation, one-way analysis of variance was performed between the answers given in both parts.

This study consists of three chapters. In the first chapter, behavioral economics and the historical development of behavioral economics are examined. Firstly, traditional economics and rational people are discussed, and then the emergence of behvioral economics is discussed. While mentioning about the historical process of behavioral economics, Prospect theory, which is the cornerstone of behavioral economics, is mentioned in detail. In addition, basic heuristics and biases are emphasized and examples of studies carried out in this field are given.

In the second chapter, consumer, consumer decision-making process and decision-making styles are examined. Regarding the consumer decision-making process, the five-stage model of the consumer buying process that forms the basis of the process and the models developed based on this model are mentioned. Eight decision-making styles or characteristics developed by Sproles and Kendall in consumer decision-making styles, which is another subject mentioned in this chapter, are mentioned in detail and then studies in the literature are included.

The third chapter is the application section, where behavioral economics concepts are explained by CDMS. In this section, the main topics which in the behavioral economics literature such as the framing effect, anchoring effect, sunk cost fallacy and payment decoupling (which is discussed within the concept of mental

accounting) were asked to the consumers through a questionnaire and discussed within the scope of CSI and demographic information.

CHAPTER ONE

BEHAVIORAL ECONOMICS

In contrast to neoclassical economics' traditional assumption that people are Homoeconomicus who always seek to maximize their utility and prefer 'true' one among choices, behavioral economics research has shown that people's judgments and decisions are frequently subject to systematic biases and heuristics, and are highly dependent on the context of decision (Reisch & Zhao, 2016, p. 190).

In this part of the study, the transition from neoclassical economics to behavioral economics is explained. In this context, first neoclassical economics was discusses with the concepts of homo economicus and rationality, then the theory of expected utility, which is the theory of decision making under uncertainty and based on rational individual, was explained. Later, while the history and development of behavioral economics was mentioned, the Prospect Theory, which emerged as a critique of the expected utility theory, was detailed, and finally, heuristics and biases, which are the tools of behavioral economics to explain why individuals do not always act rationally, are mentioned.

1.1. Neoclassical Economics with Concept of Homo Economicus and Rationality

The concept of homo economicus underpins and structures neoclassical economics. Consumer choice theory, firm theory, industrial organization theory, and welfare theorems all assume that agents operate in line with an individualistic rational optimization scheme. There is an assumption that agents act in accordance with the antropological homoeconomicus scheme as directly or indirectly in the theory of consumer choice (utility maximization), the theory of the firm (profit maximization), industrial organization, the theorems of welfare that form pratically the entire neoclassical pradigm in economics (Urbina &Villaverde, 2019, p. 64).

Homo economicus is an individual who has significant traits include maximizing (optimizing) behavior, the cognitive capacity for rational decision, individualistic behavior, and independent tastes and preferences (Doucouliagos, 1994, p. 877). The idea of homo economicus, which underpins all economic theories and is at the center of economics, is claimed to have been proposed by John Stuart Mill in 1836 (Persky, 1995, p. 222). Unlike homo sapiens, homo economicus acts rationally and with complete knowledge, seeks to maximize personal utility or satisfaction (Efeoğlu & Çalışkan, 2018, p. 29).

The Neo-classical School of Economics starts with the assumption of rationality and builds from there. By possessing complete knowledge of the market, commodities, and acting rationally in other economic topics, the homo economicus individual optimizes his benefits. There is a 'consistency assumption' for homo economicus because an individual who always evaluates among the options he encounters and prefers the majority of them does not have any conflicts in his preferences (Candan & Hanedar, 2005, p. 155).

The homo economicus model appears to be neoclassical economics' major weakness (Efeoğlu & Çalışkan, 2018, p. 34). This concept was further developed within several framework. Notion of expected utility one of them (Soukup, Maitah & Svoboda, 2014, p. 1).

1.2. Expected Utility Theory

The principle of rationality, which is one of the point that neoclassical economics emphasizes, is borrowed from classical economics (Kamilçelebi, 2013, p. 449). Classical rationality was the dominant paradigm in economics and finance until the 1970s, and it was based on the principle of producing rational solutions to the decision problem as the main theory the "homo economicus", or rational human, is the main paradigm of this time period. The Expected Utility Theory was widely accepted as a rational human model throughout this time (Tomak, 2009, p. 148).

Daniel Bernoulli was the first to introduce the concept of expected utility to the literatur in the 1700s (Şener, 2015, p.41). However, Bernoulli did not make any

concrete suggestions on how to measure expected utility (Tufan, Sarıçiçek, 2013, p. 176). Based on this concept, John Von Neuman and Oscar Morgenstern axiomized the expected utility approach. Coming two centuries after Bernoulli, these economists explained consumption decisions with the expected utility approach in their work called " Theory of Games and Economic Behavior" and made this approach an axiomatic model (Von Neumann, Morgenstern, 1944). With the work of Von Neumann and Morgenstern, the expected utility approach in explaining consumer preferences under risk and uncertainty was used as the theory of decision making under risk until the Prospect Theory was introduces by Kahneman and Tversky in 1979 (Aksoy & Şahin, 2009, p. 6).

The definition of expected utility is made as the result by multiplying the possible utility expected to be obtained as a result of the decisions made under uncertainty with the probability of occurrence of the event and accordingly, individuals who make decisions act rationally (Tekin, 2016, p. 89-90).

Expected utility, EU, can be expressed by the following formula (Aksoy & Şahin, 2009, p. 5) :

$$\sum_{r=i}^{n} u(x_i)\, p_i$$

In the aforementioned formula, p_i indicates the probability of obtaining the result x_i, and $u(x_i)$ indicates the utility of obtaining the result x_i (Aksoy & Şahin, 2015, p. 7).

Von Neumann and Morgenstern proved for the first time by axiomizing that a rational choice can be made based on expected utility maximization and thus they differ from Daniel Bernoulli's expected utility (Şener, 2015, p. 43). These axioms can be listed as follows (Aksoy & Şahin, 2015, p. 8).

- *Completeness:* Assuming X and Y are two baskets of goods, either X is at least as good as Y, or Y is at least as good as X, or both.
- *Transitivity:* Assuming X and Y are two baskets of goods, if X is at least as good as Y and Y is atleast as good as Z, then X is at least as good as Z.

- *Independence:* Assuming X, Y and Z are three lotteries, if for $\alpha \in [0,1]$, X is better than Y if $\alpha X + (1-\alpha)Z > \alpha Y + (1-\alpha)Z$ is provided. That is, if two lots are mixed with the third, the order of preference of these two lots does not depend on the third used, it is independent.
- *Continuity: Assuming that X, Y, and Z are three lotteries, if X is better than Y and Y is better than Z,* if for $\alpha \in [0,1]$ with α probability, Y as good as $\alpha X + (1- \alpha)Z$.

With the work of Von Neumann and Morgenstern, the expected utility approach has become the most widespread model for disclosing consumer preferences under risk and uncertainty (Quiggin, 1993, p. xi). However, the assumption that individuals make decisions with expected utility maximization, which is the basis of this model, has received criticism. Daniel Kahneman and Amos Tversky's Prospect Theory has added a new dimension to this approach by examining the violations of this assumption with a systematic approach and explaining the irrrational consumption decisions of individuals (Şener, 2015, p. 52).

1.3. Past and Present of Behavioral Economics

Behavioral economics, contrary to the concept of "homo economicus" in traditional economics, tries to reveal that economic units can often make irrational behaviors, decisions and choices due to incomplete information and insufficient mental capacity and conduct theoretical, analytical, emprical and experimantal studies in this field, especially focusing on cognitive biases and heuristics (Aktan, 2018, p. 347). Thaler (2015; 2016) adopted the notion of "Econ" instead of homo economicus, and according to Thaler, "Econ" makes decisions based on theoretical principles in classical economics, whereas "homo sapiens" or "human" makes rational and at the same time irrational decisions in the real world.

Another criticism of traditional economics' assumptions has been directed at the utility theory. There have been assumptions made here as well, based on premise of a rational individual, that the individual may choose the basket that will bring the greatest value to him, that it will always be consistent, and that he will prefer it to the majority.

Individuals can only be rational to a certain extent, according to this theory (Yiğit, 2018, pp. 164-165). In contrast to the individual who acts in order to maximize utility, the individual who operates within a limited framework and in a complex environment has argued that if he lacks the time and computational power to evaluate all of the components while making decisions and shaping his thoughts, he must rely on his cognitive abilities. This cognitive framework might occasionally lead an individual to make wrong decisions (Hatipoğlu, 2012, pp. 21-23). Jeremy Bentham (1781), who introduced the concept of utility, aimed to calculate the good and evil tendencies of the society by using pain and pleasure and explained the basics of consumer psycholohy (Camerer, 2005, p. 5).

Although it is accepted that behavioral economics, which melted economics and psychology in one pot, emerged after the second half of the 20th century, the relationship between two disciplines dates back much further. The main reason why the relationship between psychology and economics disciplines was revealed relatively late is the fact that economics was accepted as a science and a discipline before the science of psychology.

Behavioral economics, whose popularity has increased in recent years with the appreciation and rewarding of studies on the subject, dates back to the 1950s. Helbert A. Simon (1947, 1955) and George Katona (1951, 1953) are among the forerunners of behavioral economics which has become more well known with Richard H. Thaler (1980), Daniel Kahneman and Amos Tversky (1979). The publication of studies on behavioral economics goes back to the 1950s, but its reflection in economics thought predate to Adam Smith. This reflection continued with Irving Fisher and John Maynard Keynes in the 1930s (Thaler, 2016, p. 2).

Adam Smith, best known for the “invisible hand” and The Wealth of Nations, also wrote The Theory of Moral Sentiments, a less well-known book that lays out psychological laws of individual conduct that are arguably as profound as his economic insight. The book contains insights into human psychology, many of which foreshadow current developments in behavioral economics. For example, the following sentence indicates loss aversion: “we suffer more… when we fall from a

better to worse situation, than we ever enjoy when we rise from a worse to a better." Adam Smith (1759/1892, 311) (Camerer, 2004, p. 5). Approximately 200 yerars before Kahneman and Tversky (1979) identified the regularity in choices that has come to be known as "loss aversion", Adam Smith (1759 [1981], III, ii, 176-177) displayed an acute awareness of that concept with this sentence: "Pain…is, in almost all cases, a more pungent sensation than the opposite and correspondent pleasure. The one almost always depresses us much more below the ordinary, or what may be called the natural state of our happiness, than the other ever raises us above it." (Ashraf, Camerer & Loewenstein, 2005, p. 132).

Simon's concept of "bounded rationality" became the foundation of behavioral economics. Simon defines satisfying behavior as the decision makers who do not want to endure the computational cost of optimization or when optimization is impossible, choosing the one that satisfies them the most, instead of the optimal alternative (Simon, 1955, p. 101). George Katona said in a 1951 paper that economic processes are closely related to individual behavior, and that this simple but critical truth is ignored in modern economic theory. According to Katona, subjective factors, as well as other behavioral expressions, should be analyzed in order to comprehend economic processes (Katona, 1963, p. 3). However, these studies could not go beyond drawing attention to the impotance pf psychology in the economy without changing the basic direction of the economy (Camerer, Lowenstein, 2004; Khwaja, 2013).

One of the most fundemental theories The Expected Utility Theory, was the focus of the study and played a key role in the development of behavioral economics. Despite the fact that the Expected Utility model's assumptions and findings are highly flexible and hence difficult to reject, the model's faults have been focus of numerous economics studies. The Expected Utility Theory was heavily criticized in a number of experimental studies after the 1950s. The two most significant ones are the Allais and Ellsberg paradoxes. The preferred method suggested by expected utility theory has variants, according to Markowitz (1952), Ellsberg (1961) and Allais (1990),but it remained an anomally in the literature until its worth was determined. Psyhologists such as Ward Edwards, Duncan Luce, Amos Tversky, snd Daniel Kahneman began to use compare their psychological models starting in the 1960s, when psychology

became dominant in economics as a tool for understanding the mechanism in economic decisions (Aktan, Yavuzaslan, 2020, pp. 105-106).

One of the most cited studies is Kahneman and Tversky's "Prospect Theory: An Analysis of Decision Under Risk" which was published in the journal Econometrica in 1979. This study published in opposition to Expected Utility Theory, which is based on people's rational behavior and was initially proposed in 1738 by Daniel Bernoulli's (1700-1782), created a link between economics and psychology. While individuals make rational decisions based on several probability computations and choose the option that will benefit them the greatest in the Expected Utility hypothesis, in the Prospect Theory individuals can make irrational decisions by attributing more meaning to losses than gains (Taşdemir, 2007, p. 308).

George Akerlof, Joseph E. Stiglitz, and Michael Spence were awarded the Nobel Prize in Economics in 2001. They shared the award as a result of their work on the functioning of markets with asymmetric information. In his paper, Akerlof argued that macroeconomics should be based on behavioral economics, and that explaining concepts ike reciprocity, fairness, identity, money illusion, loss aversion, herding, and procrastination to make real world economies more understandble (Akerlof, 2002).

In 2002, the Nobel Prize in Economics was awarded to Daniel Kahneman and Veron L. Smith. While Kahneman received the award in Behavioral Economics for integrating individuals' decision-making behavior, especially under uncertainty, into economics with psychology research, V.L. Smith was awarded the prize for his work in Experimental Economics. As an economist Vernon L. Smith (1962, 1976, 1994) had an effect on making behavioral economics a respected and powerful discipline when he was awarded the 2002 Nobel Prize in economics for her development of laboratory experiments as a tool in empirical economic analysis (Yavuzaslan, 2018, p. 221).

Nudge (2008), which Thaler made with Sunstein in 2017 and won the Nobel Prize, focused on how decisions made by both individuals and institutions alike are influenced by cognitive limitations and biases brought together various experiences refuting the assumption of economic theory that humans always act as a

homoeconomicus. Thaler defines people or units that indirectly influence the decisions of others as "choice architect". In the study, it has been argued that the "choice architects" who direct the decisions of the individuals need to build "nudges" in order to be able to direct them to make the best decision and that it is possible to change the decision-making structures by considering the cognitive limits in the decisions and choices they will make without restricting the freedom of choice they have with these nudges (Thaler, Sunstein, 2009).

1.3.1. Prospect Theory: A Touchstone of Behavioral Economics

The Expected Utility Theory, which has an important place in the economics literature, started to be seriously criticized after the 1950s, and its deficient and faulty aspect were revealed with the theoretical and empirical studies (Aksoy & Şahin, 2015, p. 9). The Allais Paradox, one of the most important of these studies, was discovered by French economist Maurice Allais in 1952 during a meeting on economics of risk in Paris, with questions asked to the guests and published in 1953. Aiming to show that the guests are exposed to a certainty effect, thus violating the expected utility theory and the rational choice actions on which this theory is based, Allais addressed the following question set as summarized by Kahneman in his book Thinking, Fast and Slow (Kahneman, 2011, p. 362) :

"*A. 61% chance to win $520,000 or 63% chance to win $500,000*

B. 98% chance to win $520,000 or 100% chance to win $500,000"

The answers revealed that most of the participants preferred the option on the left when faced with problem A, and the option on the right when faced with problem B. In other words, the certainty efefct comes into play. The 2% difference between the 100% and 98% probability of winning in problem B is much more impressive than the same difference in problem A (63% vs. 61%) (Kahneman, 2011, p. 363). Kahneman and Tversky, in their work Prospect Theory which is published in 1979, also included many examples of problems based on Allais.

Nobel Prize-winning psychology professor Kahneman's studies on human heuristics and decision- making have set important milestones for both psychology

and aconomics and finance sciences (Şentürk & Fındık, 2014, p. 132). Considered the scientist who laid the foundations of behavioral economics and finance, Kahneman conducted a study titled “Prospect Theory: An Analysis of Decision Under Risk” in 1979 with another psychologist, Amos Tversky. This study has been a critique of expected utility theory and an alternative model as a descriptive model of decision making at risk. Prospect Theory deals with decisions made under risk and uncertainty (Tekin, 2016, p. 91).

In their study (1979), Kahneman and Tversky declared that choices among risky prospects exhibit several widespread affects that are inconsistent with the basic principles of expected utilit theory. Kahneman and Tversky who stating that people have tendencies that cause this inconsistency, explained these tendency with the following concepts:

Certainty effect, when people compare outcome which certain one and probable one, tend to choose certain one. Probable outcome is underwighted and overweight the outcomes that are considered certain. This tendency contributes to risk aversion and risk seeking. ***Isolation effect***, in order to simplify choosing between multipe alternatives, people disregard the common baseline and focus only the differences between alternatives. This effect leads to inconsistent preferences when the same choices presented different form. ***Gains and losses***, assigned to gains and losses rather than final assets. And the value function normally concave for gains and convex for losses and generally steeper than for gains (Kahneman & Tversky, 1979, p. 263).

Kahneman and Tversky created pairs of selection problems as a variation of Allais’ example in their work (Kahneman & Tversky, 1979, pp. 265-266):

Problem 1:

A. 2,500 with %33 probability,
2,400 with %66 probability,
0 with %1 probability,

B. 2,400 with certainty.

N=72[1] [18][2] **[82]*[3]**

Problem 2:

C. 2,500 with %33 probability,
0 with %67 probability,

D. 2,400 with %34 probability
0 with %66 probability,

N=72 **[83]*** [17]

In Problem 1, 82 percent of the subjects chose B, while in Problem 2, 83 percent of sunjects chose C. This preferences violates expected utility theory in the manner descried by Allais. According to this theory, first preference with u(0) = 0 means:

$$u(2,400)>.33u(2,500)+.66u(2,400) \text{ or } .34u(2,400)>.33u(2,500)$$

while the second preference implies the reverse. The choices in Problem 1 and 2 show that when the expectation changes from a sure gain to possible gain, it produces more desirability reduction.

In another pairs of selection problems:

Problem 3:

A. (4,000, .80) or B. (3,000).

N=95 [20] **[80]***

[1] The number of respondents who answered each problem
[2] The percentage who choose option A
[3] The percentage who choose option B

Problem 4:

	A. (4,000, .20)	or	B. (3,000,.25).
N=95	**[65]***		[35]

According to this theory, first preference with u(0) = 0 means:

In Problem3,

$$.100u(3,000)>.80u(4,000)$$

And in Problem 4,

$$.20u(4,000)>.25u(3,000)$$

To show that the modal pattern of preferences in Problem 3 and 4 is not line with the theory. Because; C= (A, .25)[4] and D= (B, .25) indeed. While B is preferred to A in Problem 3, D is not preferred to C. The subjects did not obey substitution axiom. This two problems show that reducing the probability of winning from 1.0 to .25 has greater effect than the reduction from .80 to .20.

The following pair of choice problems illustrates another situation (Kahneman & Tversky, 1979, p. 267):

Problem 7:

	A. (6,000, .45)	or	B. (3,000, .90).
N=66	[14]		**[86]***

Problem 8:

	A. (6,000, .001)	or	B. (3,000, .002).
N=66	**[73]***		[27]

[4] (.20 of .80) = .25

While B is preferred to A in Problem 7, C is preferred to D in Problem 8. Due to difference of probabilities of winning so tiny in Problem 8, so people prefer larger gain one.

1.3.1.1. The Reflection Effect

The reflaction effect explain that we have opposite "risk preferences" for uncertain choices, depending on whether the outcome is a possible gain or loss.

In previous problems, there is no losses in choices but there are positive prospects and negative prospects in Figure 1.1. In positive side, there is only gain choices and in negative side there is only losses choices. Firstly, the table show that people are risk averse in positive prospect and risk seeking in negative prospect. For example, in Problem 3' the majority of subjects preferred to accept a risk of .80 to lose 4,000 to a sure loss of 3,000. Second, preferences between the positive prospects in Figure 1.1 are inconsistent with expected utility theory and preferences between the negative prospects also violate the expectation principle in the same way. For example, Problems 3' and 4', like Problems 3 and 4, certify that outcomes which are obtained with certainty are overweighted relative to uncertain outcomes. While in the positive domain, the certainty effect contributes to a risk averse preference for a sure gain over a larger gain, have a risk seeking attitudes for a loss in negative domain (Kahneman, Tversky, 1979: 268).

FIGURE 1.1: The Reflaction Effect

PREFERENCES BETWEEN POSITIVE AND NEGATIVE PROSPECTS

	Positive prospects			Negative prospects		
Problem 3:	(4,000, .80)	<	(3,000).	Problem 3′:	(−4,000, .80)	>	(−3,000).
$N = 95$	[20]		[80]*	$N = 95$	[92]*		[8]
Problem 4:	(4,000, .20)	>	(3,000, .25).	Problem 4′:	(−4,000, .20)	<	(−3,000, .25).
$N = 95$	[65]*		[35]	$N = 95$	[42]		[58]
Problem 7:	(3,000, .90)	>	(6,000, .45).	Problem 7′:	(−3,000, .90)	<	(−6,000, .45).
$N = 66$	[86]*		[14]	$N = 66$	[8]		[92]*
Problem 8:	(3,000, .002)	<	(6,000, .001).	Problem 8′:	(−3,000, .002)	>	(−6,000, .001).
$N = 66$	[27]		[73]*	$N = 66$	[70]*		[30]

Source: Kahneman & Tversky , "**Prospect Theory: An Analysis of Decision under Risk**", 1979, p.268

1.3.1.2. Editing Operations

Decision makers may change prospects from the way they were initially defined when subjectively representing them, usually to simplify the representation (Trepel, Fox & Poldrack, 2005, p. 39). *Coding, combination, segregation* and *cancellation* may described as major operations of the editing phase (Kahneman & Tversky, 1979, p. 274).

- *Coding* : The utility of the outputs are perceived as gains and losses rather than the final version. Defining as gain or loss is done by comparing the output with the reference point (the current value of the good or the amount actually paid for that good).
- *Combination* : Sometimes prospects can be made simple by combining the probabilities associated with identical outcomes. For example, the prospect (200, .25; 200, .25) can be simplified as (200, .50). and evaluated in this form.
- *Segregation* : Some prospects contain a riskless component that is segregated from the risky component in the editing phase. For example, the prospect (300, .80; 200, .20) is naturally decomposed into a sure gain of 200 and the risky prospect (100, .80).
- *Cancellation*: It can be described that discarding of components that are shared by the offered prospects.

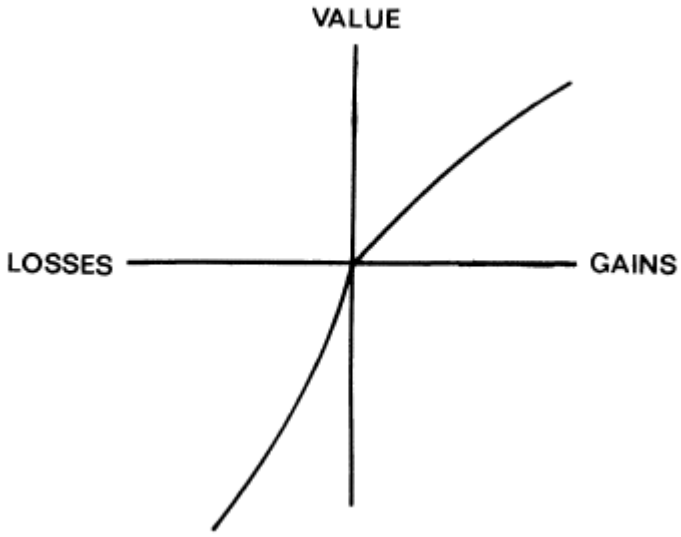
1.3.1.3. The Value Function and The Weighting Function

In some aspets, prospect theory differs from expected utility theory. First, instead of a utility function u(.) over wealth states, a value function v(.) over gains and losses relative to a reference point (typically the status quo) is used, with v(0) = 0. Second, rather than being weighted by outcome probabilities, this subjective value function is weighted by a decision weight, w, which represents the impact of the relevant probability on the prospect's valuation. The decision weights are normalized, with w(0) equaling 0 and w(1) equaling 1 (Trepel, Fox, Poldrack, 2005, p. 37).

The Value Function

According to Kahneman and Tversky (1979), an essential feature of the present theory is the carriers of value are changes in wealth or welfare, rather than final states and value should treated as a function in two arguments: the asset position that serves as reference point, and the amount of the change (positive or negative) from that reference point (Kahneman, Tversky, 1979, p. 277).

FIGURE 1.2: The Value Function



Source: Kahneman & Tversky ,"**Prospect Theory: An Analysis of Decision under Risk"**, 1979, p.279.

Kahneman and Tversky have proposed that the value function is (Trepel, Fox & Poldrack, 2005, p. 37) :

(1) defined on deviations from the reference point.

(2) generally concave for gains and commonly convex for losses: for monetary outcomes, the status quo usually acts as a reference point for separating losses from gains, resulting in a concave function for gains and a convex function for losses.

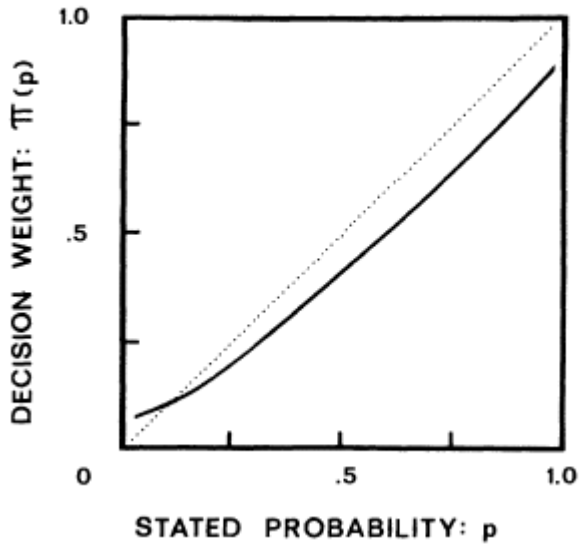
Concavity for gains, like standard utility function, contributes to risk aversion for gains, while convexity for losses refers to risk seeking for losses.

(3) steeper for losses than for gains: loss aversion is a characteristic of the prospect theory value function that makes it steeper for losses because the pain of losing always considered sharper than pleasure of gain.

