THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY

ANALYSING THE EFFECT OF COGNITIVE FLEXIBILITY AND THINKING STYLES ON PREFERENCES OF DIGITAL PAYMENT METHODS

Master Thesis

ONUR TEMEL

ISTANBUL, 2019

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Thesis Supervisor: ASSIST. PROF. DR. DILEK KARAHOCA

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INFORMATION TECHNOLOGIES

Name of the thesis: Analysing the Effect of Cognitive Flexibility and Thinking Styles on Preferences of Digital Payment Methods
Name/Last Name of the Student: Onur Temel
Date of the Defense of Thesis: 20/08/2019

The thesis has been approved by the Graduate School of Natural and Applied Sciences.

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ACKNOWLEDGEMENT

Firstly, I would like to thank to my supervisor Assist. Prof. Dr. Dilek KARAHOCA for the crucial comments and remarks through the learning process of this master thesis. I would also thank to Prof. Dr. Adem KARAHOCA for his valuable guidance.

In addition, I must express my gratitude to my parents Nigar TEMEL and Engin TEMEL, my sister Zeynep TEMEL, my brothers Cihan DURAN and Abdülkadir YILDIZ for their unfailing supports. Finally, I am very grateful to my supportive wife Nihan for always believing in me.

Istanbul, 2019 Onur TEMEL

ABSTRACT

ANALYSING THE EFFECT OF COGNITIVE FLEXIBILITY AND THINKING STYLES ON PREFERENCES OF DIGITAL PAYMENT METHODS

Onur TEMEL

Information Technologies Master Program

Thesis Supervisor: Assist. Prof. Dr. Dilek KARAHOCA

May 2019, 40 pages

The aim of this study was to investigate the effects of cognitive flexibility skills and thinking styles (analytical thinking and intuitive thinking) on the decision of consumers to choose digital payment methods. Decision-making is defined as the whole of cognitive and behavioral efforts to choose from a variety of situations. External factors (such as exposure and structure) affect decision making as well as internal factors (such as cognitive flexibility and thinking styles). In this thesis, participants' thinking styles (analytical and intuitive thinking) were evaluated with CRT test based on dual processing theory. Whereas intuitive thinking corresponds to automatic, effortless, associative, and often emotional processes; analytical thinking is defined as low, order, laborious and deliberately controlled processes. The cognitive flexibility skills defined as the adaptation capacities of the individuals against the changes were determined by the cognitive flexibility scale. As a result of the research, it was observed that the participants preferred the old generation methods more frequently than the new generation ones. In addition, there was a positive relationship between familiarity and usage of digital payment methods. It has been shown that cognitive flexibility skills have an effect on the decision to choose new generation payment methods compared to older generation ones.

Keywords: Digital Payment Methods, Cryptocurrency, Cognitive Flexibility, Thinking Styles, Dual Processing Theory