The Weighting Function

The decision weight is definitely not a probability, nor does it have the axioms of probability and the value of each outcome is multiplied by the decision weight in Prospect Theory (Şener, 2015, p. 63).

FIGURE 1.3: Weighting Function



Source: Kahneman & Tversky, **"Prospect Theory: An Analysis of Decision under Risk"**, 1979, p.283.

In Figure 1.3, weighting function, **p** presents probability of events and $\boldsymbol{\pi(p)}$ presents decision weight which measure the perceived likelihood of these events. Kahneman and Tversky stated that simplification of prospects in the editing phase may lead the individual to discard extremely low probability ant to treat events of extremely

high probability as is they were certain. And they defend as the certainty approached, near the end points of Figure1.3, the deviation increased in Figure 1.3 because people's ability to comprehend and evaluate extreme probabilities are restricted, highly unlikely events are either ignored or overweighted, and the difference between high probability and certainty is either neglected or exaggerated.

1.4. Rationality versus Bounded Rationality

People are viewed as individuals in traditional economics who have complete awareness of economic operations, are consistent in their decisions and behaviors , and act rationally by considering their interests (Kıyılar & Akkaya, 2016, p. 11). In traditional economics, it is seen that psychological factors are not ignored in people's economic decisions and economic behaviors. Although many economic thinkers, especislly Smith and Bentham, have examined the effect of preferences and beliefs on economic decisions, the relationship between psychology and economics has been neglected for a while as Neo-classical economic thought began to dominate (Frey & Stutzer, 2001, p. 5). While discussing the psychological analysis of individual behavior in the study of traditional economist Adam Smith called The Theory of Moral Sentiments, neoclassical economists thought of psychology and economics as completely separate from each other and tried to direct economics away from psychology and towards formal disciplines.

Neoclassical School of Economics takes rationality as its basic assumption and moves from there. The homo economicus individual maximizes his benefits by having full knowledge of the market, commodities, and acting rationally in other economic matters. The individual who always evaluates among the options he encounters and prefers most members does not conflict in his preferences (Candan & Hanedar, 2005, p. 155). Basically, Neoclassical economics says that individuals act in accordance with the principle of rationality. In other words, individuals use the opportunities they have in the "best" way, provided that the conditions that limit them are taken into account (Guerrien, 1999, p. 10). In summary, Neoclassical economics assumes that we are all rational in everyda lide, arguing that we calculate the value of all the options we encounter, and then follow the best possible course of action (Ariely, 2015, p. 25).

The central tenet of classical and neoclassical ideas, homo economicus r economic man, denotes a ogical individual who makes choices and pursues wealth in his own self-interest. However, humans may not always act rationally. Because human action is frequently determined by causes other than reason. These might be social standards, imitation, or repetition (Efeoğlu & Çalışkan, 2018, p. 28). Herbert A. Simon was one of the pioneers in calling into question the claimed fell rationality of homo economicus (Urbina & Villaverde, 2019, p. 67). Simon (1996, 1999) has challanged the assumption that economic decisions are made with perfect information. Like many researchers and scientists, Simon also thought that the rational decision making assumption was not a realistic assumption and put forward the "bounded rationality" proposition, which is a more realistic approach (Simon, 1947). Wiht this proposition, Simon brought more realistic approaches to the problem-solving abilities of individuals. Acoordingly, since individuals do not have unlimited time and brain power, they can not always solve problems in an optimal way and should not expect to succeed (Tekin, 2016, p. 77). The Allais Paradox (1952) which indicate the missing points of rationality with propositions supported by research, are considered to be among the first studies stating that individual preferences do not occur as suggested by the Expected Utility Theory. The French economist Allais states that individuals act irrationally when choosing among possible alternatives in situations where there is a lack of information and during evaluations that prevent stereotyped rational choices (Jureviciene & Ivanova, 2013, pp. 53-54). These pradox have been very influential in the emergence of theories that form the basis of behavioral economics, such as bounded rationality.

In economic life, very different limited rationality stituations can be encountered. For example, in Keynesian theory workers' falling into money illusion is an axample of limited rationality (Kitapcı, 2017, p. 92). While rationality is necessary for modeling decision making at the individual level and its mathematical effects at the macro level, limited rationality is for understanding and explaining human behavior in real life. For this reason, it is possible to understand the concept of limited rationality by examining the behavior of decision makers in the laboratory or in real life (Akdere & Büyükboyacı, 2015, p. 106).

1.5. Heuristics and Cognitive Biases

Kahneman and Tversky describe the heruristics as follows: “In making predictions and judgments under uncertainty, people do not appear to follow the calculus of chance or the statistical theory of prediction. Instead, they rely on a limited number of heuristics which sometimes yield reasonable judgments and sometimes lead to severe and systematic errors ” (Kahneman, Tversky, 1993, p. 237). In this section, some of these shortcuts that take individuals out of rational decision making are mentioned.

1.5.1. Framing Effect

When a decision maker’s risk tolerance (as inferred by their choices) is dependent on how a set of options is described, this is known as the “framing effect”. Especially, when people faced with consequentially identical decision problems framed positively (in terms of gains) versus negatively (in terms of losses) their choices are often contradictory (Gonzalez et al., 2005, p. 2).

Thaler described the discussion over whether petrol stations could charge different pricing for purchases made with cash or on credit in one of his early essays on consumer behavior. The credit card industry fought gardto make differential pricing illegal, but it had a back-up plan: if it was approve, the difference would be represented as a cash discount rather than a credit surcharge. People would rather skip a discount than pay a surcharge, according to their logic. Economically, the two are comparable, but emotionally, they are not (Kahneman, 2011, p. 355).

Tvesky and Kahneman (1981) tested the framing effect with the “Asian disease problem” which would later become a classic (Tversky & Kahneman, 1981, p. 453):

> Problem 1 [N= 152]: Imagine that the U.S. is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific astimate of the consequences of the programs are as follows:
>
> If Program A is adopted, 200 people will be saved. [72 percent]
>
> If Program B is adopted, there is 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved. [28 percent]

Which of the two programs would you favor?

…

A second group of respondents was given the cover story of problem 1 with a different formulation of the alternative programs, as follows:

Problem 2 [N= 155]:

If Program C is adopted 400 people will die. [22 percent]

If Program D is adopted there is 1/3 probability that nobody will die, and 2/3 probability that 600 people will die. [78 percent]

The majority of respondents were risk-averse in Problem 1 and although the outcome of both programs was the same, Program A, which saved 200 people for sure, was more appealing to them. In Problem 2 majority of respondents were risk seeking and certain death of 400 people being less acceptable than 600 people deaths with 2/3 probability (Tversky & Kahneman, 1981, p. 453).

The various options in the two frames are consistent with Prospect Theory, which states that decisions between gambles and sure things are resolved differently depending on whether the consequences are good or bad. When the outcomes are good decision makers tend to prefer the sure thing over the risky bet. On the other hand, when both outcomes are undesirable, individuals prefer to reject the sure thing and accept the gamble (risk seeking) (Kahneman, 2011, p. 359).

1.5.2. Mental Accounting & Payment Decoupling

Individuals and households employ a series of cognitive procedures called mental accounting to organize, evaluate, and keep track of their financial actions (Thaler, 1999, p. 183).

The foundations of the consumer behavior model, which blends cognitive psychology and microeconomics, were laid with mental coding of combinations of gains and losses using the Prospect Theory value function. Then Richard Thaler illustrated the concept in question with anecdote in his study. The anecdote briefly explained that Mr. L and Ms. H were out at dinner, where they went fishing in the northwest and caught some salmon, and then packaged the fish and sent it home on an airline, but the fish got lost on the way, the couple received $300 from the airline for

the loss, and after receiving the money, they went out for dinner and spent $225, in detail that the couple has never spent so much at a restaurant before. According to Thaler the couples behaved the way they did because the $300 was put intı "windfall gain" accounts in their mental account and even though they receives more valuable salary increase, the wasteful dinner would not have occured (Thaler, 1985, pp. 199-200). According to this concept, people classify their goods against economic conditions.

Thaler, under the title of "Mental Accounting Decision Making" of his study "Mental Accounting Matters", he mentioned concept such as ***the transaction utiliy*** (the difference between the amont of paid and the "refence price" for the good, e.g the price you are willing to pay to have the same beverage depending on whether it is sold at the hotel – higher price – or grocery store – lower price – because our reference price is different (Thaler, 1985, pp. 206-207).), ***opening and closing accounts*** (e.g. contrary to rationl analysis, mental account argues that it is more logical to sell secuities while its value increases, because the account of the securities that we want to dispose of when its value decreases is closed in our minds as negative, that is loss (Shefrin, Statman, 1985, p. 780).) and ***payment decoupling***.

Payment decoupling is seperation purchase from the payment and credit card has been recognized as one of the best seperationdevices. A credit card decouples the purchase from the payment in several ways. First, it postpones the payment by a couple of weeks. There are two separate impacts created by this delay: (a) the payment is later than purchase, (b) the payment is decopled from the purchase (Thaler, 1999, p. 193). However, Prelec and Loewenstein (1998) emphasized that consumers prefer to pay first rather than later. For this reason, it has been argued that factor (a) will not be one of the attractive aspects of purchasing with a credit card. Factor (b), the simple separation of payment and purchase, rather than factor (a) was found to make the payment less salient. In that vein, Soman (2001) shows that students leaving the campus bookstore who bought with cash rather than credit card were considerably more accurate in recalling the value of their purchases. According to his research credit card users are more prone to underestimate or forget the amount spent on recent purchases. In addition that he demonstrated that when suppositional purchases are

framed s credit card payments, purchase probability and willingness to pay can increase considerably in the study (Soman, 2001, p. 463).

Prelec and Simester (2001) show that willingness to pay can be increased when customers are instructed to use a credit card rather than cash in their study. They designed study to elicit willigness to pay for tickets to sporting events. Two pairs of tickets were separately auctioned off and there was also a consolation prize of a pair of banners. They did not provide information about the market values of any of the three prizes. The respondents were MBA students, who responded to a poster promising a $2 bill and an opportunity to purchase tickets. Respondents wrote down their reservation values for all three prizes and the prize had given to the person who writes down the highest value. Two different types of elicitation sheets were handed out, in a random fashion. The first, cash condition sheet, stipulated that payment was to be made by credit card. Thy found that respondents in the credit card condition wrote down significantly higher values for all three prizes although all three premia were more substantial than could be justified by the financial benefits of credit cards (Prelec & Simester, 2001).

The fact that once the statement arrives, the transaction is blended in with many others is second a second element that makes credit card spending appealing. Consider the difference between paying $50 in cash at the store versus adding a $50 item to a $843 transaction. According to psychophysics, the $50 will appear larger on its own than in the context of a much larger bill, and each item will lose salience as the bill grows larger (Thaler, 1999, p. 193).

1.5.3. Sunk Cost Fallacy

Sunk cost fallacy is evident in an increased tendency to continue a project after making a financial, effort, or time investment. Despite the fact that it should not objectively influence the decision, the earlier investment is pushing the current decision to continue (Arkes & Ayton, 1999, p. 291). Because a rational decision maker is only concerned with the future results of current invenstments, rather than worrying about justifying previous mistakes (Kahneman, 2011, p. 337).

Arkes and Blumer conducted multiple experiments to show that people fall into the sunk cost fallacy when making decisions. In one of the experiments they arranged for three distinct types of season tickets to be sold to those who came the Ohio University Theater ticket desk at the start of the season. One third of the audience paid the full $15 for season tickets, one third paid $13, and one third paid $8. Those who bought tickets at either of the discounted prices attended fewer plays during the next six months than those who bought tickets at $15. Those who had "sunk" the most money into season tickets appeared to be the most driven to use them. This goes againts the general rule that incremental expenses and benefits should guide one's decision to attend a performance. All customer (ticket buyer) have the right to attend any play ince the tickets were purchased. Because participants were assigned to the three pricing level random, it's likely that the costs and benefits of going to the theater would have been the same for all three groups. The sunk cost effect affects customer' attance decisions, as evidenced by the difference in attendance between the discount and full price groups (Arkes & Blumer, 1985, pp. 127-129).

1.5.4. Anchoring Effect

The key anchoring effect in the current study will be the anchoring and adjustment heuristics, which were first introduced by Tversky and Kahneman (1974). Tversky and Kahneman asserted that the anchoring effect is the disproportionate influence on decision makers to make judgments that are biased toward an initially presented value (Furnham, Boo, 2011, p. 35).

According to Tversky and Kahneman, in many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer (Tvesky & Kahneman, 1974, p. 1128). For example, the asking price will affect our decision on how much we should pay for a home. Even if we are resolved to fight the influence of this number, the identical house will appear more valuable if its asking price is high (Kahneman, 2011, p. 118). Tversky and Kahneman conducted a classic study (1974) in which they asked participants to estimate the percentage of African people in the United Nations based on a range of randomly generated numbers created by spinning a wheel of fortune 0 to 100 (Tvesky & Kahneman, 1974, p. 1128). Participants were

then asked to give their best estimates of this percentage and consider whether the actual answer was higher or lower than the reference value presented before the absolute decision was made. While the mean estimate of participants who received the high anchor was 45%, the mean estimate of participants who received the low anchor was 25%. So that Tversky and Kahneman suggested that absolute judgments were assimilated to the provided anchor value (Mussweiler, Strack & Pfeiffer, 2000, p. 1142) (Kahneman, 2011, p. 118).

Brian Wansink, Robert J. Kent and Stephen J. Hoch examined the effect of anchoring within the framework of purchasing quantity decisions in their study (1998). The study show that purchase limits can increase the number of units a buyer purchases and anchors embedded in a suggestive selling slogan can increase intended purchase quantities.

Another study examining the anchoring effect withing the framework of purchasing decisions is Dan Ariely, George Loewenstein and Drazen Prelec's study (2003). Their study include six experiment and they showed rhat initial valuations of familiar products and simple hedonic expeiences are strongly influenced by arbitrary "anchors" (sometimes derived from a person's social security number).

1.5.5. Status Quo Bias

People with status quo bias tend to keep things the same by changing nothing or sticking to previously made decision. The status quo bias is explained through a variety of cognitive misperceptions and psychological commitments, including loss aversion. If consider the choice between retaining the status quo or opting for a new alternative, the individual weighs potential losses from switching as larger than potential gains when the status quo taking as the reference point. The individual is biased in favor of status quo due to loss aversion (Samuelson & Zeckhauser, 1988, pp. 35-36).

Samuelson and Richard Zeckhauser assert that there is an important difference between status quo bias and loss aversion due to the loss aversion depends directly on the framing of gains and losses. In their study, they showed that the existence of status quo bias even when there are no explicit gain/loss framing effect and conclude that

status quo bias is in line with, but not only prompted by, loss aversion (Samuelson & Zeckhauser, 1988, p. 36).

Samuelson and Richard Zeckhauser designed series of decision-making experiments to test for status quo effect and reports the results of the experiments in their study. To test the status quo effect, the researchers posed the following question to a group in one of these experiments (Samuelson & Zeckhauser, 1988, pp. 12-13):

> 2. You are a serious reader of the financial pages but until recently have had few funds to invest. That is when you inherited a large sum of money from your great uncle. You are considering different portfolios. Your choices are:
>
> a) Invest in moderate-risk Co A.
>
> b) Invest in high-risk Co. B.
>
> c) Invest in treasury bills.
>
> d) Invest in municipal bonds.
>
> 2'. You are a serious reader of the financial pages but until recently have had few funds to invest. That is when you inherited a portfolio of cash and securities from your great uncle. A significant portion of this portfolio is invested in moderate-risk Company A. You are deliberating whether to leave the portfolio inact or to change it by investing in other securities. (The tax and broker commission consequences of any change are insignificant.) Your choices are (check one):
>
> a) Retain the investment in moderate-risk Company A.
>
> b) Invest in high-risk Company B.
>
> c) Invest in treasury bills.
>
> d) Invest in municipal bonds.

In both decision problems, people preferred moderate risk, but in the second case, where the status quo (having a fund already invested) was an option, people preferred the choice with average risk more. People formed the status quo bias because they believed they would lose more than gain under the status quo choice.

1.5.6. Endowment Effect

Richard Thaler first used the phrase “endowment effect” in 1980. The endowment effect is the propensity for people to esteem things they own more highly than things they do not (Morewedge & Giblin, 2015, p. 339).

The endowment effect is often explained in conjunction with the concept of loss aversion. When making a decision, we tend to focus more on what we lose than on what we gain due to loss aversion. As a result, we are biased in favor of maintaining the status quo rather than risking losses. In one experiment conducted by Daniel Kahneman and Amos Tversky, participants were instructed to envision themselves in one of two job and they were informed that they had to option of shifting to either job. In some ways, the new job was better than their old one, but in others, it was worse. Kahneman and Tversky discovered that most people did not wish to switch jobs, regardless of the one they started in (Kahneman & Tversky, 1984, p. 348).

While the endowment effect was initially based upon to loss aversion, subsequent researchers have proposed a few alternative theories that are more evidence based. One of them is Ray Weaver and Shane Frederick’s study (2012) argues that the endowment effect actually happens because people avoid making a bad deal. According to the concept which also known as reference price theory, buyers and sellers have different reference prices of how much something is value when they come to deal (Weaver, 2012).

The endowment effect has again called into question what is considered true according to traditional economy. The price a buyer was willing to pay for something should be equal to their willingness to accept to loss of that item, according to standard economic theory. In other words, buying and selling prices were supposed to coincide (Kahneman & Tversky, 1984, p. 348). This was not always the case, according to research on the endowment effect. For example, in a study by Thaler (1980), a group of people were given a mug and asked how much they might sell it for. A second group of people was asked if they could buy this mug without being a given a mug. According to the findings, the sellers’ price was greater than the purchasers’ price because they believed the mug belonged to them and they wanted to avoid loss. Kahneman and

Tversky conducted a series of experiments using variants of the same procedure. The experiment that Kahneman describes as “my favorite” among these experiments is the experiment in which Buyers and Sellers are added as a third group, as an addtional group of Choosers. Unlike Buyers, who had to spend their own money to acquire the commodity, the Choosers could buy either a trophy or a sum of money and set the amount of money that was as attractive as buying the commodity. As a result of the experiment, Sellers offered $7.12, Choosers $3.12, and Buyers $2.87. Considering that Sellers and Choosers faced the same choice, return home the mug or return home with the money, the difference between bids was remarkable. The reason for the high price set by the Sellers was considered to be the Sellers’ unwillingness to give up an object they already owned (Kahneman, 2011, p. 342).

CHAPTER TWO

CONSUMPTION, CONSUMER & CONSUMERS' DECISION MAKING BEHAVIOR

In this part of the study, the consumer's decision-making process and consumer decision-making styles are discussed basically. The chapter started with the explanation of concepts of consumer and consumption, which form the basis of these subjects, and continued with the concepts of consumer behavior and consumer decision-making process. After the explanation of these concepts, each step of the five-stage consumer decision-making process, which is accepted in the consumer decision-making process, is explained and the three basic consumer decision-making process models, *Howard and Steth Model, Nicosia Model* and *Consumer Decision Model* and are explained. Finally, consumer decision-making styles and studies in the literature on this subject are included.

2.1. Consumption and Consumer Concept

Consumption and consumer elements, which constitute the basic elements of microeconomics, have an important place in economics. The importance of consumers in free market economies can explained by the fact that production is meaningless when consumption is not available. Therefore, manufacturing companies should shape their production activity plans and programs with examining consumer behaviors and determining consumer preferences and demands (Lebe, 2006, p. 4).

Consumption has a structure that has been formed by attaching different meanings from the history of humanity to the present, and eventually it has gone far beyond meeting the needs and settled in the center of life. While people made an effort to meet the essential needs in the ancient times when consumption began to take place, it is aimed to meet the non-essential but desirable needs as well as the essential needs at the present time (İslamoğlu & Altunışık, 2017, p. 3).

As in concept of consumption, there are definitions made from different perspectives in the concept of consumer, but in the simplest sense, the consumer can be defined as the individual who concumes. As another definition, consumer is individual who buy and use products and services in order to meet their needs and wants, or have the power to make their puchases (Karabulut, 1981, p. 11).

2.2. Consumer Behavior & Decision- Making Process

Generally, consumer behavior research has been based on two assumptions since the 1950s. The first is that a variety of factors influence and shape consumer behavior, including *environmental effects* like culture, social class and family; *individual differences and effects* like knowledge, personality and motivation; and *psychological processes* like learning, attitude and behavior change (Engel, Black & Miniard, 1993, pp. 39-51). The second assumption is that consumers are rational decision makers. So much so that consumers have the ability to make a decision, as a result of which they will reach the best among the alternatives. In the 1950s, Simon argued in his research on the decision- making process that people could only make "bounded rational" decisions because the future is uncertain and the information available has costs in present (Lee, 2005, p. 6). Various models of consumer decision processes have been developed since the 1960s, such as Nicosia (1966), Engel Kollat and Blackwell (1968), Howard and Sheth (1969). Although the definitions of the consumer decision process differ between the models, the basis of all these models in five- stage decision process, which was first introduces by John Dewey in 1910 (Mitchell & Boustani, 1993, p. 56).

Consumer decision-making according to the classical paradigm consumers go through five steps while buying a product or sevice, according to five-stage model of consumer buying process (Stankevich, 2017, p. 10). The five-stage buying decision process model is a common way for marketers to learn more about their clients and how they behave. The model's premise is that when customer buys something, the purchase event is a forward-moving process that begins well before the actual purchase and continues afterward. The five steps of the process are *need recognition*, *information search*, *evaluation of alternatives*, *purchase* and *postpurchase behavior* (Comegys, Hannula & Väisänen, 2017, pp. 337-338).

FIGURE 2.1: Five-stage Model of the Consumer Buying Process

2.2.1. Need Recognition

The first and most important step in the decision-making process for consumers identification of need/problem recognition because without it, no purchase will be made. This step of the process is primarily influenced by the degree of homeostatis deviation and the balance between the actual state which means the consumer' actual state and the desired state which means the situation that the consumer wants (Bruner, 1988, p. 44).

Both internal and external triggers have the potential to initiate this need. In addition to discrepancies between the buyer's actual and desired condition influence, other aspects also need to be taken into account. Demographic characteristics, such as age, gender, income, race, education, household size are among the directly visible influences. There are also implied influences that should be taken into account. These implied implications heavily involve psychological influences (Comegys, Hannula & Väisänen, 2017, p. 337).

2.2.2. Information Search

The second step in the decision-making process for consumers is information search. Either an internal search or an exterior search might be used to describe it. Internal search is defined as a consumer's search using information about a product that was previously remembered from memory. This type of search is determined by the consumer's prior product knowledge and capacity to recall relevant product information (Engel, Blackwell & Miniard, 1993, p. 494). If the information that the consumer will provide from internal sources is not sufficient, the consumer will turn

to external sources. External search is when the consumer consults the sources around him to obtain information. Here, the consumer can consult his friends and acquaintances, search the printed and visual media, or obtain information from the seller/store (Engel, Blackwell & Miniard, 1993, pp. 495- 496).

There are many environmental factors that affect the information acquisition stage of consumers. These are listed as the number and complexity of alternatives, the presence of time pressure, access to the source of information, the physical and mental condition of the consumer, the frequency of use of the product, the price, the social convenience, the perceived risk, the differences between the alternatives, and the expectations for solving the problem (Moore & Lehman, 1980).

2.2.3. Evaluation of Alternatives

The third step in the decision-making process for consumers is alternative evaluation. It is the procedure used to assess and choose a substitute in order to meet customer needs. The most frequently mentioned factors that consumers employ to conduct the alternative evaluation are price, brand name, and country of origin. There are often differences between these three factors and how they affect consumers' decisions about which products to buy; this is known as "saliance" (Engel, Blackwell & Miniard, 1993, pp. 512-516). For instance, it has been demonstrated that brand name matters when choosing over the counter medications. In other words, even if customers are aware that all aspirin products must have the same basic formula due to government rules, they will pay significantly more for aspirin with a well-known brand name (Engel, Knapp & Knapp, 1966). Price may be used as a substitute indicator of the quality of the product when consumer understanding of the product category is limited or there is a lack of external information about products (Gerstner, 1985). On the other hand, the concept of time comes to the fore in the evaluation of alternatives. If there is flexibility in time in terms of decision making; knowledge and attitudes, experiences and evaluations of brands are effective (Hawkins, 1992, pp. 481-488).

2.2.4. Purchase

The purchase is the fourth step in the consumer decision-making process. The consumer has given the products in the choice set a ranking after the evaluation stage, however not always the number one item will be picked. Between the evaluation and buy decision stages, there are two elements (Armstrong & Kotler, 2005, pp. 169): ***First***, there the opinions of other people. Even if a consumer had meant to purchase a different brand, pressure from best friends or the community can cause them to change their ranking of preferred brands. ***Second***, some unforeseen situational elements may have an impact on the decision to buy. The cost of the item might have unexpectedly increased, or another puchase might become more necessary. The influence of other individuals is lessened at the point of puchase because internet buying typically takes place in a more private setting. A consumer must still make a few purchase related decisions even after deciding on the precise product they will purchase. Price range, timing and payment method are some of these sub-decisions (Dubois, 2000, p. 239). On the other hand, Engel, Blackwell and Miniard distinguished three types of buying decisions (Engel, Blackwell & Miniard, 1993, pp. 537-538):

- *Fully planned purchase:* Before visiting the store, both the product and the brand are picked.
- *Partially planned purchase:* The product will be purchased, but the brand choice will wait after the shopping trip.
- *Impulse purhase:* In the store, customers select both the goods and the brand. There are circumstances where none of these procedures apply, despite all the theories on need recognition, information search, and evaluation serving as the essential foundation for the purchase choice itself.

Additionaly, due to contextual circumstances like product promotion, store ambiance, weather, etc., these three purchase categories may overlap with one another (Engel, Blackwell & Miniard, 1993, p. 539).

2.2.5. Postpurchase Behavior

Even after the actual purchase has been done, the purchasing process continues. The postpurchase behavior stage of the consumer decision process refers to the consumer's post-consumption assessment of the purchasing decision. The customer's decision-making process for their subsequent identical purchase will be influenced by their satisfaction or dissatisfaction with this purchase, particularly during the need recognition and information search phases. Retailers and marketers must comprehend how customers behave after making a purchase if they want them to return (Kotler & Keller, 2006, p. 172).

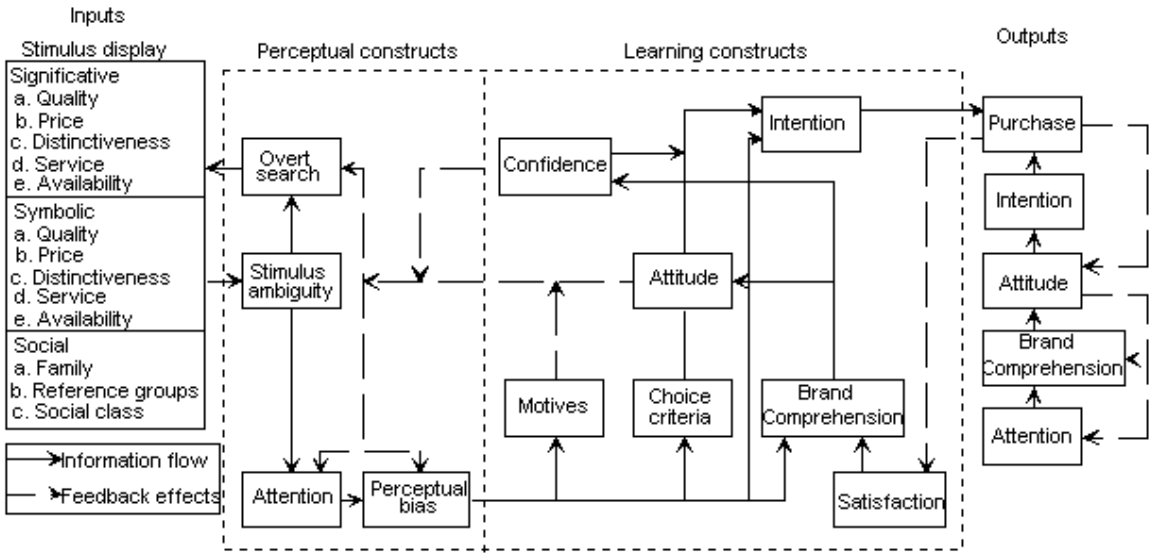
2.3. Models of Consumer Decision- Making Process

Over the past 50 years, models of consumer decision-making have been evolving. These models include studies on many components that emerged from the economics and psychology departments (Milner & Rosenstreich, 2013, p. 108). In this section, the *Howard-Sheth Model (H-S Model)*, *Nicosia Model* and *Consumer Decision Model*, which are the basic models that comprehensively cover the consumer decision-making process, are included.

2.3.1. The Howard-Sheth Model

The Howard-Sheth Model, which was developed by John Howard in 1963 and is a comprehensive model, later took its final shape in 1969 with the contributions of Jagdish Sheth. Howard and Sheth wanted to explain is the buying behavior of individuals over a period of time in "a theory of buying behavior" where the model takes place and they assume that purchasing behavior is rational in the sense that it is constrained by the buyer's "bounded rationality", or his cognitive and learning capacities, as well as the constraints of limited information (Howard & Sheth, 1969, p. 467).

FIGURE 2.2 : A Theory of Buyer Behavior



Source: Howard & Sheth, "**The Theory of Buyer Behavior**", 1969, p. 471

The H-S Model has four main components; stimulus variables (inputs), response variables (outputs), hypothetical constructs (perceptual and learning), and exogenous variables (not shown in the Model). In addition that, straight lines in the H-S Model show the information flow while dashed lines show the effects of feedback.

The input variables in the H-S Model consist of three different stimuli, namely significative stimuli, symbolic stimuli and social stimuli, and represent the stimuli arising from the buyer's environment that the buyer is influenced by in the hypothetical constructs stage. According to the H-S Model, elements such as price and quality are classified as significative stimuli when they communicate with the buyer through the objects of the brands, while the same elements are classified as symbolic stimuli when they communicate with buyer through tools such as billboard and mass media. The third stimulus of the input variables, social stimuli, represents the information provided to the buyer by family, social class and reference groups for the purchase decision. The connection of the three major types of stimuli with a series of hypothetical constructions processes and stores the inputs to the buyer's mental state. The buyer's reaction to these stimuli, eventually (Howard & Sheth, 1969, pp. 470-472).

When it comes to hypothetical constructs part in H-S Model, there are two classes: *perceptual constructs* and *learning constructs*. The *learning constructs* part consist of motive, choice criteria, brand comprehension, attitude, confidence, intention and satisfaction (Howard & Sheth, 1969, pp. 472-475) :

- *Motive* is what inspires behavior. Buyers are driven by expectations or anticipation because they have learned fromthe results of previous brand purchases.
- *Choice criteria* describe as the set of standards or guidelines established for product selection in the H-S Model.
- *Brand comprehension*. The buyer was interested in learning more about the brand or product. This concept is crucial because brands in brand comprehension of buyer create competition among sellers.
- *Attitude*. A buyer's viewpoint and willingness to buy a product from a specific brand characterize that person's attitude.
- *Confidence* refers to a buyer's confidence is boosted by his or her faith in a certain brand and its goods.
- *Intention*. The decision to choose a specific brand is driven by the buyer's buying intention, choice criteria, brand comprehension, consumer attitude, and confidence.
- *Satisfaction* is the final of the learning constructs in the H-S Model. The degree of congruence between the actual effects of buying and using a brand and what the customer anticipated at the time of purchase is referred to as satisfaction. The buyer will feel satisfied if they believe that the results were better than or equal to what they has anticipated: that is,

  $$\text{actual consequences} \geq \text{expected consequences}$$

  The buyer will feel unsatisfied, though, if the actual results are judged to be less than what he anticipated: that is,

  $$\text{actual consequences} < \text{expected consequences}$$

Any of brand's various characterisrics can be the source of satisfaction or dissatisfaction. The brand will become more attractive if it turns out to be better than the customer anticipated. Its attraction will decrease if it turns out to be less satisfying than he anticipated. Therefore, satisfaction influences brand comprehension for the following purchase.

Relation among learning constructs. The simplest wat that describe the relationship of the variables in learning constructs is buyer's decision-making or selection of a particular brand. There are three buyer's decision-making process in the H-S Model (Howard & Sheth, 1969, pp. 475-476) :

- *Extensive problem solving.* Brand ambiguity is prevalent during this decision-making stage and buyers are completely faced with risky goods. Customer is actively seeking information from his environment.
- *Limited problem solving.* Since he is unable to distinguish between brands or compare them in order to form a preference for one brand over another, there is still brand ambiguity at this stahe.
- *Routinized response behavior*. The buyer has acquired enough knowledge and experience to remove brand ambiguity. Since he doesn't require this information, he is unlikely to actively seek it out in the environment.

The *perceptual constucts* part serves the purpose of gathering and processing data necessary to make a purchasing decision and this part consist of overt search, stimulus, ambiguity attention and perceptual bias. A perceptual phenomenon refers either ignoring a physical event that could serve as a stimulus, looking it attentively, or occasionally picturing something that is not actually presented (Howard & Sheth, 1969, p. 477). In Figure 2.2., the perceptual constructs are *stimulus ambiguity*, *perceptual bias*, *attention* and *overt search*.

According to the H-S Model, the buyer will not pay attention unless he is proned to such information from prior learning if a stimulus to which the customer is exposed is overly familiar or too easy. Besides, if stimulus ambiguity remains low, the buyer experiences a sense of monotony and actively seeks out additional information, which is when his environment is said to become more complex. The buyer will use

perceptual defense to ignore the stimulus if it is too complicated and unclear for him to understand. Buyers will only be inspired to pay attention and freely absorb factual information about the brand they are considering if the stimulus is fairly ambiguous: *stimulus ambiguity* (Howard & Sheth, 1969, p. 477).

Another perceptual construct is perception bias. The buyer has the ability to change the information's quality. Depending on how much information he has already stored, he may alter the cognitive elements contained in information to make them consistent with his own frame of reference: *perceptual bias* (Howard & Sheth, 1969, p. 478).

The final perceptual concept is overt search. There are occasions when the buyer actively seeks information during the whole purchasing period, which lasts for a long time and involves numerous repeat puchases of a product class. It is very crucial to identify instances when he passively absorbs information from occasions when he actively seeks it. When a cutomer perceives ambiguity in a brand's meaning, they actively seek out information. Because the buyer is unsure of the purchasing outcomes of each brand, brand meaning is ambiguous. In other words, he still needs to understand more about alternatives in order to develop a brand expectation that would serve his purposes. The kind of brand ambiguity is typically only present when a consumer first puchases that brand: *overt search* (Howard & Sheth, 1969, p. 478).

Output part of this H-S Model consist of *purchase*, *intention*, *attitude*, *brand comprehension* and *attention*. Both in foundational research and commercial practice, each output variables has a specific function (Howard, Sheth, 1969: 479- 480):

- *Attention.* When customer pays attention, it shows how much knowledge he has taken in. It is continously measured when the buyer is obtaining information.
- *Brand comprehension.* Brand comprehension is the collection of information a customer has at any given time about a brand. This knowledge can range from only being aware of a particular brand's existence to having a thorough understanding of all of its characteristics.

- *Attitude.* A buyer's evolving perception of a brand's ability to satisfy his needs is called an attitude.
- *Intention.* It is the buyer's intention to predict which brand he will purchase. It could be described as a reaction short of real buying behavior.
- *Purchase.*

The five outputs of this model are arranged in a hierarchical form and there are several feedback effects both in themselves and with the learning constructs part. For example, purchase behavior via satisfaction involves consequences that affect brand comprehension in the learning constructs; any change in brand comprehension constitutes a change in attitude and confidence in the learning constructs. Likely, there is a feedback from attitute to comprehension and attention (Howard & Sheth, 1969, pp. 480- 481).

According to the H-S Model, *exogenous variables* were not needed to be included in the diagram on the ground that they excluded catirus paribus, which is the traditional social science acceptance. However, it is thought that other variables in the diagram will reduce the estimated error rate and are included in the H-S Model (Howard & Sheth, 1969, pp. 485- 486):

- *Importance of purchase:* Different levels of ego-involvement or commitment to various product classes are indicated by importance of purchase. Therefore, it is a subject that needs to be carefully looked at in studies involving several products. The significance of the pırchase will have an impact on how much information is required (overt search). For instance, a more extensive search will be conducted for a more important product class.
- *Time pressure:* Since time pressure is a current exogenous variable, it is unique to a decision-making scenario. A customer must divide his time among alternate applications when he feels time-constrained due to a variety of environmental factors. That is, if the product from the selected brand isn't available right now, he looks for alternatives.
- *Financial status:* Financial status affects the limitations a buyer couls have due to a lack of resources.

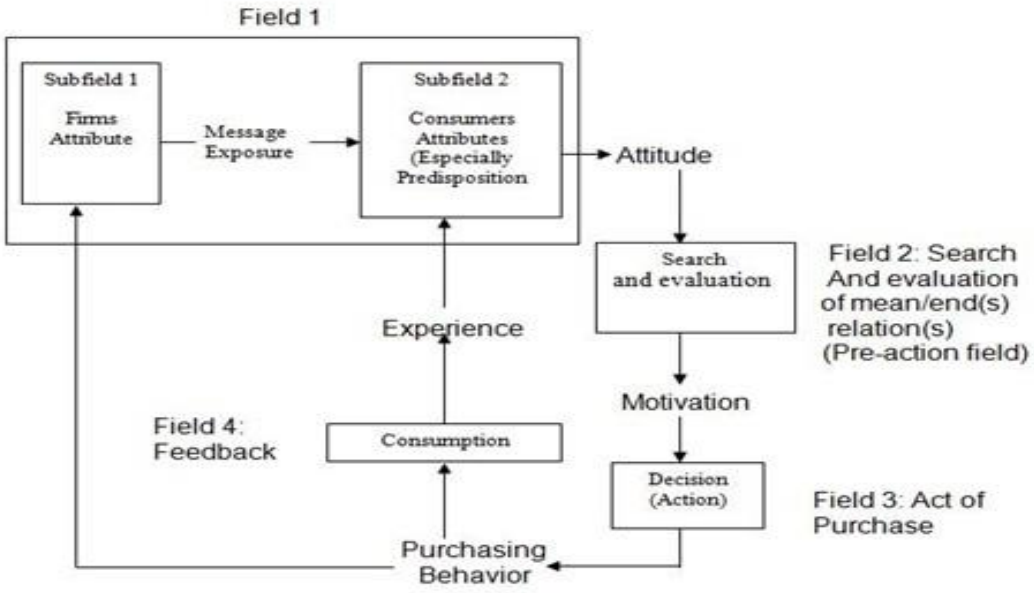
- *Personality variables:* Self- confidence, self esteem, authoritarianism, and anxiety are few examples of personality traits that have been studied to determine individual differences. For instance, according to the H-S Model's creators, a person's motivating stimulation increases with anxiety, while their brand comprehension's category widht decreases with authoritarianism.
- *Social class:* The decision to choose a specific brand is influenced by the buyer's social group, which includes family, friends, etc.
- *Organization:* The buyer's buying motivation and barriers are framed by his or her values, beliefs, and ideas.

2.3.2. The Nicosia Model

Francesco Nicosia, a specialist in consumer motivation and behavior, created this model in 1966. The Nicosia Model creates a connection between the company and its (potential) consumer in an effort to understand consumer behavior (Jisana, 2014, p. 41). The company engages with consumers through marketing communications (advertising), and they respond to these messages by making purchases. According to the Nicosia Model, the firms and the consumers are interwined; the firm tries to influence the consumer, and the consumer influences the firm by his or her choice (Prasad & Jha, 2014, p. 338).

The four main fields of the Nicosia Model are as follows: The Nicosia Model focuces on the firm's initiatives to engage with the customers and their propensity to behave in particular ways. Field 1 refers to these two aspects. The consumer participates in a search assessment process in the second stage, which is impacted by attitudes. This phase is known as Field 2. Field 3 refers to the actual purchase process, and Field 4 to the post-purchase feedback procedure (Panwar et. al, 2019, p. 38).

FIGURE 2.3 : The Nicosia Model



Source: Nicosia, **Consumer Decision Process**, New Jersey: Prentice Hall, 1966, p.156

The description of the four fields of the Nicosia Model is as follows (Prasad & Jha, 2014, pp. 338-339) :

- *Field 1: The consumer attitudes based on the firms' messages*

  There are two subfields within the first field. The firm's marketing environment and communication initiatives that influence consumer attitudes, the competitive environment, and target market characteristics are covered in the first subfield. At this point, the customer builds his opinion of the company's product based on how he interprets the message, and subfield two describes the consumer qualities, such as experience, personality, and how he perceives the promotional idea toward the product.

- *Field 2: Search and evaluation*

  The consumer will start looking for other conpanies' brands and comparing the firm's brand to competing ones.

- *Field 3: The act of the purchase*

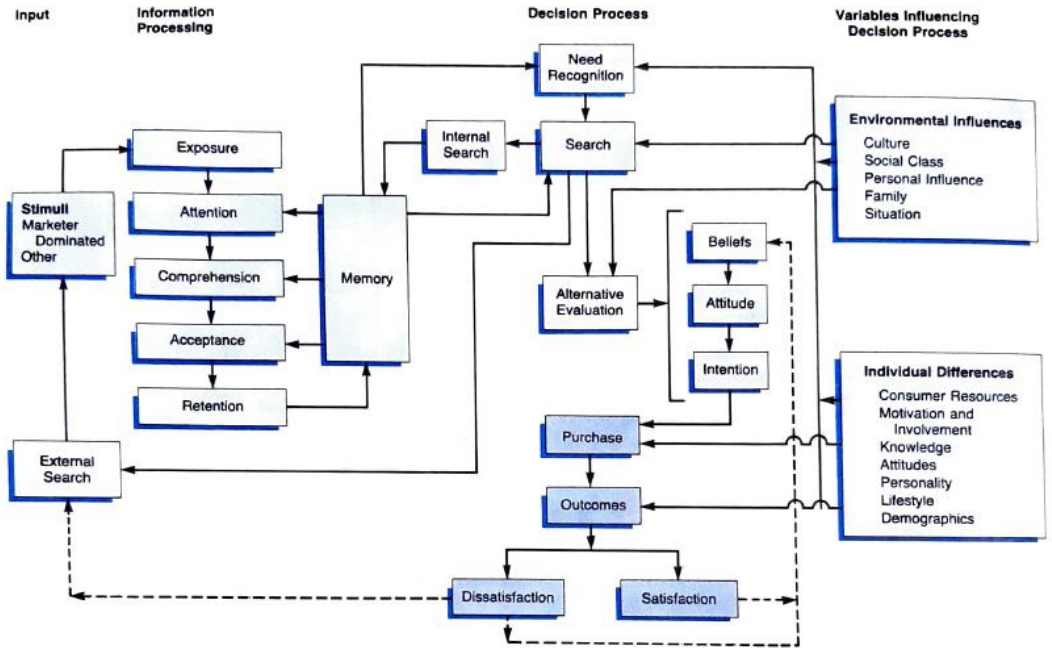
  The outcome of motivation will come from persuading the consumer to buy the company's items from a particular store.
- *Field 4: Feed back*

This Model examines the company's and the customer's responses to the product after the sale. The company will benefit from its sales data, and the customer will utilize his or her experience with the product to influence their attitudes and predispositions toward subsequent messaging from the company.

2.3.3. Consumer Decision Model

The Consumer Decision Model was originally developed in 1968 by Engel, Kollat, and Blackwell (Bray, 2008, p. 15). This Model, which appears in the literature as the Engel, Kollat and Blackwell (EKB) Model, has evolved into many versions over the years. Figure 2.4 shows the Consumer Decision Model developed by Engel, Blackwell and Miniard in 1990.

FIGURE 2.4 : The Consumer Decision Model



Source: Engel, Blackwell & Miniard, Consumer Behavior, New York: The Dryden Press, 1969, p. 482

The Consumer Decision Model is divided into four processes as *input*, *information processing*, *decision processing* and *variables influencing decision process* and the process details are as follow (Engel, Blackwell & Miniard, 1993, pp. 40-484) :

Information processing

The act of receiving, interpreting, storing, and later retrieving information processing. It can be divided into five fundamental stages: (1) exposure, (2) attention, (3) comprehension, (4) acceptance and (5) retention (Engel, Blackwell & Miniard, 1993, p. 363) :

- *Exposure.* Achieving close enough contact to a stimuli to allow one one or more of a person's five senses to be engaged.
- *Attention.* The division of available processing power among incoming stimuli.
- *Comprehension.* Interpretive analysis of the stimulus.
- *Acceptance.* The extent to which a stimuli affects a person's views or knowledge.
- *Retention.* Long-term memory storage of the stimulus interpretation.

The initial stage of information processing, exposure, requires a stimulus (such as product price) to be present and available for processing. After exposure, the consumer could focus on or interpret stimuli. The consumer will give the stmulus meaning during this processing, which is known as the comprehension stage. The following stage, accaptance, is extremely important in the context of persuasive communication. Although a customer may comprehend a salesperson's or an advertisement's message with accuracy, the crucial question at this point is whether the customer genuinely believes it. Transferring information into long-term memory is the last stage, retention. But keep in mind that memory can also affect earlier steps (Engel, Blackwell, Miniard, 1993, pp. 363-364).

Variables influencing decision process

This part of the Model consist of *environmental influences* and *individual differences*.

Environmental influences

Consumers occupy a complex world. Their conduct in making decisions is affected by five factors: (1) culture, (2) social class, (3) personal influence, (4) family and (5) situation (Engel, Blackwell, Miniard, 1993, pp. 40-42) :

- *Culture.* In the study of consumer behavior, culture is referred to as the beliefs, ideals, and other significant symbols that enable people to interact with one another, comprehend, and assess their place in society.
- *Social class.* Social classes are groups of people who share similar attitudes, interests, and behaviors. They are divisions within society. They differ in terms of socioeconomic level on scale from low to high. Social class position frequently influences various types of consumer behavior.
- *Personal influence.* Our purchasing decisions are frequently influenced by the people we have a close relationship with. When we feel compelled to live up to others' standards and expectations, we could comply. We also appreciate the opinions of individuals close to us on our purchasing decisions. This could involve watching what others are doing in order to use them as a benchmark for comparison.
- *Family.* Of fact, the family is frequently the main unit for making decisions, with a complex and varied pattern of roles and responsibilities.
- *Situation.* It is clear that behavior alters as circumstances do. This change can be unpredictable and unstable at times. Other times, they are predictable through research and can be used as an advantage in a plan.

Individual Differences

Five crucial ways can change as we shift from the external world to those internal components that impact and effect behavior : (1) consumer resources, (2) motivation and involvement, (3) knowledge, (4) attitudes, (5) personality, lifestyle and demographics (Engel, Blackwell & Miniard, 1993, pp. 42-49):

- *Consumer resources.* Every time a decision needs to be made, each person brings three resources to the table: time, money and attention. Each resource's availability typically has clear boundaries, necessitating cautious distribution.
- *Motivation and involvement.* Explaining what happens when goal-directed behavior is stimulated and activated has always been a focus of both psychologists and marketers. We define motivation as being like this. Since consumer involvement is such a strong directional factor, it is best thought of as the main driving force.
- *Knowledge.* Information stored in memory can be merely defined as the result of learning. Consumer knowledge includes a wide range of information, such as the availability and features of goods and services, when and where to make purchases, and product usage instructions.
- *Attitudes.* It can be described as a comprehensive assessment that enables one to respond consistently favorably or unfavorably to a particular thing or alternative. When all else is equal, people act in a way that is consistent with their attitudes and goals.
- *Personality, lifestyle and demographics.* Clinical psychology has traditionally valued personality studies, thus it followed logically that a marketing plan should emphasize matching consumer and product personalities. Lifestyle includes routines for how people spend their time, money, and lives. Demographic field whose goal is to categorize customer groups according to factors like age, income, and education.

Decision process

In this process of the model, it is shown how all the processes and concepts of the model mentioned earlier are involved in the consumer's decision-making process, and each stage of the five-stage consumer buying process is also included. There are two buyer's decision-making process in the Model: (1) extensive problem solving (EPS) and (2) limited problem solving (LPS).

In the EPS, the decision process especially detailed and meticulous. In this type pf problem solving it perceived as essential to make the "right choice" for consumers.

Purchasing of an automobile or expensive a luxury clothing is given as an example for EPS (Engel, Blackwell & Miniard, 1993, p. 28). When the Model uses EPS in the decision-making process, how the process works is explained as follows (Engel, Blackwell & Miniard, 1993, pp. 475-481):

- *Need recognition:* In Figure 2.4, there are three determinants: (1) information stored in memory, (2) individual differences, (3) environmental influences. Any of these, acting alone or in concert, can trigger need recognition (Engel, Blackwell & Miniard, 1993, p. 475). When there is a noticeable difference between perspective of "what may be" and the current situation, need recognition is triggered (Engel, Blackwell & Miniard, 1993, p. 477).
- *Search for information:* After need recognition, the next stage is to internally search your memory to see if you already know enough about your options to make a decision without needing to look up further information. This frequently works well in low-involvement circumstances, but when it doesn't, an external search is usually necessary. The propensity to conduct external search is influenced by personal preferences and external factors (Engel, Blackwell & Miniard, 1993, p. 477).
- *Alternative evaluation:* The construction and modification of beliefs about the product or brand and its qualities is the first step in the most typical chain of chain of impacts of processed information on alternative evaluation. This is followed by a change in attitude toward the act of purchasing. Given everything else being equal, this results in a determination to behave in accordance with attitude and, eventually, the act of making a purchase. Consumers assess various products and brands using evaluative criteria, such as standards and specifications, in alternative evaluation. In other words, these are the benefits from consumption and buying that are expressed as preferred attributes (Engel, Blackwell & Miniard, 1993, p. 479).
- *Purchase and its outcomes:* Alternative evaluation continues even after a purchase is completed. The imagined need to make the "correct choice" is a key EPS activator. Utilizing a product results in new information that is contrasted with preexisting assumptions and attitudes. If expectations are met,

satisfaction is the result. Dissatisfaction results when the alternative is perceived to be significantly deficient (Engel, Blackwell & Miniard, 1993, p. 481).

In the LPS, usually the available options are similar in essential characteristics, and there is less need for comparative shopping (Engel, Blackwell & Miniard, 1993, p. 483). Consumers are aware that most brands of toilet paper, detergent, and gasoline share a lot of qualities. As a result, decisions can be made based on a straightforward principle like "buy the cheapest brand" (Engel, Blackwell & Miniard, 1993, p. 29). When the Model uses LPS in the decision-making process, how the process works is explained as follows (Engel, Blackwell & Miniard, 1993, pp. 483-484) :

- *Need recognition:* Recognizing a need is simple. This kind of out-of-stock situations are a major purchase mativator.
- *Search for information:* If motivated information search is done before shopping at all, it frequently consists of looking through food ads for price discounts.
- *Alternative evaluation:* It is restricted and probably consists merely of a statement that each competitive alternative is acceptable in terms of the anticipated benefit.
- *Purchase and outcomes:* Typically, it is made with little thought and subsequent decision-making. The main alternative evaluation strategy is trial. An intention to repurchase results if it meets or surpasses expectations.

2.4. Consumers' Decision-Making Styles

Decision-making style is seen as a patterned, mental and cognitive orientation towards shopping and purchases that dominates the consumer's choice and leads to a relatively permanent consumer personality (Sproles & Kendall, 1986, p. 267). In the literature review, it is seen that three ways are suggested to determine the purchasing styles of consumers: *psychographic/lifestyle approach, the consumer typology approach*, and *the consmer characteristics approach*.

In *psychographic/lifestyle approach*, the fact that a woman reads news about dress designers, buys clothes according to their appearance or changes her hairstyle prequently is explained by the woman's high level of "fashion conciousness" (Lastovicka, 1982, p. 126). *Consumer typology theory* outlines how customers form their attitudes and intentions prior to engaging in actual transactions. The customer sets a preplanned set of rules to evaluate alternatives, and these set of rules directs the consumer throughout the purchase transaction, in accordance with the consumer typology method (Darden & Dorsch, 1990). As last approach the consumer characteristics approach focuses on mental orientation related to consumer decision-making (Sproles & Kendall, 1986, p. 268). According to Lysonksi, Durvasula and Zotos (1966) the most revealing of these three approaches is the consumer characteristics approach, as it focuses on the mental orientation of consumers in the decision making. Sproles (1985) developed a 50 item questionnaire to measure common characteristics for purchasing products within the scope of the consumer characteristics approach and aimed at nine decision-making styles (DMS) derived from 50 items. But as a result, six decision-making styles emerged. Later, Kendall and Sproles (1986) developed a 40 item scale to explain consumer decision-making styles (CDMS). These 40 items are referred to as the consumer style inventory (CSI). CSI's factor analysis confirmed eight decision-making styles or characteristics that define how the consumer makes decisions based on cognitive and personality characteristics. The mentioned factors and their definitions are given in Table 2.1.

TABLE 2.1 : Consumer Styles Inventory

Consumer Styles	Definition
Perfectionistics, High-Quality Conscious Consumer	Items that load on this factor reflect a consumer's quest for the greatest products available. Customers who are more perfectionistic can also be anticipated to purchase more carefully and systematically. Their dissatisfaction with the "good enough" product is evident.
Brand Conscious, "Price Equals Quality" Consumer	It measures customers' preferences for spending more money on well-known, pricey national brands. People who scored highly are more inclined to think that a higher price indicates better quality. They seem to have favorable opinions of department and specialized stores, where brand names and more expensive prices are common. Additionaly, they seem to favor the most popular, well-known brands.
Novelty-Fashion Conscious Consumer	High scorers in this trait appear to be both fashion –and apparently novelty– concious. They probably experience thrill and pleasure when they look for new items. They stay current with fashion, and they value looking good. Variety-seeking also seems to be a key component of this trait.
Recreational, Hedonistic Consumer	Those that perform well on it enjoy shopping; they do it just for fun. The loadings demonstrate that this factor evaluates leisure and entertaintment shopping.
Price Conscious, "Value for Money" Consumer	High scorers appear to be aware of lower pricing in general and search for sales prices. They are particularly interested in getting the best value for their money. They probably compare prices when shopping.

Impulsive, Careless Consumer	Those that score well on this trait do not plan their puchases. Additionally, they don't seem to care about their budget or the "best buy" at all.
Confused by Overchoice Consumer	High scorers on this trait believe there are many brands and shops to pick from and struggle with decision-making. They also struggle with information overload, as implied by a number of this factor's elements.
Habitual, Brand-Loyal Consumer	High scorers on this trait are more likely to have favorite brands and retailers as well as established buying habits. A well-known component of consumer decision-making is habitual behavior, and this element confirms that it exists as a general trait.

Source: Sproles & Kendall, **A Methodology For Profiling Consumers' Decision-Making Styles**, 1986, pp. 271-274.

CSI seems to be a measurement model that can help marketing researchers and managers as an alternative segmentation criterion in order to make it easier to understand the dynamics of consumers' complex purchasing decision process and thus consumer behavior and to create more meaningful consumer groups. However, the fact that the CSI was created with a sample of high school students in the USA caused the generalizability of this scale to be questioned at the universal level. The scale has been tested in many countries to ensure greater generalizability (Dursun, Alnıaçık & Kabadayı, 2013, p. 295).

2.4.1. Studies Using the Consumer Styles Inventory

Although it is the most widely used scale by marketers, some concerns have been expressed about the applicability of CSI in different cultures and the generalizability of the scale has been questioned. As a matter of fact, the generalizability ability os the scale in question has been tested by many researchers. Some of the studies in which the CSI scale was applied are summarized in Table 2.2.

TABLE 2.2 : Some of CSI Studies in the Literature

Researchers/Country	**Sample Structure of Research**	**Consumers' Decision-Making Styles**
Sproles, G. B. (1985)/ USA	A sample of 111 undergraduate women in two classes of School of Family and Consumer Resources, University of Arizona.	1) Perfectionist-"Maximizer" Style 2) Value-Conscious, "V lue for Money", Low Price Style 3) Brand Conscious, High Price Payer Style 4) Novelty, Aesthetic, Fad and Fashion-Conscious Style 5) Shopping Avoider, Time Saver, Satisficer Style 6)Confused, "Support-Seeker" Style
Sproles, G. B., Kendall, E. L. (1986)/ USA	482 students in 29 home economics classes in five high schools in the Tucson area.	1) Perfectionism or High-Quality Conscious Consumer 2) Brand Consciousness, "Price Equals Quality" Consumer 3) Novelty-Fashion Conscious Consumer 4) Recreational, Hedonistic Consumer

		5) Price Conscious, "Value for Money" Consumer 6) Impulsive, Careless Consumer 7) Confused by Overchoice Consumer 8) Habitual, Brand-Loyal Consumer
Hafstrom, J. L., Chane, J.S., Chung, Y.S. (1992)/Korea	310 college students aged between 17 and 27 years of age at four universities Taegu, the third largest city in Korea.	1) Brand Consciousness, "Price Equals Quality" Consumer 2) Perfectionism or High-Quality Conscious Consumer 3) Recreational- Shopping Conscious Consumer 4) Confused by Overchoice Consumer 5) Time- Energy Conserving Consumer 6) Impulsive, Careless Consumer 7) Habitual, Brand-Loyal Consumer 8) Price-Value Conscious Consumer
Durvasula, S., Lysonski, S., Andrews, J. C. (1993)/ New Zealand	210 undergraduate business students had a mean age of 20.2 years and was evenly	1) Perfectionism or High-Quality Conscious Consumer

	divided by gender at a large university in New Zealand.	2) Brand Consciousness, "Price Equals Quality" Consumer 3) Novelty-Fashion Conscious Consumer 4) Recreational, Hedonistic Consumer 5) Price Conscious, "Value for Money" Consumer 6) Impulsive, Careless Consumer 7) Confused by Overchoice Consumer 8) Habitual, Brand-Loyal Consumer
Lysonski, S., Durvasula, S., Zotos, Y. (1996)/ Greece, India, New Zealand and USA	A total of 486 undergraduate college-students majoring in business administration evenly divided by gender. 95 students from Greece, 73 students from India, 210 students from New Zealand, and 108 students from the USA.	1) Perfectionism 2) Brand Consciousness 3) Novelty-Fashion Consciousness 4) Recreational, Hedonism 6) Impulsiveness 7) Confused by Overchoice 8) Habitual, Brand-Loyal Consumer
Fan, J. X., Xiao, J. (1998)/ China	271 undergraduate students aged between 18 and 25 from 5 different university in China.	1) Brand Consciousness 2) Time Consciousness 3) Quality Consciousness 4) Price Consciousness

		5) Information Utilization
Mitchell, V. W., Bates, L. (1998)/ UK	401 undergraduate students in UK.	1) Perfectionism 2) Price- Value Consciousness 3) Brand Consciousness 4) Novelty-Fashion Consciousness 5) Confused by Overchoice 6) Time- Energy Conserving 7) Recreational, Hedonism 8) Impulsiveness 9) Brand Loyalty 10) Store Loyalty
Hiu, A. S. Y., Siu, N. Y. M., Wang, C. C. L., Chang, L. M. K. (2001)/ China	The researchers collected data 387 adult Chinese consumer in shopping malls or places nearby shopping center in Guangzhou, China.	1) Perfectionistic, High-Quality Conscious Consumer 2) Brand Conscious, "Price Equals Quality" Consumer 3) Novelty-Fashion Conscious Consumer 4) Recreational, Hedonistic Consumer 5) Price Conscious, "Value for Money" Consumer 6) Confused by Overchoice Consumer

		7) Habitual, Brand-Loyal Consumer
Walsh, G., Mitchell, V. W., Henning-Thurau, T. (2001)/ Germany	455 interviews were conducted (184 in Hamburg and 271 in Lüneburg) from people are eighteen and older in urban areas.	1) Brand Consciousness 2) Perfectionism 3) Recreational, Hedonism 4) Confused by Overchoice 5) Impulsiveness 6) Variety Seeking
Kavas, A., Yeşilada, F. (2007)/ Turkey	229 university students from two universities in the city of İzmir, Turkey.	1) Brand Conscious Style 2) Recreational, Hedonistic Consumers 3) Perfectionist, High-Quality Conscious Consumer 4) Confused by Overchoice Consumer 5) Price Conscious, Value for Money 6) Shopping Avoider, Non-Perfectionist Consumer 7) Habitual, Brand-Loyal Consumer 8) Impulsive Consumer
Mokhlis, S. (2009)/ Malaysia	419 undergraduate students from one public university at the northeast of Malaysia, majoring in management and economics studies.	1) Novelty- Brand Conscious 2) Perfectionist, High-Quality Conscious

		3) Confused by Overchoice 4) Recreational, Hedonistic Consumer 5) Impulsive, Careless Consumer 6) Variety Seeking 7) Habitual, Brand-Loyal 8) Financial, Time-Energy Conserving
Dursun, İ., Alnıaçık, Ü., Kabadayı, E. T. (2010)/ Turkey	**A total of 849 people, 518 of whom are students and 331 of whom are not students, living Istanbul or Kocaeli.**	**1) Perfectionism, High-Quality Consciousness** **2) Brand Consciousness, "Price Equals Quality"** **3) Fashion Consciousness** **4) Price Consciousness** **5) Impulsive Shopping, Careless** **6) Habitual, Brand-Loyal Orientation** **7) Confused by Information** **8) Shopping Aversion** **9) Indecision**
Anič, I. D., Suleska, A. C., Rajh, E. (2010)/ Republic of Macedonia	304 undergraduate students from the Faculty of Economics in Skopje.	1) Perfectionism or High-Quality Conscious Consumer 2) Brand Consciousness, "Price Equals Quality" Consumer

		3) Novelty-Fashion Conscious Consumer 4) Recreational, Hedonistic Consumer 5) Price Conscious, "Value for Money" Consumer 6) Impulsive, Careless Consumer 7) Confused by Overchoice Consumer 8) Habitual, Brand-Loyal Consumer
Azizi, S., Makizadeh, V. (2012)/ Iran	145 students of Shahid Behehsti University aged between under 20 old and above 35 old.	1) Behavioral Perfectionist 2) Brand Consciousness 3) Fashion Conscious 4) Economic 5) Brand Loyal 6) Confused 7) Economic- Hedonism 8) Attitudinal Perfectionist 9) Time- Energy Conserving 10) Hate from Shopping 11) Undemanding 12) Variety Seeking
Tarnanidis, T., Frimpong, N. O.,	Two samples used in this study, students and non-student. As this study by	1) Perfectionist High Quality Conscious Consumer

Nwankwo, S., Omar, M. (2015)/ Greece	using two samples (i.e. students and non-student). For student sample, data collected from 330 undergraduate students in Thessaloniki in Nothern Greece. For non-student sample, data collected from 151 adult who are resident in Region of Central Macedonia, located in the city of Thessaloniki.	2) Recreational Conscious Consumer 3) Brand Conscious Consumer 4) Novelty Conscious Consumer 5) Impulsive Conscious Consumer 6) Confused by Overchoice Consumer
Mehta, R., Dixit, G. (2016)/ Germany, India	558 graduate and postgraduate college students from India and 185 graduate and postgraduate college students Germany.	*For Indian Consumers* 1) Perfectionism/Quality Consciousness 2) Brand Consciousness 3) Hedonism/Fashion Consciousness 4) Pice/Value Consciousness 5) Confused by Overchoice/Carelessness 6) Habitual/Brand Loyalty 7) Price Equals Quality Consciousness 8) Time Consciousness *For German Consumers* 1) Perfectionism/Quality Consciousness 2) Brand Consciousness

		3) Novelty/Fashion Consciousness 4) Recreational/Hedonism 5) Carelessness 6) Confused by Overchoice 7) Habitual/Brand Loyalty 8) Price Equals Quality Consciousness 9) Variety-seeking
Nawaz, Z., Zhang, J., Mansoor, R., Ahmad, A., Bangash, I. A. (2019)/ Pakistan	260 questionnaires from University of Sargodha which is one of the prestigious universities of Pakintan.	1) Recreational and Hedonism Consciousness 2) Perfectionism Consciousness 3) Brand Consciousness 4) Price and Value Consciousness 5) Confused by Overchoices 6) Impulsive Buying Behavior

As can be seen from the Table 2.2, every country has an own set of decision-making techniques and due to differences styles of decision making vary across different countries. While some of the studies validated Sproles and Kendall's eight-factor CSI (Durvasula, Lysonski, Andrews, 1993; Anič, Suleska, Rajh, 2010), this scale which is accepted as the original scale of consumer style, has not been validated in many other studies.

Previous studies imply that CDMS are also influenced by national economic situations and individual social classess. Income and loyalty are strongly correlated.

Most high-income individuals are devoted and perfectionism conscientious (Wesley, LeHew & Woodside, 2006).

Studies that focus on how gender influences customers'decision-making processes are also available. According to earlier studies, male and female make different decisions and communicate their emotions differently when making purchases. While males typically engage in less shopping than female, female like it (Underhill, 1999). Even while women's roles in the home alter, they still tend to shop more frequently, for longer periods of time, and for a greater proportion of unexpected purchases. Another study on gender-based decision-making found only four criteria were shared by male and female while five more characteristics were unique to male and female (Mitchell & Walsh, 2004).

CHAPTER THREE

CONSUMERS' DECISION-MAKING STYLES IN THE CONTEXT OF BEHAVIORAL ECONOMICS: EMPIRICAL RESULTS

3.1 Purpose And The Scope Of The Research

Behavioral economics, which originated in the 1950s and emerged as a critique of the homo economicus concept accepted in traditional economics, has become more known with the Prospect Theory study of Kahneman and Tversky (1979). This study has brought many concepts to the field of behavioral economics. Kahneman and Tversky (1979) examined the decision-making behavior under uncertainty and risk and revealed that the individual tends to risk-averse when it comes to gain, and to risk-seeking when it comes to loss. Contrary to the traditional economics, behavioral economics, which argues that individuals cannot always make rational decisions, argues that individuals can make irrational decisions by making a number of congnitive errors while making decisions. These errors, which include concepts such as the endowment effect and the anchoring effect, are handled with the concept of "heuristics and cognitive biases" in the behavioral economics literature.

The first purpose of the study is to test main topics accepted in the behavioral economics literature such as the *framing effect*, *anchoring effect*, *sunk cost fallacy and payment decoupling* (which is discussed within the concept of mental accounting) for Turkish consumers.

The second purpose of the study is to determine the decision-making styles of Turkish consumers. To determine consumer decision-making styles the scale developed by Dursun, Alnıaçık and T. Kabadayı (2010) has used. The scale is adapted for Turkish consumers from Consumer Style Inventory (CSI) which developed by Sproles and Kendall (1986).

The final purpose of the study is to evaluate the results obtained within the scope of the two objectives mentioned above together. In other words, it is aimed to evaluate

the answers of Turkish consumers to the questions posed within the scope of testing behavioral economics concepts and the decision-making styles of Turkish consumers.

The hypotheses determined within the scope of these purposes are as follows:

H1: When the Prospect Theory is measured by the framing effect, consumers tend to avoid risk when it comes to gains and to take risks when it comes to losses.

H2: The answers given over the gain-loss options to the question measured by the framing effect show significant differences according to demographic characteristics.

H3: The answers given to the question on which the anchoring effect is measured differ according to the demographic characteristics of the consumers.

H4: The answers given to the question on which payment decoupling is measured differ according to the demographic characteristics of the consumers.

H5: The answers given to the question on which the Endowment effect is measured differ according to the demographic characteristics of the consumers.

H6: Consumers' perception of sunk costs differs significantly according to demographic characteristics.

H7: Consumers' decision-making styles differ significantly according to demographic characteristics.

H8: The answers given to the question of measuring the framing effect differ according to the decision-making styles of the consumers.

H9: The answers given to the question in which the anchoring effect is measured differ according to the decision-making styles of the consumers.

H10: The answers to the questions on which payment decoupling is measured differ according to the consumers' decision-making styles.

H11: The answers given to the question of measuring the sunk cost error differ according to the decision-making styles of the consumers.

3.2. Design and Method of Research

The most common heruristics and biases in the literature mentioned in the first part were asked using the hypothetical selection method and the consumer decision-making styles in the second part were asked through a questionnaire using the Likert-scale; the data obtained and analysis of the data were included in this part of the study. Since the questions in the literature are asked using the hypothetical selection method and it is desired to be faithful to the questions, the hypothetical selection method is used in the part of behavioral economics approaches.

In the first part of the questionnaire, there were questions that reveal the demographic structure of the participants. In this part, in order to test how the participants who graduated from departments such as economics and finance differ in rationality, the question of which department they graduated from was also asked.

In the second part of the questionnaire, nine questions about behavioral economics approaches prepared by the hypothetical selection method were asked to the participants.

The first and sixth questions in this section are questions that measure the "framing effect". Based on the Asian Pandemic question of Kahneman and Tversky (1981), these questipns were asked by framing them according to gain and loss in order to determine risk behavior by creating a framing effect of two options with statistically equal results, as in the original. The original question is below:

> Problem 1 [N = 152]: Imagine that the U.S is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:
>
> If Program A is adopted, 200 people will be saved. [72 percent]
>
> If Program B is adopted , there is 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved. [28 percent]
>
> Which of the two programs would you favor?
>
> A second group of respondents was given the cover story of problem 1 with a different formulation of the alternative programs, as follows:

Problem 2 [N = 155]

If Program C is adopted 400 people will die. [22 percent]

If Program D is adopted there is 1/3 probability that nobody will die, and 2/3 probability that 600 people will die. [78 percent]

As can be seen above, two statistically equal options are given for each problem, but for the first problem these options are framed with gain, while the options for the second problem are framed with losses. Considering the preference rates of options, the majority of respondents were risk-averse which saved 200 people for sure. In other words, people tended to take less risk when options were framed by gain. In the Problem 2, the options were framed with loss, and as a result, the respondents displayed risk-seeking behavior. According to majority of respondents a two-thirds probability of 400 deaths being less acceptable than 600 deaths. Based on this question and inspired by Kurt's question, who used a derived question from Asian pandemic question in her work (Kurt, 2011), the following questions were prepared as the first and sixth questions in the second part of the questionnaire:

The first question, the options were framed with loss:

It is said that soon there will be a problem with the supply of toilet paper in the nearby markets. When you calculate your need for the period when the toilet paper shortage will start and end, tou have determined that you need 30 rolls of toilet paper. Due to the heavy sales with the resulting disruiton, companies are experiencing stock shortages and therefore it is uncertain which brand can sell to consumer. In this case, which of the following options would you prefer? (Please tick only one option)

- If you prefer brand A, you will lose 20 rolls.
- If you choose brand B, there is a 1/3 probability that you will not lose any rolls, and 2/3 probability that you will not buy any toilet paper.

The sixth question, the options were framed with gain:

It is said that soon there will be a problem with the supply of toilet paper in the nearby-markets. When you calculate your need for the period when the toilet paper shortage will start and end, you have determined that you need 30 rolls of toilet paper. Due to

the heavy sales with the resulting disruption, companies are experiencing stock shortages and therefore it is uncertain which brand can sell to the consumer. In this case, which of the following options would you prefer? (Please tick only one option).

- If you choose the X brand, you will be able to buy 10 rolls for sure.
- If you choose the Y brand, 1/3 probability you will be able to buy 30 rolls, 2/3 probability that you will not buy any toilet paper.

Another concept explored within the scope of behavioral economics approaches in the study is "sunk cost fallacy". In order to examine this issue, Thaler's (1980) study is based on the examples in which consumer decisions may not always be rational as described in economic theory and this situation is observed, and the following question, which is the second question of the second part of the questionnaire, was prepared based on the examples in the aforementioned study:

> You have already paid 300 TL for one of the care treatments that support hair growth. The efficiency you get from the products you have used in the cure is behind what you expected and you will have to pay 600 TL more to buy all the products of the cure. Another alternative is to buy a new hair care cure with 600 TL, which will allow you to get more efficiency. What decision would you make in such a situation?

- I continue the old hair care cure .
- By ending the old cycle, I start a new cycle with new products.

With this question, it was aimed to measure the difference in the way consumers perceive a loss of the same amount. If consumers pay for the product themselves, the rate of using that product will increase regardless (Thaler, 1980).

The behavioral economics concept explored with the fourth and eighth questions in the second part of the questionnaire is the "payment decoupling". Kahneman (2018, p.408) stated that decision units keep cash and credit transactions in separate mental accounts. This statement has been empirically confirmed by Soman in 1999 and by Prelec and Simester in 2001 in different studies. The same expenditure scenario was

used in the fourth and eighth questions in order to question whether the willingness of the respondents to pay changes according to the payment method, only the payment method in two questions differed from each other:

Fourth question with credit card payment method.

Imagine a situation where you want to buy a limited edition shoe. How much would you bid to have this product in this situation where no one can see other's offers and payment is only by credit card?

…….. TL.

Eighth question with cash payment method.

Imagine a situation where you want to buy a limited edition shoe. How much would you bid to have this product in a situation where no one can see the others' offers and payment is cash only?

…….. TL.

The third and seventh questions in the second part of the questionnaire explore the concept of "anchoring effect". Behavioral Economics stated that in most cases where individuals make predictions using anchor values, there is a difference in responses according to anchor value. The anchoring effect has been the subject of research by Tversky and Kahneman (1974), Brian Wansink, Robert J. Kent and Stephen J. Hoch (1998), Dan Ariely, George Loewenstein and Drazen Prelec's (2003).

As can be seen below in the third question in the second part of the questionnaire, the expression "under 90 TL" is presented as descriptive of the anchor value, while in the seventh question of the same part the descriptive expression of the anchor value is "90 TL".

Third question:

How many TL would you pay for a standard t-shirt that you know is under 90 TL on the list?

…….. TL.

Seventh question:

How many TL will you pay for a standard t-shirt that you know is the list price of 90 TL?

…….. TL.

In the study, the last concept explored within the scope of behavioral economics approaches is the "endowment effect". According to the endowment effect, when a person owns a good, he or she tends to value the good more than the person who does not own it. In a study by Thaler (1980), the first of two groups was given a mug and asked how much they could sell it for, and the second was asked if they could buy the mug. According to the findings, the price of the sellers was higher than the price of the buyers because they believed the mug belonged to them. Based on this study, the fifth and ninth questions in the second part of the questionnaire were prepared. In the fifth question, the person owns the object, while in the ninth question, the price that one is willing to pay to have the same object was asked.

In the ninth question:

For how many TL would you sell a standard Turkish coffee cup that you own?

…….. TL.

In the fifth question:

How much would you offer to have a standard Turkish coffee cup?

……TL

In the third part of the questionnaire, a nine-factor measurement model consisting of 22 questions and developed by İnci DURSUN, Ümit ALNIAÇIK, and Ebru TÜMER KABADAYI (2010) was used to determine the decision-making styles of the participants. This model which used in the study emerged by testing the validity and reliability of the Consumer Styles Inventory (CSI) developed by Sproles & Kendall (1986). The scale consisting of 40 questions and developed by Sproles & Kendall (1986) to measure the eight basic decision-making characteristics of

onsumers was tested on a sample of Turkish consumers by İnci DURSUN, Ümit ALNIAÇIK and Ebru TÜMER KABADAYI, and a nine-factor measurement model consisting of 22 questions was revealed out.

This scale measures nine consumer decision-making styles:

- Perfectionism, High-Quality Consciousness
- Brand Consciousness, "Price Equals Quality"
- Fashion Consciousness
- Price Consciousness
- Impulsive Shopping, Careless
- Habitual, Brand-Loyal Orientation
- Confused by Information
- Shopping Aversion
- Indecision

Convenience sampling method was used in the study and the number of samples was determined based on the 384 figure suggested for the representativeness of a population of 1 million and above in (Saunders, Lewis & Thornhill, 2000, p. 156). In the study, there are analyzes obtained from the data of 403 questionnaires distributed to the participants and available. The questionnaires used in the study can be seen in the Appendix. IBM SPSS 23.0 package program was used for statistical analyzes in the study. Minimum, maximum, mean, standard deviation, median, frequency, and percentage were used in reporting study data. The conformity of the quantitative data to the normal distribution was evaluated with the Shapiro-Wilk test and graphical examinations. While independent groups t-test was used in the between-group evaluations of the normally distributed variables, one-way analysis of variance was used in the between-group evaluations of more than two-group normally-distributed variables. The Kruskal- Wallis test was used for the intergroup evaluations of more than two non-normally distributed variables. Dependent groups t-test was used for the evaluation of the normally distributed variables between two dependent measurements. Pearson chi-square test and Fisher-Freeman-Halton exact test were used for comparisons between qualitative variables. Pearson correlation analysis was

used to determine the level of relationship between quantitative variables. Cronbach's alpha coefficient was used to determine the internal consistency levels. Statistical significance was accepted as $p<0.05$.

3.3. Findings of the Research

3.3.1. Demographic Structure of The Sample

Answering the questions in the first part of the questionnaire applied in the study and the demographic structure of 403 participants are given in Table 3.1.

Considering the gender distribution of the participants, it is seen that 50.4% (n=203) are female and 49.6% (n=200) are male.

When it comes to the age distribution of the participants which was determined as ; 23.3 % (n=94) 18-25 years old, 23.8% (n=96) 26-32 years old, 21.6% (n=87) 33-39 years old, 15.1% (n=61) were between the ages of 40-46, 9.4% (n=38) were between the ages of 47-53, 4% (n=16) were between the ages of 54-60, 2.7% (n=11) were 61 years old and over.

The education level distribution of the participants is as follows; 0.5% (n=2) were literate, 0.5% (n=2) were primary school graduates, 0.2% (n=1) were secondary school graduates, 11.4% were (n=46) high school graduates, 14.9% (n=60) undergraduate students, 51.9% (n=209) bachelor's degree, 20.6% (n=83) master's degree.

Considering that graduating from economics or economics-related departments would make a difference in the rationality of the answers to the survey questions, the participants were also asked about the university departments they graduated from/are studying at. According to the answers obtained, 29.3% (n=18) of the participants graduated from economics and related departments.

The occupational distribution of the participants is as follows, while 2.5% (n=10) are unemployed, 2% (n=8) are housewifes, 3.7% (n=15) are workers, 9.2% (n=37) are civil servants, 4.2% (n=17) are self-employed, 1%(n=4) are tradesmen, 15.6% (n=63) are students, 3,2% (n=13) are retired, 0.5 % (n=2) industrialists/traders, 42.9% (n=173)

private sector employess, 2% (n=8) academicians and 13.2% (n=53) are other professionals.

According to the monthly income distribution results, which is the last indicator of the demographic profiles of the participants, 18.9% (n=76) had an income of 2.825 TL or less, while 11.7% (n=47) had an income between 2.826-4.500 TL, 26%, 6 of them (n=107) are between 4.501-6.500 TL, 42.9% of them (n=173) are over 6.500 TL.

TABLE 3.1: Demographic Structure of the Sample

		n	**%**
Gender	Female	203	50,4
	Male	200	49,6
Age	18-25	94	23,3
	26-32	96	23,8
	33-39	87	21,6
	40-46	61	15,1
	47-53	38	9,4
	54-60	16	4,0
	61 and over	11	2,7
Educational Status	Literate	2	0,5
	Primary school graduates	2	0,5
	Secondary school graduates	1	0,2
	High school graduates	46	11,4
	Undergraduate students	60	14,9
	Bachelor’s degree	209	51,9
	Master’s degree	83	20,6
Studying/ Graduated department (economics or economics-related departments)	No	285	70,7
	Yes	118	29,3
Occupation	Unemployed	10	2,5
	Housewife	8	2,0

	Worker	15	3,7
	Civil servant	37	9,2
	Self-employed	17	4,2
	Tradesmen	4	1,0
	Student	63	15,6
	Retired	13	3,2
	Industrialist / trader	2	0,5
	Private sector employee	173	42,9
	Academician	8	2,0
	Other professional	53	13,2
Monthly Income	2.825 TL or less	76	18,9
	2.826-4.500 TL	47	11,7
	4.501-6.500 TL	107	26,6
	Over 6.501 TL	173	42,9

3.3.2. Findings on Heuristics and Cognitive Biases

3.3.2.1. Framing Effect

The first of the heuristics and cognitive biases measured in the study is the framing effect. The concept in question was asked to the participants twice, as the scenario in which the *"toilet paper"* product was used, and the first and sixth questions in the second part of the questionnaire. In the **Question 1,** which is the first question of the survey about the framing effect, the options are framed with loss, while in the second survey question, **Question 6,** the options are framed with gain.

According to Tversky and Kahneman (1981), people's preferences differ in situations of uncertainty and risk, and in case of uncertainty, people avoid risk when it comes to gain (risk-averse behavior), and take risks because of loss(risk-seeking behavior). The questions prepared in the survey regarding the framing effect were prepared based on Tversky and Kahneman's (1981) question of the Asian disease problem, and the table regarding the findings is given below.

TABLE 3.2: Finding on the Framing Effect

FRAMING EFFECT	**n**	**%**
Framing Effect (Loss)		
Risk averse (A)	252	62,5
Risk- seeking (B)	151	37,5
Framing Effect (Gain)		
Risk averse (X)	283	70,2
Risk- seeking (Y)	120	29,8

In Question 1, when the toilet paper shortage is expected and given the loss options, the participants chose the A brand, that is the option "certain lost 20 rolls" (62.5%) and avoided risk. In other words, the majority of respondents were risk-averse in Question 1 and although the outcome of both options was the same, A brand, which certain lost 20 rolls. In question 6, where the gain options were given, they again avoided risk and chose the brand X, namely "10 rolls wins for sure" (70.2%) but this time the rate of risk aversion is higher than in question 1, which is framed with loss. Consumers were risk-averse in both the gain and loss options when the product was toilet paper, but the loss aversion rate was higher in the gain option than in the loss option.

The results of the Chi-Square analysis and cross-tables, which were made to see whether these results differ according to the demographic characteristics of the participants, are presented below.

In order to see whether the answers given to the framing effect question differ according to the demographic structure of the sample, the Chi-Square significance test was conducted. In order to understand whether there is a relationship between two nominal variables or whether these two variables act independently of each other, the Chi-Square test should be performed. Fisher-Freeman-Halton exact test was also applied for low-numbered cells for which the Chi-Square test did not give a healthy result. The primary aim of the study is to compare the risk behavior of consumers when it comes to gain and their risk behavior when it comes to loss. For this reason, separate

Chi-Square analyzes were applied to see whether the responses to the gain options differed according to demographic variables and whether the responses to the loss options differed. As can be seen from Table 3.3, no statistically significant difference was found in terms of risk aversion and risk seeking percentages in the question with loss framing in terms of the demographic variables ($p>0.05$).

TABLE 3.3: Chi-Square and Fisher-Freeman-Halton Exact Test Results between the Demographic Structure of the Sample and Framing Effect (Loss- Framed)

Variables	**n**	**Framing Effect (Loss options)**		**p**
		Risk aversion (A)	**Risk seeking (B)**	
		n (%)	**n (%)**	
Gender				**[a][5]0,847**
Female	203	126 (62,1)	77 (37,9)	
Male	200	126 (63)	74 (37)	
Age				**[a]0,080**
18-25	94	63 (67)	31 (33)	
26-32	96	62 (64,6)	34 (35,4)	
33-39	87	53 (60,9)	34 (39,1)	
40-46	61	34 (55,7)	27 (44,3)	
47-53	38	26 (68,4)	12 (31,6)	
54-60	16	5 (31,3)	11 (68,8)	
61 and over	11	9 (81,8)	2 (18,2)	
Educational Status				**[a]0,407**
High school graduates and less level	51	27 (52,9)	24 (47,1)	
Undergraduate students	60	41 (68,3)	19 (31,7)	
Bachelor's degree	209	132 (63,2)	77 (36,8)	
Master's degree	83	52 (62,7)	31 (37,3)	

[5] Chi-Square test

Studying/ Graduated department (economics or economics-related departments)				**[a]0,392**
No	285	182 (63,9)	103 (36,1)	
Yes	118	70 (59,3)	48 (40,7)	
Occupation				**[b6]0,553**
Unemployed	10	7 (70)	3 (30)	
Housewife	8	3 (37,5)	5 (62,5)	
Worker	15	9 (60)	6 (40)	
Civil servant	37	27 (73)	10 (27)	
Self-employed	17	12 (70,6)	5 (29,4)	
Tradesmen	4	3 (75)	1 (25)	
Student	63	43 (68,3)	20 (31,7)	
Retired	13	7 (53,8)	6 (46,2)	
Industrialist / trader	2	1 (50)	1 (50)	
Private sector employee	173	102 (59)	71 (41)	
Academician	8	7 (87,5)	1 (12,5)	
Other professional	53	31 (58,5)	22 (41,5)	
Monthly Income				**[a]0,622**
2.825 TL or less	76	49 (64,5)	27 (35,5)	
2.826-4.500 TL	47	33 (70,2)	14 (29,8)	
4.501-6.500 TL	107	66 (61,7)	41 (38,3)	
Over 6.501 TL	173	104 (60,1)	69 (39,9)	

According to the results presented in Table 3.4, there was no statistically significant difference in terms of risk aversion and risk seeking percentages in the gain-

[6] Fisher-Freeman-Halton exact test

framed question, as in the loss-framed question, in terms of demographic variables ($p>0.05$).

TABLE 3.4: Chi-Square and Fisher-Freeman-Halton Exact Test Results between the Demographic Structure of the Sample and Framing Effect (Gain- Framed)

	n	**Framing Effect (Gain options)**		**p**
		Risk averse (A)	**Risk seeking (B)**	
		n (%)	**n (%)**	
Gender				**[a][7]0,453**
Female	203	146 (71,9)	57 (28,1)	
Male	200	137 (68,5)	63 (31,5)	
Age				**[a]0,423**
18-25	94	70 (74,5)	24 (25,5)	
26-32	96	63 (65,6)	33 (34,4)	
33-39	87	66 (75,9)	21 (24,1)	
40-46	61	39 (63,9)	22 (36,1)	
47-53	38	28 (73,7)	10 (26,3)	
54-60	16	9 (56,3)	7 (43,8)	
61 and over	11	8 (72,7)	3 (27,3)	
Educational Status				**[a]0,517**
High school graduates and less level	51	33 (64,7)	18 (35,3)	
Undergraduate students	60	46 (76,7)	14 (23,3)	
Bachelor's degree	209	144 (68,9)	65 (31,1)	
Master's degree	83	60 (72,3)	23 (27,7)	
Studying/ Graduated department (economics or economics-related departments)				**[a]0,786**

[7] Chi-Square test

No	285	199 (69,8)	86 (30,2)	
Yes	118	84 (71,2)	34 (28,8)	
Occupation				**[b][8]0,924**
Unemployed	10	7 (70)	3 (30)	
Housewife	8	6 (75)	2 (25)	
Worker	15	11 (73,3)	4 (26,7)	
Civil servant	37	27 (73)	10 (27)	
Self-employed	17	12 (70,6)	5 (29,4)	
Tradesmen	4	3 (75)	1 (25)	
Student	63	50 (79,4)	13 (20,6)	
Retired	13	8 (61,5)	5 (38,5)	
Industrialist / trader	2	2 (100)	0 (0)	
Private sector employee	173	115 (66,5)	58 (33,5)	
Academician	8	6 (75)	2 (25)	
Other professional	53	36 (67,9)	17 (32,1)	
Monthly Income				**[a]0,719**
2.825 TL or less	76	56 (73,7)	20 (26,3)	
2.826-4.500 TL	47	35 (74,5)	12 (25,5)	
4.501-6.500 TL	107	72 (67,3)	35 (32,7)	
Over 6.501 TL	173	120 (69,4)	53 (30,6)	

As a result, when loss and gain options are given in uncertainty and risk situations, it can be interpreted that the results do not differ according to the demographic structures of the consumers.

[8] Fisher-Freeman-Halton exact test

3.3.2.2. Sunk Cost Fallacy

Question 2 in the second part of the questionnaire is about sunk cost fallacy, which is predicted to be ignored by rational people. It is accepted that the participants did not fall into the sunk cost fallacy by acting rationally who gave up the inefficient old cure and preferred the new cure which is expected to be more efficient with the same cost, in other words those who answered "no". On the other hand, it is accepted that the participants who continue to the old cure just because of the cost they have incurred before, those who answer the question as "yes", fall into sunk cost fallacy. Because a rational decision maker is only concerned with the future results of current investments rather than worrying about justfying previous mistakes (Kahneman, 2011, p. 337).

TABLE 3.5: Finding on the Sunk Cost Fallacy

	n	**%**
Sunk cost fallacy		
Yes (old cure)	106	26,3
No (new cure)	297	73,7

According to the findings in Table 3.5, 73.7% of the participants preferred to start a new cycle by ending the old hair care cure, which they did not receive effective. In other words, the majority of the participants did not consider the sunk cost. Behavioral Economics literature could not be verified with this result; decision units acted in accordance with rational choice.

The results of the chi-square significance test and Fisher-Freeman-Halton exact test, which was conducted to see whether the answers given to the sunk cost fallacy measured question differ according to demographic variables, are presented in Table 3.6.

TABLE 3.6: Chi-Square and Fisher-Freeman-Halton Exact Test Results between the Demographic Structure of the Sample and Sunk Cost Fallacy

	n	**Sunk cost fallacy**		**p**
		Yes (Old cure)	**No (New cure)**	
		n (%)	**n (%)**	
Gender				**a0,716**
Female	203	55 (27,1)	148 (72,9)	
Male	200	51 (25,5)	149 (74,5)	
Age				a0,740
18-25	94	22 (23,4)	72 (76,6)	
26-32	96	26 (27,1)	70 (72,9)	
33-39	87	25 (28,7)	62 (71,3)	
40-46	61	16 (26,2)	45 (73,8)	
47-53	38	7 (18,4)	31 (81,6)	
54-60	16	6 (37,5)	10 (62,5)	
61 and over	11	4 (36,4)	7 (63,6)	
Educational Status				a0,684
High school graduates and less level	51	15 (29,4)	36 (70,6)	
Undergraduate students	60	16 (26,7)	44 (73,3)	
Bachelor's degree	209	50 (23,9)	159 (76,1)	
Master's degree	83	25 (30,1)	58 (69,9)	
Studying/ Graduated department (economics or economics-related departments)				a0,450
No	285	78 (27,4)	207 (72,6)	

Yes	118	28 (23,7)	90 (76,3)	
Occupation				b0,523
Unemployed	10	2 (20)	8 (80)	
Housewife	8	0 (0)	8 (100)	
Worker	15	4 (26,7)	11 (73,3)	
Civil servant	37	11 (29,7)	26 (70,3)	
Self-employed	17	6 (35,3)	11 (64,7)	
Tradesmen	4	1 (25)	3 (75)	
Student	63	13 (20,6)	50 (79,4)	
Retired	13	4 (30,8)	9 (69,2)	
Industrialist / trader	2	1 (50)	1 (50)	
Private sector employee	173	49 (28,3)	124 (71,7)	
Academician	8	4 (50)	4 (50)	
Other professional	53	11 (20,8)	42 (79,2)	
Monthly Income				a0,668
2.825 TL or less	76	16 (21,1)	60 (78,9)	
2.826-4.500 TL	47	14 (29,8)	33 (70,2)	
4.501-6.500 TL	107	28 (26,2)	79 (73,8)	
Over 6.501 TL	173	48 (27,7)	125 (72,3)	

As can be seen in Table 3.6, no statistically significant difference was found in terms of the answers given by the participants to the sunk cost fallacy question for any demographic feature ($p > 0.05$).

3.3.2.3. Anchoring Effect

Question 3 and **Question 7** in the second part of the survey study are the questions investigating the anchoring effect. In Question 3, the expression "below 90 TL" is used as a low anchor, and in Question 7, the expression "90 TL" as a high anchor is given as a reference. The results of the price offers submitted by the participants depending on the anchor in the question are given in Table 3.7.

TABLE 3.7: Finding on the Anchoring Effect

	Min-Max (Median)	**Avg±sd**
Question 3 (Low anchor)	10-300 (50)	58,78±27,78
Question 7 (High anchor)	0-300 (50)	63,68±29,86

As can be seen in Table 3.7, the price offers of the participants in Question 3 which includes the low anchor, in other words their willingness to pay, range between 10 and 300 with an average of 58,78 TL and a median of 50 TL. In Question 7 where the low anchor was included, it was seen that the price offers of the participants, ranged between 0 and 300 with an average of 63,68 TL and a median of 50 TL.

TABLE 3.8: T-test in Dependent Groups Findings Between High Anchor and Low Anchor

Question 3 (Low anchor)	**Question 7 (High anchor)**	**Difference (Q7-Q3)**	**[c9]p**
Avg±sd	**Avg±sd**	**Avg±sd**	
58,78±27,78	63,68±29,86	4,91±16,28	**<0.001*[10]**

In order to examine the anchoring effect, the differences in the answers given by the participants to Question 3 and Question 7 were tested and a statistically significant difference was found ($p<0.001$). It was determined that the averages of the

[9] t-test in dependent groups
[10] $p<0,05$

participants' offer were different according to the anchor value, and their answers to Question 7 with a high anchor (63.68±29.86) were greater than their answers to Question 3 with a low anchor (58.78±27.78). Thus, the anchor used as the adjustment mechanism has proven to be effective.

TABLE 3.9: T-test in Independent Groups, Krusksal- Wallis Test and One-Way Analysis of Variance Results between the Demographic Structure of the Sample and Anchoring Effect

	n	**Anchoring Effect**			**p**
		Question 3 (Low anchor)	**Question 7 (High anchor)**	**Difference (Q7-Q3)**	
		Avg±sd	**Avg±sd**	**Avg±sd**	
Gender					**[d11]0,015***
Female	203	55,14±29,58	61,99±31,95	6,85±18	
Male	200	62,47±25,37	65,4±27,56	2,93±14,1	
Age					**[e12]0,082**
18-25	94	52,8±23,34 (50)	61,8±29,58 (50)	9±20,54 (0)	
26-32	96	62,12±36,87 (50)	69,1±37,25 (60)	6,98±16,17 (0)	
33-39	87	54,55±20,33 (50)	59,3±24,52 (50)	4,75±13,44 (0)	
40-46	61	56,98±20,92 (50)	56,74±23 (50)	-0,25±13,98 (0)	
47-53	38	64,29±21,5 (50)	66,5±22,68 (55)	2,21±10,69 (0)	

[11] t-test in independent groups
[12] Krusksal- Wallis test

54-60	16	71,88±35,96 (60)	70,94±30,73 (65)	-0,94±16,55 (0)	
61 and over	11	85,91±37,4 (80)	85,36±38,23 (80)	-0,55±14,5 (0)	
Educational Status					**[f13]0,639**
High school graduates and less level	51	62,33±26,18	66,86±35,54	4,53±19,94	
Undergraduate students	60	48,43±21,53	55,02±25,03	6,58±16,68	
Bachelor's degree	209	56,73±22,54	60,77±24,65	4,04±15,04	
Master's degree	83	69,22±39,2	75,31±37,29	6,1±16,65	
Studying/ Graduated department (economics or economics-related departments)					**[d]0,022*[14]**
No	285	58,48±30,28	64,44±32,59	5,96±17,45	
Yes	118	59,48±20,64	61,84±21,94	2,36±12,73	
Occupation					**[e]0,919**
Unemployed	10	56,9±13,92 (50)	72±47,56 (50)	15,1±34,71 (0)	
Housewife	8	42,5±23,75 (40)	45,63±26,38 (40)	3,13±23,14 (0)	
Worker	15	72,6±29,35 (80)	76,33±39,93 (75)	3,73±13,14 (0)	

[13] one-way analysis of variance
[14] $p<0.05$

Civil servant	37	60,24±23,5 (50)	63,19±24,96 (50)	2,94±9,75 (0)	
Self-employed	17	55±12,75 (50)	61,47±17,48 (55)	6,47±12,22 (0)	
Tradesmen	4	70±18,26 (70)	70±18,26 (70)	0±0 (0)	
Student	63	52,32±24,88 (50)	60,49±28,3 (50)	8,17±18,21 (0)	
Retired	13	84,23±48,86 (70)	85,77±43,15 (75)	1,54±19,62 (0)	
Industrialist / trader	2	65±21,21 (65)	69,5±27,58 (69,5)	4,5±6,36 (4,5)	
Private sector employee	173	58,5±27,71 (50)	62,67±28,63 (60)	4,17±15,37 (0)	
Academician	8	68,75±31,37 (60)	76,25±27,74 (75)	7,5±21,21 (0)	
Other professional	53	57,62±29,36 (50)	61,4±30,65 (50)	3,77±15,38 (0)	
Monthly Income					**[f]0,250**
2.825 TL or less	76	52,7±24,43	60,61±31,81	7,91±21,33	
2.826-4.500 TL	47	58,17±31,32	62,32±33,47	4,15±20,33	
4.501-6.500 TL	107	59,76±27,75	62,79±26,68	3,03±12,88	
Over 6.501 TL	173	61,01±28,02	65,96±29,9	4,95±14,21	

T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was performed for each variable in order to analyze the differences of these results according to the demographic characteristics of the participants. As can be seen from Table 3.9, a statistically significant difference was found in terms of the anchoring effect according to the gender of the participants (p=0.015) and the departments they studying or graduated from (p=0.022).

When the anchoring effect was examined according to the gender of the participants, it was seen that the anchoring effect observed in male was lower than that of female, in other words, male acted relatively more rationally. When the anchoring effect is examined in terms of the studying/graduated department, it was seen that the anchoring effect was lower in the participants who graduated from or studying economics and related departments, in other words, the participants who graduated from or studying economics and related departments acted more rationally.

3.3.2.4 Payment Decoupling

Question 4 and **Question 8** in the second part of the questionnaire were asked to the participants to test the "payment decoupling". The question in survey was scripted as how much price would be offered to own a limited edition shoe. In Question 4, the information that the payment would be made by *credit card* was given, while in Question 8, it was informed that the price offered for the shoes would be paid *in cash.* According to the payment decoupling, it is a kind of mental accounting system which seperation purchase from the payment and credit card, it is expected that consumers will tend to be willing to pay higher amounts for payments made by credit card compared to paying with cash (Soman, 2001, p. 463).

According to Table 3.10, in which the mean and median values are compared according to the data obtained by the answers of the participants to Question 4 and Question 8, a difference of approximately 39 TL was observed in the averages, while a difference of 50 TL was observed in the median values.

TABLE 3.10: Finding on the Payment Decoupling

	Min-Max (Median)	**Avg±sd**
Question 4 (credit card)	0-16000 (350)	728,02±1356,2
Question 8 (cash)	0-10001 (300)	689,17±1185,79

No statistically significant difference was found in terms of the answers given by the participants to the Question 4 and Question 8 asked to examine the payment decoupling ($p>0.05$). However, it was determined that the average of the answers given by the participants to Question 4 in which the credit card payment method (728.02±1356.2) was presented was higher than the average of the answers given to the Question 8, in which the cash payment method was presented (689.17± 1185.79). The difference in the price offers presented in Question 4 and Question 8 can be interpreted as the participants tend to pay higher prices for the same product when the credit card payment method is presented.

TABLE 3.11: T-test in Dependent Groups Findings Between Credit Card Payment Method and Cah Payment Method

Question 4 (credit card)	**Question 8 (cash)**	**Difference (Q4-Q8)**	**[c15]p**
Avg±sd	**Avg±sd**	**Avg±sd**	
728,02±1356,2	689,17±1185,79	38,85±813,7	0.338

T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was conducted to see if the payment offers have a significant difference according to demographic characteristics, and the data obtained are presented in Table 3.12.

[15] t-test in dependent groups

TABLE 3.12: T-test in Independent Groups, Krusksal- Wallis Test and One-Way Analysis of Variance Results between the Demographic Structure of the Sample and Payment Decoupling

	n	Payment decoupling			p
		Question 4 (credit card)	Question 8 (cash)	Difference (Q4-Q8)	
		Avg±sd	Avg±sd	Avg±sd	
Gender					[d16]**0,064**
Female	203	830,36±1637,21	716,97±1174,46	113,39±932,73	
Male	200	624,15±986,49	660,95±1199,47	-36,8±665,59	
Age					[e]**0,273**
18-25	94	668,87±856,65 (325)	583,55±692,43 (300)	85,32±370,52 (0)	
26-32	96	1075,54±2028,4 (500)	962,01±1504,78 (500)	113,53±1499,06 (0)	
33-39	87	794,62±1553,09 (400)	845,78±1662,12 (350)	-51,16±644,04 (0)	
40-46	61	584,98±829,3 (300)	595,64±836,6 (250)	-10,66±152,24 (0)	
47-53	38	392,37±436,7 (300)	349,21±360,05 (275)	43,16±175,67 (0)	
54-60	16	306,38±257,96 (275)	290,75±259,48 (250)	15,63±35,21 (0)	
61 and over	11	240±147,31 (250)	244,55±137,58 (250)	-4,55±86,3 (0)	
Educational Status					[f]**0,164**

[16] t-test in independent groups

High school graduates and less level	51	331,18±314,31	489,22±1388,5	-158,04±1270,42	
Undergraduate students	60	505,12±814,13	527,15±952,63	-22,03±872,72	
Bachelor's degree	209	777,4±1446,25	664,58±863,2	112,82±799,78	
Master's degree	83	1008,67±1718,7	991,08±1742,66	17,59±223,8	
Studying/ Graduated department (economics or economics-related departments)					**[d]0,146**
No	285	687,36±1018,29	693,22±1179,61	-5,86±692,8	
Yes	118	826,25±1946,5	679,39±1205,59	146,86±1045,59	
Occupation					**[e]0,924**
Unemployed	10	1065±1456,79 (450)	1065±1449,15 (550)	0±235,7 (0)	
Housewife	8	287,5±307,93 (200)	268,75±304,65 (200)	18,75±53,03 (0)	
Worker	15	414,67±615,99 (250)	394,67±613,54 (250)	20±56,06 (0)	
Civil servant	37	476,76±422,69 (350)	715,95±1629,2 (300)	-239,19±1520,93 (0)	
Self-employed	17	929,35±897,82 (750)	868,18±846,16 (500)	61,18±176,6 (0)	

Tradesmen	4	1000±668,33 (700)	1000±668,33 (700)	0±0 (0)	
Student	63	626,94±1012,71 (300)	531,4±810,96 (250)	95,54±417,69 (0)	
Retired	13	384,62±500,58 (200)	364,62±501,77 (200)	20±55,83 (0)	
Industrialist / trader	2	200±282,84 (200)	200±282,84 (200)	0±0 (0)	
Private sector employee	173	854,71±1844,82 (350)	761,36±1426,41 (300)	93,35±985,86 (0)	
Academician	8	668,75±561,84 (500)	668,75±561,84 (500)	0±0 (0)	
Other professional	53	729,68±712,08 (500)	718,55±714,99 (500)	11,13±50,1 (0)	
Monthly Income					**[f]0,861**
2.825 TL or less	76	699,55±1100,01	603,91±958,17	95,64±400,15	
2.826-4.500 TL	47	504,68±522,44	446,17±459,03	58,51±196,25	
4.501-6.500 TL	107	928,69±2082,03	880,1±1692,83	48,59±1519,29	
Over 6.501 TL	173	677,1±992,5	674,55±1010,63	2,54±204,79	

As can be seen in Table 3.12, no statistically significant difference was found in terms of the answers given by the participants to the payment decoupling question for any demographic feature ($p>0.05$). In addition that, it has been determined that female are willing to pay a higher amount for the product offered in both payment methods

compared to male, and the offers of the participants for both payment methods increase in direct proportion to their education level.

3.3.2.5. Endowment Effect

The last heuristic and biases tested from behavioral economics approaches is the endowment effect. As can be seen in the study of Thaler (1980), the price that people are willing to sell a product of their own, the selling price, is higher than the price they are willing to pay, buying price, to have the same product. In other words, people tend to put more value on the things they own. This creates an endowment effect. The endowment effect was measured by **Question 5** and **Question 9** in the second part of the questionnaire, based on the study of Thaler (1980), and the findings are presented in Table 3.13.

According to Table 3.13, the answers given by the participants to Question 5 range from 0 to 250, with an average of 28.15±35.05, while their answers to Question 9 range from 0 to 250, with an average of 27.45±35.46 . The mean and median values are compared according to the data obtained by the answers of the participants to Question 5 and Question 9, a difference of approximately 1 TL was observed in the averages.

TABLE 3.13: Finding on the Endowment Effect

	Min-Max (Median)	**Avg±sd**
Question 5 (price of sell)	0-250 (15)	28,15±35,05
Question 9 (price of purchase)	0-250 (15)	27,45±35,46

There was no statistically significant difference between the answers given to Question 5 and Question 9 to examine the endowment effect ($p>0.05$). The price willing to sell the product owned is higher than the price willing to buy the same product, albeit by a small difference.

TABLE 3.14: T-test in Dependent Groups Findings Between Price of Sell and Price of Purchase

Question 5 (price of sell)	**Question 9 (price of purchase)**	**Difference (Q5-Q9)**	**[c]p**
Avg±sd	**Avg±sd**	**Avg±sd**	
28,15±35,05	27,45±35,46	0,7±15,59	0.367

T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was conducted to see if the payment offers have a significant difference according to demographic characteristics, and the data obtained are presented in Table 3.15.

TABLE 3.15: T-test in Independent Groups, Krusksal- Wallis Test and One-Way Analysis of Variance Results between the Demographic Structure of the Sample and Endowment Effect

	n	**Endowment Effect**			**p**
		Question 5 (price of sell)	**Question 9 (price of purchase)**	**Difference (Q5-Q9)**	
		Avg±sd	**Avg±sd**	**Avg±sd**	
Gender					**[d]0,795**
Female	203	31,62±36,16	31,11±35,99	0,5±20,01	
Male	200	24,64±33,62	23,73±34,6	0,9±9,2	
Age					**[e]0,318**
18-25	94	32,56±37,16 (20)	30,36±33,29 (20)	2,2±21,5 (0)	
26-32	96	26,58±32,96 (15)	25,92±36,44 (15)	0,67±17,87 (0)	
33-39	87	26,56±35,01 (15)	26,72±34,17 (15)	-0,16±12,89 (0)	
40-46	61	27,84±34,47 (15)	28,41±35,24 (15)	-0,57±8,95 (0)	

47-53	38	26,25±39,51 (10)	25,99±45,33 (10)	0,26±10,33 (0)	
54-60	16	22,38±27,23 (12,5)	22,06±27,04 (12,5)	0,31±3,86 (0)	
61 and over	11	33,55±36,68 (20)	29,32±35,46 (15)	4,23±7,85 (0)	
Educational Status					**[f]0,345**
High school graduates and less level	51	24,25±23,27	21,22±19,22	3,04±11,09	
Undergraduate students	60	33,8±37,72	31,37±33,77	2,43±25,36	
Bachelor's degree	209	26,29±34,25	25,86±35,74	0,43±14,6	
Master's degree	83	31,15±40,54	32,46±42,54	-1,31±10,15	
Studying/ Graduated department (economics or economics-related departments)					**[d]0,982**
No	285	28,89±35,85	28,19±35,56	0,69±16,27	
Yes	118	26,38±33,12	25,65±35,29	0,73±13,88	
Occupation					**[e]0,155**
Unemployed	10	29,5±29,01 (20)	25±16,83 (27,5)	4,5±18,17 (0)	
Housewife	8	27,5±15,35 (25)	23,13±12,8 (20)	4,38±8,21 (0)	
Worker	15	18,87±19,5 (10)	17,53±19,08 (10)	1,33±3,44 (0)	

Civil servant	37	27,51±43,14 (15)	29,68±50,48 (15)	-2,16±24,28 (0)	
Self-employed	17	29±33,11 (15)	30,76±36,49 (15)	-1,76±17,13 (0)	
Tradesmen	4	26,25±6,29 (25)	23,75±2,5 (25)	2,5±5 (0)	
Student	63	34,4±37,48 (20)	31,25±32,96 (20)	3,14±25,4 (0)	
Retired	13	29±29,84 (15)	24,27±28,55 (10)	4,73±7,34 (0)	
Industrialist / trader	2	14±8,49 (14)	14±8,49 (14)	0±0 (0)	
Private sector employee	173	25,36±30,96 (15)	25,22±31,83 (15)	0,14±12,09 (0)	
Academician	8	16,19±15,83 (10)	15,88±16,05 (10)	0,31±0,88 (0)	
Other professional	53	34,75±48,28 (15)	34,83±48,41 (15)	-0,08±4,31 (0)	
Monthly Income					**[f]0,040***
2.825 TL or less	76	31,64±35,42	27,53±27,45	4,12±22,52	
2.826-4.500 TL	47	31±29,77	27,49±28,44	3,51±11,72	
4.501-6.500 TL	107	28,11±40,54	27,7±41,44	0,41±11,49	
Over 6.501 TL	173	25,87±32,58	27,25±36,53	-1,38±14,73	

As a result of the analysis, it was determined that there was a statistically significant difference in terms of endowment effect according to the monthly income levels of the participants (p=0,040). Although the endowment effect observed in those with an income of 2.825 TL or less was higher/larger than the endowment effect

observed in those with an income of over 6.501 TL (p= 0.049), no difference was found between other income levels (p>0.05).

3.3.3. Analysis of Consumer Styles Inventory

In order to measure consumer decision-making styles, the scale which emerged by testing its validity and reliability on a sample of Turkish consumers was used. This measurement model with nine factors consisting of 22 questions was developed by Dursun, Alnıaçık and Kabadayı (2010). The scale in question emerged with the development of the Consumer Styles Inventory, which was developed by Sproles & Kendall (1986) to measure eight basic decision-making characteristics of consumers and whose generalizability was tested in many countries before. The study conducted by Sproles & Kendall (1986) received criticism for its generalizability because it was created with a sample of high school students in the USA. Therefore, a larger sample of student and non-student adults was used in the model used in this study.

The nine factors of the scale and their expressions under these factors are presented in Table 3.16. The expressions are presented with numbers in parentheses correspond to in the original inventory in this scale, which is an adaptation of the original Consumer Style Inventory (Sproles & Kendall) consisting of 8 factors and 40 questions.

TABLE 3.16: Developed CSI with Nine Factors and Twenty-Two Expressions

Factor 1- Perfectionism, High-Quality Consciousness
1 (CSI 1) - Getting very good quality is very important to me.
2 (CSI 2) - When it comes to purchasing products, I try to get the very best or perfect choice.
3 (CSI 3) - In general, I usually try to buy the best overall quality.
4 (CSI 6) - My standards and expectations for products I buy are very high.
Factor 2- Brand Consciousness, "Price Equals Quality"
5 (CSI 10) - The more expensive brands are usually my choices.
6 (CSI 11) - The higher the price of a product, the better its quality.

7 (CSI 12) - Nice department and specialty stores offer me the best products.
8 (CSI 13) - I prefer buying the best-selling brands.
Factor 3- Fashion Consciousness
9 (CSI 16) - I keep my wardrobe up-to-date with the changing fashions.
10 (CSI 17) - Fashionable, attractive styling is very important to me.
Factor 4- Price Consciousness
11 (CSI 25) - I buy as much as possible at sale prices.
12 (CSI 32) - I carefully watch how much I spend.
Factor 5- Impulsive Shopping, Careless
13 (CSI 29) - I am impulsive when purchasing.
14 (CSI 30) - Often I make careless purchases I later wish I had not.
Factor 6- Habitual, Brand-Loyal Orientation
15 (CSI 37) - I have favorite brands I buy over and over.
16 (CSI 38) - Once I find a product or brand I like, I stick with it.
Factor 7- Confused by Information
17 (CSI 35) - The more I learn about products, the harder it seems to choose the best.
18 (CSI 36) - All the information I get on different products confuses me.
Factor 8- Shopping Aversion
19 (CSI 20) - Shopping is not a pleasant activity to me.
20 (CSI 22) - Shopping the stores wastes my time.
Factor 9- Indecision
21 (CSI 33) - There are so many brands to choose from that often I feel confused.
22 (CSI 34) - Sometimes it's hard to choose which stores to shop.

Source: Dursun, Alnıaçık, Kabadayı, **"Tüketici Karar Verme Tarzları Ölçeği: Yapısı ve Boyutları**", 2013, pp. 300-301.

The factors that emerged with the analyzes of Dursun, Alnıaçık and Kabadayı (2010) can be expressed as follows:

1. *Perfectionism, High-Quality Consciousness:* It is the factor that measures how much consumers focus on product quality during purchase. This factor emerged with

the use of 4 expressions from the factor of the same name that Sproles and Kendall (1986) which was measured with 8 expressions:

- Getting very good quality is very important to me (CSI 1).
- When it comes to purchasing products, I try to get the very best or perfect choice (CSI 2).
- In general, I usually try to buy the best overall quality (CSI 3).
- My standards and expectations for products I buy are very high (CSI 6).

2. *Brand Consciousness, "Price Equals Quality".* It is the factor that measures the tendency to buy familiar and expensive brands, as product quality is predicted with the help of the price and prestige of the brand. This factor emerged with the use of 4 expressions from the factor of the same name that Sproles and Kendall (1986) which measured with 7 expressions:

- The more expensive brands are usually my choices (CSI 10).
- The higher the price of a product, the better its quality (CSI 11).
- Nice department and specialty stores offer me the best products (CSI 12).
- I prefer buying the best-selling brands (CSI 13).

3. *Fashion Consciousness.* This factor emerged with the use of 2 expressions in the factor named ***Novelty-Fashion Consciousness***, which was measured with 5 expressions by Sproles and Kendall (1986). By removing the questions measuring novelty in the original CSI, this factor was simplified to *"Fashion Consciousness"* and measures how much consumers focus on following fashion when making decisions.:

- I keep my wardrobe up-to-date with the changing fashions (CSI 16).
- Fashionable, attractive styling is very important to me (CSI 17).

4. *Price Consciousness.* It is the factor to measure how much attention is paid to low product prices and the amount of money to be spent in purchasing decisions. This factor contains the combination of the expression "I buy as much as possible at sale prices" from the factor of the same name that Sproles and Kendall (1986) measured

with 3 expressions and the expression “I carefully watch how much I spend” from ***Impulsive, Careless Consumer*** factor Sproles and Kendall (1986) measured with 5 expressions:

- I buy as much as possible at sale prices (CSI 25).
- I carefully watch how much I spend (CSI 32).

5. *Impulsive Shopping Careless.* It is the factor that measures the tendency of consumers to be careless in their shopping, to make quick and rash decisions. This factor emerged with the use of 2 expressions from the factor of the same name that Sproles and Kendall (1986) which was measured with 5 expressions:

- I am impulsive when purchasing (CSI 29).
- Often I make careless purchases I later wish I had not (CSI 30).

6. *Habitual, Brand-Loyal Orientation.* It is the factor that measures the tendency of consumers to purchase certain favorite brands repeatedly and regularly. This factor emerged with the use of 2 expressions from the factor of the same name that Sproles and Kendall (1986) which was measured with 4 expressions:

- I have favorite brands I buy over and over (CSI 37).
- Once I find a product or brand I like, I stick with it (CSI 38).

7. *Confused by Information.* In the original CSI, the factor for measuring the difficulty of consumers in making decisions due to the variety and redundancy of information was divided into two dimensions in the scale used (Dursun, Alnıaçık and Kabadayı (2010)). As one of these dimensions, the factor called “information confusion” is intended to measure the state of consumers experiencing confusion due to the excess of information about the products. This factor emerged with the use of 2 expressions in the factor named ***Confused by Overchoice Consumer,*** which was measured with 4 expressions by Sproles and Kendall (1986) :

- The more I learn about products, the harder it seems to choose the best (CSI 35).
- All the information I get on different products confuses me (CSI 36).

8. *Shopping Aversion.* This factor includes reversed questions aimed at measuring the propensity to shop for pleasure and entertainment in the original CSI. In the scale used, an inverse factor was formed due to the change in the direction of the factor loads of the questions in question. This inverse factor, which measures consumers' dislike of shopping and seeing it as a waste of time, was named "Shopping aversion". This factor emerged with the use of 2 expressions in the factor named ***Recreational, Hedonistic, Consumer,*** which was measured with 5 expressions by Sproles and Kendall (1986):

- Shopping is not a pleasant activity to me (CSI 20).
- Shopping the stores wastes my time (CSI 22).

9. *Indecision.* It is the factor that measures the difficulty experienced by consumers in making decisions and making choices. This factor emerged with the use of 2 expressions in the factor named ***Confused by Overchoice Consumer,*** which was measured with 4 expressions by Sproles and Kendall (1986). This two expressions used other than the two expressions used in the Confused by Information factor.

- There are so many brands to choose from that often I feel confused (CSI 33).
- Sometimes it's hard to choose which stores to shop (CSI 34).

The Cronbach's alpha coefficient was used to determine the internal consistency levels for the reliability assessment of the scale, and the results are presented in Table 3.17. As can be seen from Table 3.17, the calculated internal consistency values for *Perfectionism, High-Quality Consciousness, Brand Consciousness, "Price Equals Quality", Fashion Consciousness, Habitual, Brand-Loyal Orientation, Confused by Information, Shopping Aversion* and *Indecision* factors are above the critical level of 0.6 (Bagozzi & Yi, 1988: 82). In the *"Price Consciousness"* and *"Impulsive Shopping, Careless"* factors, the calculated internal consistency values were calculated as below the critical level of 0.6. However, since these factors were not excluded from the CSI measurement model (Dursun, Alnıaçık and Kabadayı, 2010), with a statement that as they were found to be problematic in almost all of the research on CSI including the

original study by Sproles & Kendall (1986), these factors were not excluded from this study either.

TABLE 3.17: Internal Consistency for Developed CSI

	Amount of Expressions	**Min-Max (Median)**	**Avg±sd**	**Internal Consistency (Cronbach's Alpha)**
Perfectionism, High-Quality Consciousness	4	4-20 (16)	14,98±3,2	0,872
Brand Consciousness, "Price Equals Quality"	4	4-20 (10)	10,4±3,01	0,773
Fashion Consciousness	2	2-10 (5)	4,79±1,75	0,765
Price Consciousness	2	2-10 (8)	7,58±1,48	**0,508**
Impulsive Shopping, Careless	2	2-10 (4)	4,51±1,58	**0,539**
Habitual, Brand-Loyal Orientation	2	2-10 (6)	6,04±1,98	0,866
Confused by Information	2	2-10 (8)	7,35±1,63	0,690
Shopping Aversion	2	2-10 (6)	5,87±2,01	0,699
Indecision	2	2-10 (5)	5,5±1,77	0,781

The determinations regarding the answers given by the participants to the CSI measurement model items are as follows:

- *Perfectionism, High-Quality Consciousness* sub-dimension consists of 4 expressions. The scores of the participants in this sub-dimension ranged from 4 to 20, with an average of 14.98±3.2, while the internal consistency level of the items constituting the sub-dimension was 0.872.
- *Brand Consciousness, "Price Equals Quality"* sub-dimension consists of 4 expressions. The scores of the participants in this sub-dimension ranged

from 4 to 20, with an average of 10,4±3,01, while the internal consistency level of the items constituting the sub-dimension was 0,773.

- *Fashion Consciousness* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 4,79±1,75, while the internal consistency level of the items constituting the sub-dimension was 0,765.
- *Price Consciousness* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 7,58±1,48, while the internal consistency level of the items constituting the sub-dimension was 0,508.
- *Impulsive Shopping, Careless* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 4,51±1,58, while the internal consistency level of the items constituting the sub-dimension was 0,539.
- *Habitual, Brand-Loyal Orientation* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 6,04±1,98, while the internal consistency level of the items constituting the sub-dimension was 0,866.
- *Confused by Information* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 7,35±1,63, while the internal consistency level of the items constituting the sub-dimension was 0,690.
- *Shopping Aversion* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 5,87±2,01, while the internal consistency level of the items constituting the sub-dimension was 0,699.
- *Indecision* sub-dimension consists of 2 expressions. The scores of the participants in this sub-dimension ranged from 2 to 10, with an average of 5,5±1,77, while the internal consistency level of the items constituting the sub-dimension was 0,781.

T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was conducted to see the differences in the answers given by the participants to the CSI scale expressions according to the demographic characteristics of the sample and the data obtained are presented in Table 3.18.

TABLE 3.18: T-test in Independent Groups, Kruskal-Wallis Test and One-Way Analysis of Variance Test Results between the Demographic Structure of the Sample and CSI

	n	Perfectionism, High-Quality Consciousness	Brand Consciousness, "Price Equals Quality"	Fashion Consciousness	Price Consciousness	Impulsive Shopping, Careless	Confused by Information	Habitual, Brand-Loyal Orientation	Shopping Aversion	Indecision
		Avg±sd	**Avg±sd**	**Avg±sd**	**Avg±sd**	**Avg±sd**	**Avg±sd**	**Avg±sd**	**Avg±sd**	**Avg±sd**
Gender										
Female	203	14,83±3,27	9,94±3,07	4,85±1,82	7,74±1,55	4,46±1,68	7,48±1,71	6,23±1,99	5,31±2,04	5,54±1,86
Male	200	15,14±3,13	10,86±2,89	4,73±1,66	7,42±1,4	4,56±1,48	7,23±1,55	5,85±1,96	6,45±1,81	5,47±1,67
[d]p		**0,328**	**0,002***	**0,483**	**0,026***	**0,540**	**0,113**	**0,056**	**<0,001***	**0,683**
Age										
18-25	94	14,17±3,39 (15)	9,89±3,52 (10)	4,76±1,86 (5)	7,84±1,67 (8)	4,49±1,87 (4)	7,2±1,94 (8)	6,41±2,17 (7)	5,24±2,25 (5)	5,51±1,97 (5)
26-32	96	14,68±2,98 (15)	10,19±2,76 (10)	4,85±1,69 (5)	7,52±1,5 (8)	4,51±1,6 (4)	7,51±1,57 (8)	6,28±1,99 (7)	5,9±1,99 (6)	5,77±1,77 (6)
33-39	87	15,45±2,88 (16)	10,74±2,98 (11)	4,79±1,77 (5)	7,68±1,39 (8)	4,33±1,51 (4)	7,62±1,53 (8)	5,92±1,89 (6)	6,09±2,02 (6)	5,33±1,69 (5)
40-46	61	15,66±3,09 (16)	10,97±2,74 (11)	4,92±1,63 (5)	7,41±1,36 (8)	4,59±1,37 (4)	7,3±1,46 (8)	5,52±1,69 (5)	6,23±1,73 (6)	5,34±1,5 (5)
47-53	38	15,29±3,19 (16)	10,66±2,79 (11)	4,84±1,75 (5)	7,32±1,47 (7,5)	4,76±1,44 (5)	6,95±1,47 (7)	6,16±1,88 (6,5)	5,95±1,79 (6)	5,42±1,73 (5)
54-60	16	15,56±3,86 (16)	10,56±2,92 (12)	4,63±2 (4)	7,25±0,86 (7)	4,94±1,48 (5)	7,5±1,21 (8)	5,31±2,18 (5,5)	6,44±1,9 (6)	5,38±2 (5)
61 and over	11	15,27±4,47 (16)	9,55±2,77 (8)	3,91±1,3 (4)	7,45±1,69 (8)	4,18±1,17 (4)	6,73±1,85 (7)	5,18±1,78 (5)	6,27±1,35 (6)	5,73±1,74 (5)

[e]p		**0,083**	**0,201**	**0,704**	**0,170**	**0,539**	**0,134**	**0,025***	**0,018***	**0,664**
Educational Status										
High school graduates and less level	51	14,39±3,5	10,51±3,39	4,49±1,97	7,2±1,97	4,65±1,94	6,59±1,88	6,22±2,03	5,71±2,07	5,67±2,03
Undergraduate students	60	13,77±3,24	9±2,91	4,58±1,77	7,97±1,26	4,22±1,69	6,92±1,71	6,1±2,06	5,2±2,3	5,55±1,89
Bachelor's degree	209	15,24±2,97	10,82±2,9	4,9±1,64	7,62±1,31	4,52±1,51	7,42±1,54	6,05±1,92	6,05±1,83	5,47±1,69
Master's degree	83	15,58±3,33	10,27±2,85	4,84±1,83	7,45±1,64	4,63±1,45	7,99±1,37	5,87±2,08	6,02±2,11	5,43±1,71
[f]p		**0,002***	**0,001***	**0,346**	**0,039***	**0,410**	**<0,001***	**0,781**	**0,027***	**0,882**
Studying/ Graduated department (economics or economics-related departments)										
No	285	14,92±3,11	10,47±3,15	4,81±1,73	7,57±1,54	4,44±1,64	7,38±1,65	6,06±2,06	5,72±2,02	5,5±1,86
Yes	118	15,14±3,43	10,22±2,65	4,75±1,8	7,61±1,35	4,69±1,44	7,31±1,59	5,99±1,78	6,25±1,93	5,51±1,52
[d]p		**0,516**	**0,417**	**0,783**	**0,797**	**0,134**	**0,694**	**0,739**	**0,016***	**0,954**
Occupation										
Unemployed	10	13,3±3,83 (14,5)	11±4,57 (10,5)	5,4±2,07 (5,5)	7,6±2,76 (8)	5,2±2,74 (4)	8,3±1,34 (8)	6,1±2,56 (7,5)	4,8±1,62 (5)	5,7±2,11 (6)
Housewife	8	14,25±3,62 (14)	8±1,93 (8)	3,5±0,76 (4)	8,25±1,91 (8,5)	3,75±1,39 (3)	7,25±1,28 (7,5)	5,88±1,64 (6,5)	3,88±1,64 (4)	4,13±0,99 (4)
Worker	15	15,4±3,11 (15)	11,67±3,81 (11)	5,2±1,93 (5)	7,4±1,12 (8)	4,53±1,55 (4)	7,4±1,45 (8)	6,73±2,05 (8)	6,47±2 (7)	5,73±1,83 (6)
Civil servant	37	15,24±2,88 (16)	11,24±2,82 (11)	4,68±1,83 (4)	7,59±1,5 (8)	4,86±1,57 (5)	7,08±1,66 (7)	5,97±2,03 (6)	6,03±1,59 (6)	5,59±1,94 (5)

Self-employed	17	15,47±3,87 (16)	11,59±2,74 (13)	4,71±1,79 (4)	7,06±1,48 (7)	5,35±1,8 (5)	7,41±1,46 (8)	6,65±2,12 (7)	5,35±2,47 (5)	6,53±1,84 (7)
Tradesmen	4	15,5±0,58 (15,5)	11,75±2,75 (11,5)	3,75±2,36 (3)	7±0,82 (7)	4,5±1,29 (4,5)	8±0 (8)	6,5±1,91 (7)	5,5±1 (6)	7±2 (8)
Student	63	13,67±3,08 (14)	9,48±3,09 (9)	4,51±1,76 (4)	7,87±1,58 (8)	4,29±1,7 (4)	6,98±1,95 (8)	6,11±2,17 (6)	5,37±2,29 (5)	5,51±2,08 (5)
Retired	13	15,31±3,92 (16)	8,69±2,14 (8)	4±1,68 (4)	7,77±1,09 (8)	4,46±1,33 (4)	6,15±1,91 (6)	6±1,96 (6)	6,54±1,51 (6)	5,85±2,23 (6)
Industrialist / trader	2	13±4,24 (13)	9±1,41 (9)	4±1,41 (4)	8,5±0,71 (8,5)	3,5±0,71 (3,5)	7,5±0,71 (7,5)	5,5±0,71 (5,5)	7,5±0,71 (7,5)	4,5±0,71 (4,5)
Private sector employee	173	15,27±3,18 (16)	10,64±2,87 (11)	4,94±1,7 (5)	7,51±1,43 (8)	4,55±1,51 (4)	7,34±1,57 (8)	5,91±1,92 (6)	6,12±1,96 (6)	5,31±1,56 (5)
Academician	8	16,75±3,49 (18)	10,5±4,11 (10)	5,5±1,85 (5,5)	7,5±1,07 (8)	4,25±1,49 (4)	8,75±1,04 (8)	5,13±1,64 (4)	6,13±1,81 (6)	5,13±1,64 (4)
Other professional	53	15,26±2,78 (16)	9,98±2,68 (10)	4,92±1,66 (5)	7,53±1,44 (8)	4,21±1,41 (4)	7,87±1,39 (8)	6,19±1,91 (6)	5,85±1,99 (6)	5,74±1,61 (6)
[e]p		**0,038***	**0,003***	**0,162**	**0,371**	**0,308**	**0,005***	**0,834**	**0,011***	**0,118**
Monthly Income										
2.825 TL or less	76	13,82±3,22	9,64±3,31	4,64±1,85	7,88±1,77	4,49±1,91	7,16±1,92	6,01±2,18	5,05±2,21	5,57±2,05
2.826-4.500 TL	47	14,53±3,37	9,62±2,97	4,32±1,96	7,77±1,46	4,3±1,32	7,02±1,54	6,38±1,97	6,06±2,41	5,64±1,89
4.501-6.500 TL	107	15,39±2,89	10,56±3,06	4,71±1,59	7,64±1,48	4,4±1,59	7,25±1,74	6,24±1,92	6,02±1,78	5,4±1,65
Over 6.501 TL	173	15,36±3,22	10,84±2,77	5,03±1,71	7,36±1,32	4,65±1,49	7,6±1,42	5,83±1,92	6,09±1,85	5,5±1,68
[f]p		**0,001***	**0,007***	**0,055**	**0,046***	**0,449**	**0,064**	**0,218**	**0,001***	**0,869**

The ones determined according to Table 3.18, which includes the distribution of the answers given by the participants to the CSI scale according to the demographic characteristics of the sample, are as follows :

- According to gender of participants, while no statistically significant difference was found in terms of the CSI scale's sub-dimension scores of *Perfectionism, High-Quality Consciousness, Fashion Consciousness, Impulsive Shopping, Careless, Confused by Information, Habitual, Brand-Loyal Orientation* and *Indecision* ($p>0.05$), a statistically significant difference was found in terms of sub-dimension scores of ***Brand Consciousness, "Price Equals Quality", Price Consciousness*** and ***Shopping Aversion*** (respectively, $p=0.002$, $p= 0.026$, $p<0.001$). While ***Brand Consciousness, "Price Equals Quality"*** and ***Shopping Aversion*** sub-dimension scores were lower in female than in male, Price Consciousness sub-dimension scores were found to be higher. In other words, while male are more *brand-conscious* and tend to *avoid shopping* during their consuming behavior, female tend to be more price-conscious than male.
- According to age of participants, while no statistically significant difference was found in terms of the CSI scale's sub-dimension scores of *Perfectionism, High-Quality Consciousness, Brand Consciousness, "Price Equals Quality", Fashion Consciousness, Price Consciousness, Impulsive Shopping, Careless, Confused by Information* and *Indecision (p>0,05), a statistically significant difference was found in terms of sub-dimension scores of* ***Habitual, Brand-Loyal Orientation*** ($p=0.025$) and ***Shopping Aversion*** ($p=0,018$). As a result of the evaluations carried out for the ***Habitual, Brand-Loyal Orientation*** sub-dimension, it was determined that the scores of the participants aged 61 and above were lower than the scores of those aged 18-25 ($p=0.041$), the scores of the participants aged 40-46 were lower than the scores of the participants aged 18-25 and 26-32 (respectively, $p=0.003$, $p=0.012$) and no significant difference was found between other age groups ($p>0.05$). In other words, it has been determined

that those aged 18-25 exhibit more habit-oriented consumption behavior compared to the participants aged 61 and over. In addition, those aged 18-25 and 26-32 tend to have more habit-oriented consumption behavior compared to those aged 40-46. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that the scores of the participants aged 18-25 were lower than the scores of those aged 26-32, 33-39, 40-46 and 54-60 years old (respectively p=0.020, p=0.002, p=0.002, p=0.032), no significant difference was found between other age groups (p>0.05). In other words, participants aged 18-25 were found to be less tend to shopping aversion compared to those aged 26-32, 33-39, 40-46 and 54-60.

- According to educational status of participants, while no statistically significant difference was found in terms of the CSI scale's sub-dimension scores of *Fashion Consciousness, Impulsive Shopping, Careless, Habitual, Brand-Loyal Orien*tation and *Indecision* (p>0.05), a statistically significant difference was found in terms of sub-dimension scores of ***Perfectionism, High-Quality Consciousness*** (p=0.002), ***Brand Consciousness, "Price Equals Quality"*** (p=0.001), ***Price Consciousness*** (p=0.039), ***Confused by Information*** (p<0.001) and ***Shopping Aversion*** (p=0.027). As a result of the evaluations carried out for the ***Perfectionism, High-Quality Consciousness*** sub-dimension, it was determined that the scores of the participants with high school or less education were lower than the scores of those with Master's degree (p=0.035), the scores of the participants with Undergraduate students were lower than the scores of the participants with Bachelor's degree and Master's degree (respectively, p=0.002, p=0.001) and no significant difference was found between other education status (p>0.05). In other words, it has been determined that those with Master's degree exhibit more high-quality conscious consumption behavior compared to the participants with high school or less education. In addition, participants with Bachelor's degree and Master's degree tend to have more high-quality conscious consumption behavior compared to those

Undergraduate students. As a result of the evaluations carried out for the ***Brand Consciousness, "Price Equals Quality"*** sub-dimension, it was determined that the scores of participants with Undergraduate students were lower than the scores of those with High school graduates and less level, Bachelor's degree and Master's degree (respectively, p= 0.008, p<0.001, p=0.012), and no significant difference was found between other education status (p>0.05). In other words, it has been determined that those with Undergraduate students exhibit less brand conscious consumption behavior compared to the participants with High school graduates and less level, Bachelor's degree and Master's degree. As a result of the evaluations carried out for the ***Price Consciousness*** sub-dimension, it was determined that the scores of participants with Undergraduate students were higher than the scores of those with High school graduates and less level and Master's degree (respectively, p= 0.006, p=0,038), and no significant difference was found between other education status (p>0.05). In other words, it has been determined that those with Undergraduate students exhibit more price concious consumption behavior compared to the participants with High school graduates and less level and Master's degree. As a result of the evaluations carried out for the ***Confused by Information*** sub-dimension, it was determined that the scores of participants with Bachelor's degree were higher than the scores of those with High school graduates and less level and Undergraduate students (respectively, p=0.001, p=0.032), the scores of participants with Master's degree were higher than the scores of those with High school graduates and less level Undergraduate students and Bachelor's degree (respectively, p<0,001, p<0,001, p=0,006) and no significant difference was found between other education status (p>0.05). In other words, it has been determined that those with Bachelor's degree exhibit more confused consumption behavior compared to the participants with High school graduates and less level and Undergraduate students. In addition, participants with Master's degree tend to have more confused consumption behavior compared to those with High

school graduates and less level Undergraduate students and Bachelor's degree. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that the scores of participants with Undergraduate students were lower than the scores of those with Bachelor's degree and Master's degree (respectively, p=0.004, p=0.015), and no significant difference was found between other education status (p>0.05). In other words, it has been determined that those with Undergraduate students exhibit less shopping aversion behavior compared to the participants with Bachelor's degree and Master's degree.

- According to studying/graduated department of participants, while no statistically significant difference was found in terms of the CSI scale's sub-dimension scores of *Perfectionism, High-Quality Consciousness, Brand Consciousness, "Price Equals Quality", Fashion Consciousness, Price Consciousness, Impulsive Shopping, Careless, Confused by Information, Habitual, Brand-Loyal Orientation* and *Indecision* (p>0.05), a statistically significant difference was found in terms of sub-dimension scores of ***Shopping Aversion*** (p=0,016). As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that the scores of participants who studying/graduated department from economics or economics-related departments were higher than others. In other words, it has been determined that those studying/ graduated department from economics or economics-related departments exhibit more shopping aversion behavior compared to other participants.
- According to occupation of participants, while no statistically significant difference was found in terms of the CSI scale's sub-dimension scores of *Fashion Consciousness, Price Consciousness, Impulsive Shopping, Careless, Habitual, Brand-Loyal Orientation* and *Indecision* (p>0.05), a statistically significant difference was found in terms of sub-dimension scores ***of Perfectionism, High-Quality Consciousness (p=0,038), Brand Consciousness, "Price Equals Quality"*** (p=0,003), ***Confused by Information*** (p=0,005) and ***Shopping Aversion*** (p=0,011). As a result of

the evaluations carried out for the ***Perfectionism, High-Quality Consciousness*** sub-dimension, it was determined that the scores of unemployed participants were lower than scores of academician participants ($p=0.038$) and the scores of student participants were lower than scores of participants who are civil servant, self-employed, private sector employee, academician and other professional (respectively, $p=0.032$, $p=0.012$, $p<0.001$, $p=0.009$, $p=0.006$) and no significant difference was found between other occupation group ($p>0.05$). In other words , it has been determined that unemployed participants tend to have less high-quality conscious consumption behavior compared to academician. In addition, student participant exhibit less high-quality conscious behavior compared to civil servant, self-employed, private sector employee, academician and other professional participants. As a result of the evaluations carried out for the ***Brand Consciousness, "Price Equals Quality"*** sub-dimension, it was determined that the scores of housewife participants were lower than scores of participants who are unemployed, worker, civil servant, self-employed, tradesmen and private sector employee (respectively, $p=0.034$, $p=0.010$, $p=0.003$, $p=0.003$, $p=0.032$, $p=0.009$), the scores of retired participants were lower than scores of worker, civil servant, self-employed and private sector employee (respectively, $p=0.018$, $p=0.004$, $p=0.005$, $p=0.013$), the scores of student participants were lower than scores of worker, civil servant, self-employed and private sector employee (respectively, $p=0.048$, $p=0.0013$, $p=0.009$, $p=0.009$), the scores of other professional participants were lower than scores of participants who are civil servant and self-employed (respectively, $p=0.037$, $p=0.049$) and no significant difference was found between other occupation group ($p>0.05$). In other words, it has been determined that housewife participants tend to have less brand conscious consumption behavior compared to participants who are unemployed, worker, civil servant, self-employed, tradesmen and private sector employee. In addition, retired participants exhibit less brand conscious

behavior compared to worker, civil servant, self-employed and private sector employee participants. Student participants tend to have less brand conscious consumption behavior compared to participants who are worker, civil servant, self-employed and private sector employee. As a last determination, other professional participants exhibit less brand conscious behavior compared to participants who are civil servant and self-employed. As a result of the evaluations carried out for the ***Confused by Information*** sub-dimension, it was determined that the scores of unemployed participants were higher than scores of participants who are civil servant, student and retired (respectively, p=0,036, p=0,034, p=0,004), the scores of academician participants were higher than scores of housewife, worker, civil servant, self-employed, student, retired and private sector employee (respectively, p=0,038, p=0,027, p=0,005, p=0,041, p=0,004, p<0,001, p=0,014), the scores of retired participants were lower than scores of private sector employee (p=0,018), the scores of other professional participants were higher than scores of participants who are civil servant student, retired and private sector employee (respectively p=0,008, p=0,004, p=0,001, p=0,022) and no significant difference was found between other occupation group (p>0.05). In other words, it has been determined that unemployed participants tend to have more confused consumption behavior compared to participants who are civil servant, student and retired. In addition, academician participants exhibit more confused consumption behavior compared to housewife, worker, civil servant, self-employed, student, retired and private sector employee participants. Retired participants tend to have less confused consumption behavior compared to participants who are private sector employee. As a last determination, other professional participants exhibit more confused consumption behavior compared to participants who are civil servant, student, retired and private sector employee. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that the scores of housewife participants were lower than scores of

participants who are worker, civil servant, retired, tradesmen, private sector employee, academician and other professional (respectively, p=0,002, p=0,007, p=0,004, p=0,015, p=0,002, p=0,029, p=0,010), the scores of unemployed participants were lower than scores of worker, retired and private sector employee (respectively, p=0,034, p=0,046, p=0,049), the scores of student participants were lower than scores of participants who are worker and private sector employee (respectively, p=0,031, p=0,008) and no significant difference was found between other occupation group (p>0.05). In other words, it has been determined that housewife participants tend to have less shopping aversion behavior compared to participants who are worker, civil servant, retired, tradesmen, private sector employee, academician and other professional. In addition, unemployed participants exhibit less shopping aversion behavior compared to worker, retired and private sector employee participants. As a last determination, student participants exhibit less shopping aversion behavior compared to participants who are worker and private sector employee.

- According to monthly income of participants, while no statistically significant difference was found in terms of the CSI scale's sub-dimension scores of *Fashion Consciousness, Impulsive Shopping, Careless, Confused by Information, Habitual, Brand-Loyal Orientation* and *Indecision* (p>0.05), a statistically significant difference was found in terms of sub-dimension scores of ***Perfectionism, High-Quality Consciousness*** (p=0,001), ***Brand Consciousness, "Price Equals Quality"*** (p=0.007), ***Price Consciousness*** (p=0.046) and ***Shopping Aversion*** (p=0.001). As a result of the evaluations carried out for the ***Perfectionism, High-Quality Consciousness*** sub-dimension, it was determined that the scores of participants who have 2.825 TL or less monthly income were lower than scores of participants who have 4501-6500 TL and over 6.501 TL monthly income (respectively, p=0.001, p<0.001) and no significant difference was found between other income group (p>0.05). In other words, it has been determined that participants who have 2.825 TL or less monthly income

tend to have less high-quality conscious consumption behavior compared to participants who have 4.501-6.500 TL and over 6.501 TL monthly income. As a result of the evaluations carried out for the ***Brand Consciousness, "Price Equals Quality"*** sub-dimension, it was determined that the scores of participants who have 2.825 TL or less monthly income were lower than scores of participants who have 4.501-6.500 TL and over 6.501 TL monthly income (respectively, p=0.041, p=0.004), the scores of participants who have 2.826-4.500 TL monthly income were lower than scores of participants who have over 6.500 TL monthly income (p=0.013) and no significant difference was found between other income group (p>0.05). In other words, it has been determined that participants who have 2.826-4.500 TL monthly income tend to have less brand conscious consumption behavior compared to participants who have over 6.501 TL monthly income. As a result of the evaluations carried out for the ***Price Consciousness*** sub-dimension, it was determined that the scores of participants who have 2.825 TL or less monthly income were higher than scores of participants who have over 6.501 TL monthly income (p=0.010) and no significant difference was found between other income group (p>0.05). In other words, it has been determined that participants who have 2.825 TL or less monthly income tend to have more price conscious consumption behavior compared to participants who have over 6.501 TL monthly income. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that the scores of participants who have 2.825 TL or less montly income were lower than scores of participants who have 2.826-4.500 TL, 4.501-6.500 TL and over 6.501 TL monthly income (respectively, p=0,006, p=0,001, p<0,001) and no significant difference was found between other income group (p>0.05). In other words, it has been determined that participants who have 2.825 TL or less monthly income tend to have less shopping aversion behavior compared to participants who have 2.826-4.500 TL, 4.501-6.500 TL and over 6.501 TL monthly income.

3.3.4. Explanation of Heuristics and Cognitive Biases with Consumer Decision Making Styles

In order to explain Heuristics and Cognitive Biases in the first part of the study with the concept of Consumer Decision-Making Styles in the second part of the study, the answers obtained about Heuristics and Cognitive Biases in the second part of the questionnaire and the answers obtained within the scope of the CSI scale in the third part of questionnaire were evaluated together. In order to make the said evaluation, one-way analysis of variance was performed between the answers given in both parts.

3.3.4.1. Framing Effect and Consumer Decision Making Styles

As a first of the heuristics and cognitive biases, **framing effect** measured with **Question 1**, whose is the options are framed with loss and **Question 6** framed with gain options. This time, T-test in independent groups was carried out separately for gain and loss framing in order to evaluate the answers given to the aforementioned questions in the context of consumer decision-making styles.

TABLE 3.19: T-test in Independent Groups Results between the Framing Effect (Loss-Framed) and CDMS

	Framing Effect (Loss options)		**[d]p**
	Risk averse (A)	**Risk seeking (B)**	
	Avg±sd	**Avg±sd**	
Perfectionism, High-Quality Consciousness	15,14±3,06	14,72±3,42	**0,219**
Brand Consciousness, "Price Equals Quality"	10,46±3,03	10,29±3	**0,587**
Fashion Consciousness	4,75±1,65	4,85±1,9	**0,590**
Price Consciousness	7,64±1,41	7,48±1,59	**0,277**
Impulsive Shopping, Careless	4,4±1,47	4,7±1,75	**0,084**
Confused by Information	7,51±1,53	7,09±1,76	**0,012***

Habitual, Brand-Loyal Orientation	6,03±1,89	6,06±2,13	**0,876**
Shopping Aversion	5,93±1,95	5,77±2,11	**0,446**
Indecision	5,62±1,75	5,31±1,78	**0,095**

The results of the analysis of the answers given to the question in which the options are framed with loss and the consumer decision-making styles are given in Table 3.19. As can be seen from the table, there was a statistically significant difference only in terms of the ***Confused by Information*** sub-dimension of CSI scale according to the answers given by the participants to the question framed with loss options. (p=0.012). It was determined that the scores of the risk-seeking participants were lower than the scores of risk-averse ones. In other words, it was observed that risk-averse participants tended to have more confused consumer behavior.

TABLE 3.20: T-test in Independent Groups Results between the Framing Effect (Gain-Framed) and CDMS

	Framing Effect (Gain options)		**[d]p**
	Risk averse (X)	**Risk- seeking (Y)**	
	Avg±sd	**Avg±sd**	
Perfectionism, High-Quality Consciousness	14,98±3,12	14,99±3,41	**0,971**
Brand Consciousness, "Price Equals Quality"	10,33±2,97	10,56±3,12	**0,485**
Fashion Consciousness	4,65±1,67	5,13±1,87	**0,010***
Price Consciousness	7,62±1,45	7,48±1,56	**0,392**
Impulsive Shopping, Careless	4,4±1,5	4,78±1,75	**0,029***
Confused by Information	7,42±1,64	7,2±1,61	**0,216**

Habitual, Brand-Loyal Orientation	6,05±1,96	6,01±2,03	**0,836**
Shopping Aversion	6±2,03	5,58±1,94	**0,059**
Indecision	5,56±1,78	5,36±1,72	**0,291**

In Table 3.20, the results of the analysis of the answers given to the question in which the options are framed with gain and the consumer decision-making styles are presented. As can be seen from the table, there was a statistically significant difference in terms of the ***Fashion Consciousness*** and ***Impulsive Shopping, Careless*** sub-dimension of CSI scale according to the answers given by the participants to the question framed with gain options (respectively, p=0,010, p=0,029). As a result of the evaluations carried out for the ***Fashion Consciousness*** sub-dimension, it was determined that the scores of the risk-seeking participants were higher than the scores of risk-averse ones. In other words, it was observed that risk-seeking participants tended to have more fashion conscious consumer behavior.

As a result of the evaluations carried out for the ***Impulsive Shopping, Careless*** sub-dimension, it was determined the scores of the risk-seeking participants were higher than the scores of risk-averse ones. In other words, it was observed that risk-seeking participants exhibit more impulsive shopping and careless behavior compared to risk-averse ones. This result shows a result that is compatible with Dursun's definition of Impulsive Shopping, Careless factor. According to Dursun, consumers who show a high average in this decision-making style tend to be careless in their shopping, and make decisions quickly and without thinking. The character traits included in the factor definition and the state of being risk-seeking are compatible with each other.

3.3.4.2. Sunk Cost Fallacy and Consumer Decision Making Styles

Sunk cost fallacy measured with **Question 2** in the second part of the questionnaire. It is acknowledged that individuals who chose the new treatment over the old one, which is anticipated to be more effective at the same price while acting

rationally, or those who responded"no," did not fall victim to the sunk cost fallacy. On the other hand, it is acknowledged that individuals who stick with the old treatment simply because of the expense they have already incurred, those who respond "yes," fall victim to the sunk cost fallacy. This time, T-test in independent groups was carried out in order to evaluate the answers given to the aforementioned question in the context of consumer decision-making styles.

TABLE 3.21: T-test in Independent Groups Results between the Sunk-Cost Fallacy and CDMS

	Sunk cost fallacy		**[d]p**
	Yes (Old cure)	**No (New cure)**	
	Avg±sd	**Avg±sd**	
Perfectionism, High-Quality Consciousness	14,72±3,3	15,08±3,17	**0,320**
Brand Consciousness, "Price Equals Quality"	10,49±2,99	10,36±3,03	**0,710**
Fashion Consciousness	4,79±1,78	4,79±1,74	**0,995**
Price Consciousness	7,43±1,49	7,63±1,48	**0,236**
Impulsive Shopping, Careless	4,66±1,63	4,46±1,57	**0,259**
Confused by Information	7,48±1,58	7,31±1,65	**0,354**
Habitual, Brand-Loyal Orientation	6,05±2	6,04±1,98	**0,964**
Shopping Aversion	5,88±2,05	5,87±2	**0,981**
Indecision	5,56±1,69	5,48±1,8	**0,708**

The results of the analysis of the answers given to the question and the consumer decision-making styles are given in Table 3.21. As can be seen from the table, no statistically significant difference was found in terms of sub-dimensions of CSI scale according to the answers given by the participants to the "sunk cost fallacy" question ($p>0,05$).

3.3.4.3 Anchoring Effect and Consumer Decision Making Styles

Anchoring effect measured with **Question 3** and **Question 7** in the second part of the, questionnaire. While low anchor used in **Question 3,** high anchor used in **Question 7.** And as a result of anchoring effect, offers given in response to the question presented with a high anchor (**Question 7**) were expected to be higher than those with a low anchor (**Question 3**). This time, Pearson correlation analysis was carried out in order to evaluate the answers given to the aforementioned questions in the context of consumer decision-making styles.

TABLE 3.22: T-test in Independent Groups and Correlation Results between the Answers of Anchoring Effect Questions and CDMS

	Anchoring Effect (Difference Q7-Q3)	
	r[17]	**p**
Perfectionism, High-Quality Consciousness	0,105	**0,035***
Brand Consciousness, "Price Equals Quality"	0,033	**0,514**
Fashion Consciousness	0,073	**0,142**
Price Consciousness	-0,075	**0,133**
Impulsive Shopping, Careless	0,034	**0,497**
Confused by Information	0,074	**0,138**
Habitual, Brand-Loyal Orientation	0,009	**0,862**
Shopping Aversion	-0,037	**0,454**
Indecision	0,036	**0,470**

[17] Pearson correlation coefficient

The results of the analysis of the answers given to the questions about anchoring effect and the consumer decision-making styles are given in Table 3.22. As can be seen from the table, there was a statistically significant difference only in terms of the ***Perfectionism, High-Quality Consciousness*** sub-dimension of CSI scale according to the answers given by the participants to the questions about anchoring effect. It was determined that there was a statistically significant positive correlation between the anchoring effect observed in the participants and scores of the ***Perfectionism, High-Quality Consciousness*** sub-dimension of CSI scale (r=0,105, p=0,035). In other words, the greater the anchoring effect observed in a participant, the greater the tendency of that participant to engage in perfectionist consumer behavior.

3.3.4.4. Payment Decoupling and Consumer Decision Making Styles

Payment decoupling measured with **Question 4** and **Question 8** in the second part of the questionnaire. While credit card is offered as a payment method in **Question 4,** cash is offered as a payment method in **Question 8.** And as a result of payment decoupling, offers given in response to the question presented with credit card as a payment method (**Question 4**) were expected to be higher than those with cash as a payment method (**Question 8**). This time, Pearson correlation analysis was carried out in order to evaluate the answers given to the aforementioned questions in the context of consumer decision-making styles.

TABLE 3.23: T-test in Independent Groups and Correlation Results between the Answers of Payment Decoupling Questions and CDMS

	Payment decoupling (Difference Q4-Q8)	
	r	**p**
Perfectionism, High-Quality Consciousness	-0,035	**0,481**
Brand Consciousness, "Price Equals Quality"	-0,051	**0,303**
Fashion Consciousness	-0,087	**0,082**
Price Consciousness	0,000	**0,994**

Impulsive Shopping, Careless	-0,045	**0,363**
Confused by Information	-0,040	**0,419**
Habitual, Brand-Loyal Orientation	0,016	**0,745**
Shopping Aversion	-0,014	**0,782**
Indecision	0,035	**0,482**

The results of the analysis of the answers given to the questions about payment decoupling and the consumer decision-making styles are given in Table 3.23. As can be seen from the table, no statistically significant difference in terms of the sub-dimensions of CSI scale according to the answers given by the participants to the questions about payment decoupling ($p>0.05$).

3.3.4.5. Endowment Effect and Consumer Decision Making Styles

The last heuristic and biases tested from behavioral economics approaches is the endowment effect. The endowment effect was measured by **Question 5** and **Question 9** in the second part of the questionnaire. While Question 5 asked the price agreed to sell an object owned, Question 9 asked the price willing to pay for owning the same object. As a result of the endowment effect, the prices in the answers to Question 5 were expected to be higher than the prices in the answers to Question 9. Because according to the endowment effect, people tend to attribute more value to the objects they own. This time, Pearson correlation analysis was carried out in order to evaluate the answers given to the aforementioned questions in the context of consumer decision-making styles.

TABLE 3.24: T-test in Independent Groups and Correlation Results between the Answers of Endowment Effect Questions and CDMS

	Endowment effect (Difference Q5-Q9)	
	r	**p**
Perfectionism, High-Quality Consciousness	0,019	**0,711**
Brand Consciousness, "Price Equals Quality"	-0,006	**0,910**
Fashion Consciousness	0,015	**0,764**
Price Consciousness	-0,110	**0,027***
Impulsive Shopping, Careless	-0,077	**0,123**
Confused by Information	0,012	**0,811**
Habitual, Brand-Loyal Orientation	-0,035	**0,480**
Shopping Aversion	-0,051	**0,307**
Indecision	-0,125	**0,012***

The results of the analysis of the answers given to the questions about endowment effect and the consumer decision-making styles are given in Table 3.24. As can be seen from the table, there was a statistically significant difference only in terms of the ***Price Consciousness*** and ***Indecision*** sub-dimension of CSI scale according to the answers given by the participants to the questions about endowment effect. As a result of the evaluations carried out for the ***Price Consciousness*** sub-dimension, it was determined that there was a statistically significant negative correlation between the endowment effect observed in the participants and scores of the ***Price Consciousness*** sub-dimension of CSI scale (r=-0,110, p=0,027). In other words, the greater the endowment effect observed in a participant, less the tendency of that participant to engage in price conscious consumer behavior. This result shows a result that is not compatible with Dursun's definition of Price Consciousness factor. According to Dursun, consumers who show a high average in this decision-making style tend to pay attention to low product prices and the amount of money to be spent

in purchasing decisions. Similarly when it comes to the endowment effect it is argued that in the case of the same product, the price that the consumer is willing to pay for owning that product is lower than the price to be determined to sell it. In other words, the selling price of the product in question will be greater than the purchase price. In summary, contrary to the results of the analysis obtained in consumers where the effect of ownership is observed, it is expected that price conscious consumer behavior will be observed.

As a result of the evaluations carried out for the ***Indecision*** sub-dimension, it was determined that there was a statistically significant negative correlation between the endowment effect observed in the participants and scores of the ***Indecision*** sub-dimension of CSI scale (r = -0,125, p= 0,012). In other words, the greater the endowment effect observed in a participant, less the tendency of that participant to engage in indecision consumer behavior.

CONCLUSION

In contrast to neoclassical economics' traditional assumption that people are homo economicus who always seek to maximize their utility and prefer 'true' one among choices, behavioural economics research has shown that people's judgements and decisions are frequently subject to systematic biases and heuristics, and are highly dependent on the context of the decision (Reisch & Zhao, 2017, p. 190).

Thaler (2015;2016) adopted the notion of "Econ" instead of homo economicus, and according to Thaler, "Econ" makes decisions based on theoretical principles in classical economics, whereas "homo sapiens" or "Human" makes rational and at the same time irrational decisions in the real world (Aktan & Yavuzaslan, 2020, p. 102).

Although it is accepted that behavioral economics, which melted eceonomics and psychology in one pot, emerged after the second half of the 20th century, the relationship between the two disciplines dates back much further. The main reason why the relationship between psychology and economics disciplines was revealed relatively late is the fact that economics was accepted as a science and a discipline before the science of psychology.

Behavioral economics, which originated in the 1950s and emerged as a critique of the homoeconomicus concept accepted in traditional economics, has become more known with the Prospect Theory study of Kahneman and Tversky (1979). This study has brought many concepts to the field of behavioral economics. Kahneman and Tversky (1979) examined the decision-making behavior under uncertainty and risk and revealed that the individual tends to risk-averse when it comes to gain, and to risk-seeking when it comes to loss. Contrary to traditional economics, behavioral economics, which argues that individuals cannot always make rational decisions, argues that individuals can make irrational decisions by making a number of cognitive errors while making decisions. These errors, which include concepts such as the endowment effect and the anchoring effect, are handled with the concept of "heuristics and cognitive Biases" in the behavioral economics literature.

In this context, the first purpose of the study is to test main topics accepted in the behavioral economics literature such as the framing effect, anchoring effect, sunk-cost fallacy and payment decoupling (which is discussed within the concept of mental accounting) for Turkish consumers. The second purpose of the study is to determine the decision-making styles of Turkish consumers. To determine consumer decision-making styles the scale developed by Dursun, Alnıaçık and T. Kabadayı (2010) has used. The scale is adapted for Turkish consumers from the Consumer Style Inventory (CSI) which developed by Sproles and Kendall (1986). The final purpose of the study is to evaluate the results obtained within the scope of the two objectives mentioned above together. In other words, it is aimed to evaluate the answers of Turkish consumers to the questions posed within the scope of testing behavioral economics concepts and the decision-making styles of Turkish consumers.

The first of the heuristics and cognitive biases measured in the study is the **framing effect.** The concept in question was asked to the participants twice, as the scenario in which the "toilet paper" product was used. There are two questions in survery and one of them framed with loss, while another one framed with gain. The questions prepared in the survey regarding the framing effect were prepared based on Tversky and Kahneman's (1981) question of the Asian disease problem. According to the answers given to this question, which measures decision-making behavior under uncertainty and risk, consumers are risk-averse when it comes to both gain and loss. It is a parallel result with the literature (Tversky and Kahneman, 1981) that consumers are risk-averse when it comes to gain, that is, they have a risk-averse attitude. However, in case of loss, contrary to the literature, it has been determined that consumers tend to have risk-averse behavior too. On the other hand, the percentage of risk-aversion in case of gain (%70,2) is higher than in case of loss (%62,5). In addition, Chi-Square test and Fisher-Freeman-Halton exact test was used to examine whether there was a significant difference between the answers given to the questions testing the framing effect and the demographic structure of the sample. As a result of this analysis, there was no significant difference in the risk-taking behaviors of consumers in terms of demographic structure of the sample in neither the loss nor the gain scenario. In other words, when it comes to uncertainty and risk, it has been found that

the risk-taking behavior of consumers does not differ according to demographic variables.

Another concept explored within the scope of behavioral economics approaches in the study is **sunk cost fallacy.** In order to test the concept in question the participants were asked if the same cost would be incurred, to choose between the old hair care cure which was started beforehand but could not be effective and the new hair care cure which was thought to be more efficient. The vast majority of participants (73.7%) preferred the new hair care cure by leaving the old hair care cure that they did not get any efficiency from. In other words, they did not fall into the sunk cost fallacy. In addition, chi-square test and Fisher-Freeman-Halton exact test was conducted to see whether the answers given to the sunk cost fallacy measured question differ according to demographic variables. As a result of the analysis no statistically significant difference was found in terms of the answers given by the participants to the sunk cost fallacy question for any demographic feature. In summary, most of the participants did not make the sunk cost fallacy but it was found that the behavior of not fall into the fallacy did not differ according to the demographic characteristics of the sample.

Participants were asked two questions to explore the concept of **anchoring effect.** Behavioral Economics stated that in most cases where individuals make predictions using anchor values, there is a difference in responses according to anchor value (Tversky and Kahneman, 1974; Wansink, Kent and Hoch, 1998; Ariely, Loewenstein and Prelec's, 2003). The expression "below 90 TL" is used as a low anchor and the expression "90 TL" as a high anchor is given as a reference in the questions. In order to examine the anchoring effect, the differences in the answers given by the participants to questions were tested and a statistically significant difference was found. It was determined that the averages of the participants' offers were different according to the anchor value, and their answers to question with a high anchor (63.68±29.86) were greater than their answers to question with a low anchor (58.78±27.78). Thus, the anchor used as the adjustment mechanism has proven to be effective. T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was performed for each variable in order to analyze the differences of these results according to the demographic characteristics of the participants. A statistically

significant difference was found in terms of the anchoring effect according to the gender of the participants and the departments they studying or graduated from. When the anchoring effect was examined according to the gender of the participants, it was seen that the anchoring effect observed in male was lower than that of female, in other words, male acted relatively more rationally. When the anchoring effect is examined in terms of the studying/graduated department, it was seen that the anchoring effect was lower in the participants who graduated from or studying economics and related departments, in other words, the participants who graduated from or studying economics and related departments acted more rationally.

Another behavioral economics concept explored with two questions is the **payment decoupling.** Kahneman (2018, p. 408) stated that decision units keep cash and credit card transactions in separate mental accounts. This statement has been empirically confirmed by different studies (Soman, 1999; Prelec and Simester, 2001) and it has been determined that consumers tend to spend more when the payment method is credit card. The same expenditure scenario but different payment method (cash and credit card) was used in the two questions in order to question whether the willingness of the respondents to pay changes according to the payment method. When the answers given to the aforementioned two questions are analyzed no statistically significant difference was found. However, it was determined that the average of the answers given by the participants to question which the credit card payment method (728.02±1356.2) was presented was higher than the average of the answers given to the question, in which the cash payment method was presented (689.17±1185.79). In other words, the participants tend to pay higher prices for the same product when the credit card payment method is presented. T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was conducted to see whether the answers given to the payment decoupling measured question differ according to demographic variables and no statistically significant difference was found in terms of the answers given by the participants to the payment decoupling question for any demographic feature. In addition that, it has been determined that female are willing to pay a higher amount for the product offered in both payment methods compared to male, and the

offers of the participants for both payment methods increase in direct proportion to their education level.

In the study, the last concept explored within the scope of behavioral economics approaches is the **endowment effect**. According to the endowment effect, when a person owns a good, he or she tends to value the good more than the person who does not own it. As can be seen in the study of Thaler (1980), the price that people are willing to sell a product of their own, the selling price, is higher than the price they are willing to pay, buying price, to have the same product. Based on Thaler's study (1980), two questions were prepared. In one question the person owns the object, while in another question the price that one is willing to pay to have the same object was asked. There was no statistically significant difference between the answers given to questions to examine the endowment effect. The price willing to sell the product owned is higher than the price willing to buy the same product, albeit by a small difference (approximately 1 TL). T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was conducted to see if the payment offers have a significant difference according to demographic characteristics. As a result of the analysis, it was determined that there was a statistically significant difference in terms of endowment effect according to the monthly income levels of the participants. Although the endowment effect observed in those with an income of 2.825 TL or less was higher/larger than the endowment effect observed in those with an income of over 6.501 TL.

The second purpose of the study is to determine the decision-making styles of Turkish consumers. To determine consumer decision-making styles the scale developed by Dursun, Alnıaçık and T. Kabadayı (2010) has used. The scale is adapted for Turkish consumers from the Consumer Style Inventory (CSI) which developed by Sproles and Kendall (1986). The scale consisting of 40 questions and developed by Sproles & Kendall (1986) to measure the eight basic decision-making characteristics of consumers was tested on a sample of Turkish consumers by İnci DURSUN, Ümit ALNIAÇIK and Ebru TÜMER KABADAYI, and a nine-factor measurement model consisting of 22 questions was revealed out. This scale measures nine consumer decision-making styles: 1) Perfectionism, High-Quality Consciousness, 2) Brand

Consciousness, “Price Equals Quality”, 3) Fashion Consciousness, 4) Price Consciousness, 5) Impulsive Shopping, Careless, 6)Habitual, Brand-Loyal Orientation, 7) Confused by Information, 8) Shopping Aversion, 9) Indecision. The Cronbach’s alpha coefficient was used to determine the internal consistency levels for the reliability assessment of the scale, and internal consistency was found for 7 factors. In the “Price Consciousness” and “Impulsive Shopping, Careless” factors, the calculated internal consistency values were calculated as below the critical level of 0.6. However, since these factors were not excluded from the CSI measurement model (Dursun, Alnıaçık and T. Kabadayı, 2010), with a statement that as they were found to be problematic in almost all of the research on CSI including the original study by Sproles & Kendall (1986), these factors were not excluded from this study either. T-test in independent groups, Kruskal-Wallis test and one-way analysis of variance was conducted to see the distribution of the answers given by the participants to the CSI scale according to the demographic characteristics of the sample. According to gender of participants a statistically significant difference was found in terms of sub-dimension scores of ***Brand Consciousness, “Price Equals Quality”, Price Consciousness*** and ***Shopping Aversion.*** As a result of this analysis, while male are more brand-conscious and tend to avoid shopping during their consuming behavior, female tend to be more price-conscious than male. According to age of participants, a statistically significant difference was found in terms of sub-dimension scores of ***Habitual, Brand-Loyal Orientation*** and ***Shopping Aversion.*** As a result of the evaluations carried out for the ***Habitual, Brand-Loyal Orientation*** sub-dimension, it has been determined that those aged 18-25 exhibit more habit-oriented consumption behavior compared to the participants aged 61 and over. In addition, those aged 18-25 and 26-32 tend to have more habit-oriented consumption behavior compared to those aged 40-46. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that participants aged 18-25 were found to be less tend to shopping aversion compared to those aged 26-32, 33-39, 40-46 and 54-60.

According to educational status of participants, a statistically significant difference was found in terms of sub-dimension scores of ***Perfectionism, High-Quality Consciousness, Brand Consciousness, “Price Equals Quality”, Price***

Consciousness, Confused by Information and ***Shopping Aversion.*** As a result of the evaluations carried out for the ***Perfectionism, High-Quality Consciousness*** sub-dimension, it was determined that those with Master's degree exhibit more high-quality conscious consumption behavior compared to the participants with high school or less education. In addition, participants with Bachelor's degree and Master's degree tend to have more high-quality conscious consumption behavior compared to those Undergraduate students. As a result of the evaluations carried out for the ***Brand Consciousness, "Price Equals Quality"*** sub-dimension, it was determined that those with Undergraduate students exhibit less brand conscious consumption behavior compared to the participants with High school graduates and less level, Bachelor's degree and Master's degree. As a result of the evaluations carried out for the ***Price Consciousness*** sub-dimension, it was determined that those with Undergraduate students exhibit more price conscious consumption behavior compared to the participants with High school graduates and less level and Master's degree. As a result of the evaluations carried out for the ***Confused by Information*** sub-dimension, it was determined that those with Bachelor's degree exhibit more confused consumption behavior compared to the participants with High school graduates and less level and Undergraduate students. In addition, participants with Master's degree tend to have more confused consumption behavior compared to those with High school graduates and less level, Undergraduate students and Bachelor's degree. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that those with Undergraduate students exhibit less shopping aversion behavior compared to the participants with Bachelor's degree and Master's degree. According to studying/graduated department of participants, a statistically significant difference was found in terms of sub-dimension scores of ***Shopping Aversion.*** As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that those studying/graduated department from economics or economics-related departments exhibit more shopping aversion behavior compared to other participants. According to occupation of participants, a statistically significant difference was found in terms of sub-dimension scores of ***Perfectionism, High-Quality Consciousness, Brand Consciousness, "Price Equals Quality", Confused by Information*** and

Shopping Aversion. As a result of the evaluations carried out for the ***Perfectionism High-Quality Consciousness*** sub-dimension, it was determined that unemployed participants tend to have less high-quality conscious consumption behavior compared to academician. In addition, student participant exhibit less high-quality conscious behavior compared to civil servant, self-employed, private sector employee, academician and other professional participants. As a result of the evaluations carried out for the ***Brand Consciousness, "Price Equals Quality"*** sub-dimension, it was determined that housewife participants tend to have less brand conscious consumption behavior compared to participants who are unemployed, worker, civil servant, self-employed, tradesmen and private sector employee. In addition, retired participants exhibit less brand conscious behavior compared to worker civil servant, self-employed and private sector employee participants. Student participants tend to have less brand conscious consumption behavior compared to participants who are worker, civil servant, self-employed and private sector employee. As a last determination, other professional participants exhibit less brand conscious behavior compared to participants who are civil servant and self-employed. As a result of the evaluations carried out for the ***Confused by Information*** sub-dimension, it was determined that unemployed participants tend to have more confused consumption behavior compared to participants who are civil servant, student and retired. In addition, academician participants exhibit more confused consumption behavior compared to housewife, worker, civil servant, self-employed, student, retired and private sector employee participants. Retired participants tend to have less confused consumption behavior compared to participants who are private sector employee. As a last determination, other professional participants exhibit more confused consumption behavior compared to participants who are civil servant, student, retired and private sector employee. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that housewife participants tend to have less shopping aversion behavior compared to participants who are worker, civil servant, retired, tradesmen, private sector employee, academician and other professional. In addition, unemployed participants exhibit less shopping aversion behavior compared to worker, retired and private sector employee participants. As a last determination, student participants

exhibit less shopping aversion behavior compared to participants who are worker and private sector employee. According to monthly income of participants, a statistically significant difference was found in terms of sub-dimension scores of ***Perfectionism, High-Quality Consciousness, Brand Consciousness, "Price Equals Quality", Price Consciousness*** and ***Shopping Aversion.*** As a result of the evaluations carried out for the ***Perfectionism, High-Quality Consciousness*** sub-dimension, it was determined that participants who have 2.825 TL or less monthly income tend to have less high-quality conscious consumption behavior compared to participants who have 4.501-6.500 TL and over 6.501 TL monthly income. As a result of the evaluations carried out for the ***Brand Consciousness, "Price Equals Quality"*** sub-dimension, it was determined that participants who have 2.826-4.500 TL monthly income tend to have less brand conscious consumption behavior compared to participants who have over 6.501 TL monthly income. As a result of the evaluations carried out for the ***Price Consciousness*** sub-dimension, it was determined that participants who have 2.825 TL or less monthly income tend to have more price conscious consumption behavior compared to participants who have over 6.501 TL monthly income. As a result of the evaluations carried out for the ***Shopping Aversion*** sub-dimension, it was determined that participants who have 2.825 TL or less monthly income tend to have less shopping aversion behavior compared to participants who have 2.826-4.500 TL, 4.501-6.500 TL and over 6.501 TL monthly income.

The final purpose of the study to evaluate the answers of Turkish consumers to the questions posed within the scope of testing behavioral economics concepts and the decision-making styles of Turkish consumers. In order to make the said evaluation, one-way analysis of variance was performed between the answers given in both parts. The results of the analysis of the answers given to the question in which the options are framed with loss and the consumer decision-making styles there was a statistically significant difference only in terms of the ***Confused by Information*** sub-dimension of CSI scale. It was determined that risk-averse participants tended to have more confuesed consumer behavior. The results of the analysis of the answers given to the question in which the options are framed with gain and the consumer decision-making styles, there was a statistically significant difference in terms of the ***Fashion***

Consciousness and ***Impulsive Shopping, Careless*** sub-dimension of CSI scale. As a result of the evaluations carried out for the ***Fashion Consciousness*** sub-dimension, it was determined that risk-seeking participants tended to have more fashion conscious consumer behavior. As a result of the evaluations carried out for the ***Impulsive Shopping, Careless*** sub-dimension, it was determined that risk-seeking participants exhibit more impulsive shopping and careless behavior compared to risk-averse ones. This result shows a result that is compatible with Dursun's definition of Impulsive Shopping, Careless factor. According to Dursun, consumers who show a high average in this decision-making style tend to be careless in their shopping, and make decision quickly and without thinking. The character traits included in the factor definition and the state of being risk-seeking are compatible with each other. The results of the analysis of the answers given to the sunk cost fallacy question and the consumer decision-making styles no statistically significant difference was found in terms of sub-dimensions of CSI scale. The results of the analysis of the answers given to the questions about anchoring effect and the consumer decision-making styles there was a statistically significant difference only in terms of the ***Perfectionism, High-Quality Consciousness*** sub-dimension of CSI scale. It was determined that there was a statistically significant positive correlation between the anchoring effect observed in the participants and scores of the ***Perfectionism, High-Quality Consciousness*** sub-dimension of CSI scale. In other words, the greater the anchoring effect observed in a participant, the greater the tendency of that participant to engage in perfectionist consumer behavior. The results of the analysis of the answers given to the questions about payment decoupling and the consumer decision-making styles no statistically significant difference in terms of the sub-dimensions of CSI scale. The results of the analysis of the answers given to the questions about endowment effect and the consumer decision-making styles there was a statistically significant difference only in terms of the ***Price Consciousness*** and ***Indecision*** sub-dimension of CSI scale. As a result of the evaluations carried out for the ***Price Consciousness*** sub-dimension, it was determined that there was a statistically significant negative correlation between the endowment effect observed in the participants and scores of the ***Price Consciousness*** sub-dimension of CSI scale. In other words, the greater the endowment effect observed

in a participant, less the tendency of that participant to engage in price conscious consumer behavior. This result shows a result that is not compatible with Dursun's definition of Price Consciousness factor. According to Dursun, consumers who show a high average in this decision-making style tend to pay attention to low product prices and the amount of money to be spent in purchasing decisions. Similarly when it comes to the endowment effect it is argued that in the case of the same product, the price that the consumer is willing to pay for owning that product is lower than the price to be determined to sell it. In other words, the selling price of the product in question will be greater than the purchase price. In summary, contrary to the results of the analysis obtained in consumers where the effect of ownership is observed, it is expected that price conscious consumer behavior will be observed. As a result of the evaluations carried out for the ***Indecision*** sub-dimension, it was determined that there was a statistically significant negative correlation between the endowment effect observed in the participants and scores of the ***Indecision*** sub-dimension of CSI scale. In other words, the greater the endowment effect observed in a participant, less the tendency of that participant to engage in indecision consumer behavior.

As a result, in this study, the basic concepts of behavioral economics were tested for Turkish consumers, consumer decision-making styles were examined and finally these two analyzes were evaluated together.

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APPENDIX

Appendix 1: Questionnaire used in the study

BÖLÜM 1

Cinsiyetiniz*:* □ Kadın □ Erkek

Yaşınız: □ 18-25 □ 26-32 □33-39 □40-46 □47-53 □54-60 □61 ve üzeri

Eğitim durumunuz:

□ Okur Yazar

□ İlköğretim mezunu

□ Ortaöğretim mezunu

□ Lise mezunu

□ Lisans öğrencisi

□ Lisans mezunu

□ Yüksek Lisans ve üzeri

Öğrenim gördüğünüz/mezun olduğunuz bölüm (bu soru ile yalnızca ankette eğitim durumu kısmında lisans öğrencisi, lisans mezunu ya da yüksek lisans ve üzeri seçeneklerini işaretleyenler karşılaşacaktır) : …….

Mesleğiniz:

□ İşsiz □ Ev hanımı □ işçi □ Memur □ Serbest Meslek □ Esnaf □ Öğrenci □ Çiftçi □ Emekli □ Sanayici/Tüccar □Özel sektör çalışanı □ Akademisyen □ Diğer:.....

Aylık Geliriniz:

□2.825 TL ve daha az

□2.826 – 4.500 TL

□4.501 – 6.500 TL

□6.5001 TL ve üzeri

BÖLÜM 2

SORU 1: "Yakın zamanda civardaki marketlerin tuvalet kağıdı temini ile ilgili aksaklığın ortaya çıkacağı söylenmektedir. Tuvalet kağıdı temin sıkıntısının başlayacağı ve biteceği dönem için ihtiyacınızı hesapladığınızda 30 rulo tuvalet kağıdı ihtiyacınız olduğunu belirlediniz. Ortaya çıkan aksaklıkla birlikte yoğun satışlar gerçekleşmesinden ötürü firmalar stok sıkıntısı yaşamaktadır ve bu nedenle hangi markanın tüketiciye ne kadar satış yapabileceği belirsizlik taşımaktadır. Bu durumda aşağıdaki seçeneklerden hangisini tercih edersiniz? (Lütfen yalnızca tek şıkkı işaretleyiniz).

□ A markasını tercih ederseniz 20 rulo kaybınız söz konusu olacaktır.

□ B markasını tercih ederseniz 1/3 olasılıkla hiç rulo kaybınız söz konusu olmayacak, 2/3 olasılıkla hiç tuvalet kağıdı alamayacaksınız."

SORU 2: "Saç oluşumunu destekleyen bakım kürlerinden birine şimdiden 300 TL ödediniz. Kürün içinden kullanmış olduğunuz ürünlerden aldığınız verim öngördüğünüzün gerisinde ve kürün tüm ürünlerini satın almak için 600 TL daha ödemeniz olacak. Bir başka alternatifiniz ise 600 TL ile daha fazla verim almanızın mümkün olacağı yeni bir saç bakım kürü satın almak. Böyle bir durumda hangi kararı verirsiniz ?

□ Eski saç bakım kürünü devam ettiririm.

□ Eski kürü sonlandırarak, yeni ürünlerle yeni küre başlarım."

SORU 3:

"Liste fiyatının 90 TL nin altında olduğunu bildiğiniz standart bir tişört için sizin vereceğiniz ücret kaç TL olacaktır?

……. TL"

SORU 4:

"Sınırlı sayıda üretilen bir ayakkabıyı almak istediğiniz bir durum varsayın. Hiç kimsenin diğerlerinin tekliflerini göremediği ve ödemenin sadece kredi kartıyla yapıldığı bu durumda, bu ürüne sahip olmak için ne kadar fiyat teklif edersiniz?

…….. TL."

SORU 5:

Sahibi olduğunuz standart bir Türk kahvesi fincanını kaç TL ye satarsınız ? …….. TL

SORU 6: "Yakın zamanda civardaki marketlerin tuvalet kağıdı temini ile ilgili aksaklığın ortaya çıkacağı söylenmektedir. Tuvalet kağıdı temin sıkıntısının başlayacağı ve biteceği dönem için ihtiyacınızı hesapladığınızda 30 rulo tuvalet kağıdı ihtiyacınız olduğunu belirlediniz. Ortaya çıkan aksaklıkla birlikte yoğun satışlar gerçekleşmesinden ötürü firmalar stok sıkıntısı yaşamaktadır ve bu nedenle hangi markanın tüketiciye ne kadar satış yapabileceği belirsizlik taşımaktadır. Bu durumda aşağıdaki seçeneklerden hangisini tercih edersiniz? (Lütfen yalnızca tek şıkkı işaretleyiniz).

□ X markasını tercih ederseniz kesin olarak 10 rulo satın alabileceksiniz.

□ Y markasını tercih ederseniz 1/3 olasılıkla 30 rulo satın alabileceksiniz, 2/3 olasılıkla hiç tuvalet kağıdı alamayacaksınız.

SORU 7:

"Liste fiyatının 90 TL olduğunu bildiğiniz standart bir tişört için sizin vereceğiniz ücret kaç TL olacaktır ?

…….. TL"

SORU 8:

"Sınırlı sayıda üretilen bir ayakkabıyı almak istediğiniz bir durum varsayın.. Hiç kimsenin diğerlerinin tekliflerini göremediği ve ödemenin sadece nakitle yapıldığı bu durumda, bu ürüne sahip olmak için ne kadar fiyat teklif edersiniz?

…….. TL."

SORU 9:

Standart bir Türk kahvesi fincanına sahip olmak için kaç TL teklif edersiniz ?

…….. TL

BÖLÜM 3

Lütfen aşağıdaki ifadelere katılma derecenizi belirtiniz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Ne Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum
1. Aldığım ürünlerin kalitelerinin yüksek olması benim için çok önemlidir					
2. Konu bir ürün satın almak olunca, en iyisini ya da en kusursuz olanını satın almaya çalışırım.					
3. Genellikle alışverişlerimde kalitesi en iyi olan ürünü almaya çalışırım.					
4. Satın aldığım ürünlere yönelik standartlarım ve beklentilerim oldukça yüksektir					
5. Genellikle daha pahalı markaları tercih ederim					
6. Bir ürün ne kadar pahalı ise o kadar kalitelidir					
7. Şık mağaza ve dükkânlar bana en iyi ürünü sunarlar					
8. En çok satılan markaları almayı tercih ederim					

9. Sürekli olarak gardırobumu değişen modaya uygun olarak yenilerim					
10. Tarzımın modaya uygun ve çekici olması benim için çok önemlidir					
11. Çoğunlukla indirimde olan ürünleri satın alırım					
12. Genellikle ne kadar para harcadığıma dikkat ederim					
13. Alışveriş yaparken düşünmeden karar veririm					
14. Sonrasında pişman olduğum pek çok dikkatsiz alışveriş yapmışımdır					
15. Tekrar tekrar satın aldığım favorim olan markalar vardır					
16. Hoşuma giden bir ürün ya da marka bulduğum zaman, onu kolay kolay bırakmam					
17. Ürünler hakkında ne kadar fazla şey öğrenirsem aralarından seçim yapmak da o kadar zorlanıyorum					
18. Farklı ürünlerle ilgili edindiğim bilgiler kafamı karışmasına yol açıyor					
19. Alışveriş yapmak benim için zevkli bir aktivite değildir					
20. Mağaza mağaza dolaşarak alışveriş yapmak zaman kaybıdır					
21. Çok fazla marka seçeneği olmasından dolayı seçim yaparken aklım karışıyor					
22. Bazen hangi mağazadan alışveriş yapacağıma karar vermem zor oluyor					