ÖZET

BİLİŞSEL ESNEKLİK VE DÜŞÜNME STİLLERİNİN DİGİTAL ÖDEME YÖNTEMLERİ TERCİHİ ÜZERİNDEKİ ETKİSİNİN ANALİZİ

Onur TEMEL

Bilgi Teknolojileri Yüksek Lisans Programı

Tez Danışmanı: Assist. Prof. Dr. Dilek KARAHOCA

Mayıs 2019, 40 sayfa

Bu araştırmada kognitif esneklik becerilerinin ve düşünme stillerinin (analitik düşünce ve sezgisel düşünce) tüketicilerin digital ödeme yöntemlerini tercih etme kararı üzerindeki etkisinin incelenmesi amaçlanmıştır. Karar verme, çeşitli durumlar arasında tercih yapmak ile ilgili bilişsel ve davranışsal çabaların bütünü olarak tanımlanır. Karar verme dış faktörlerden (maruz kalma ve alt yapı gibi) etkilendiği gibi içsel faktörlerden (bilişsel esneklik ve düşünce stilleri gibi) de etkilenir. Bu tez çalışmasında katılımcıların düşünme stilleri ikili işlem teorisi temel alınarak CRT test ile değerlendirilmiştir. Sezgisel düşünme otomatik, daha az enerji harcayan, çağrışımsal ve çoğunlukla duygusal süreçlere karşılık gelirken; analitik düşünme yavaş, sıralı, yorucu, kasti ve kontrollü süreçler olarak tanımlanır. Bireylerin değişikliklere karşısındaki uyum kapasiteleri olarak tanımlanan bilişsel esneklik becerileri ise bilişsel esneklik ölçeği ile belirlenmiştir. Araştırma sonucunda katılımcıların eski nesil yöntemleri yeni nesil yöntemlere kıyasla daha sık kullandığı gözlenmiştir. Ayrıca dijital ödeme yöntemlerini bilme ve kullanma davranışı arasında pozitif ilişki izlenmiştir. Kognitif esneklik becerilerinin eski nesil yöntemlere kıyasla, yeni nesil ödeme yöntemlerini tercih etme kararı üzerinde etkisi olduğu kaydedilmiştir.

Anahtar Kelimeler: Dijital Ödeme Yöntemleri, Kripto para, Bilişsel Esneklik, Düşünme Stilleri, İkili İşlem Teorisi

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ABBREVIATIONS

ANOVA	:	Analysis of variance
ATM	:	Automated teller machine
CFS	:	Cognitive Flexibility Scale
CRT	:	Cognitive Reflection Test
EMV	:	Europay, Mastercard, Visa
IC	:	Integrated Circuit
IEC	:	International Electrotechnical Commission
ISO	:	International Organization for Standardization
IT	:	Information Technology
MAX	:	Maximum
MİN	:	Minimum
NFC	:	Near Field Communication
POS	:	Point of Sale
RFID	:	Radio Frequency Identification
SPSS	:	Statistical Package for the Social Sciences
WCST	:	Wisconsin Card Sorting Task
QR	:	Quick Response

1. INTRODUCTION

Cognition is a bunch of information processing operations, such as attention, reasoning, problem solving, understanding, decision making, memory, perception, recognition, conceptualizing and language that happened in mind or brain (Von Eckardt 1996). Each of these processes is taken as creative and dynamic. Instead of simple information transforming process, which is taken from external world, it is configuring and processing in cognition. At the end of the configuring, the phenomenon of the choosing and decision making is occurred. Decision making can be described as the combination of the cognitive and behavioral efforts on different situations. Personal differences, content and complication of the topic can affect that process. Individual's analytical and intuitive thinking and cognitive flexibility also have an impact on decision making mechanism too (Phillips et al. 2016). There are some thoughts about that cognitive flexibility and thinking styles (analytic or intuitive) have regulator and decisive roles on that dynamic structure (Evans & Frankish 2009).

There is dualist approach to explain decision making behavior as type 1 and type 2 on dual processing theory (Kahneman 2003). In type 1, process is automatic, consumes less energy and decisions are made after the end of the intuitive thinking process. On the other hand, in type 2, it consumes relatively more energy and it represents more controlled and decisions are made after the end of the analytic thinking process. In evolution of cognition, it is believed that type 1 is much older and type 2 is taken as specific to human nature and relatively new. In 2005, Frederick prepared Cognitive Reflection Test (CRT) that contains three clauses. That test highlights differences between these two processing techniques (Frederick 2005). In this thesis, participants' analytic and intuitive decision skills are evaluated with CRT.

Cognitive flexibility is defined as changeability on cognitive strategies and being adapted (Canas et al. 2005). On the root of the cognitive flexibility, there are the skills of being aware of alternatives, controlling on that alternatives and change them if it will be necessary.

Research projects show that getting older and increasing expertness causes decreasing on cognitive flexibility (Aleman 2014). Cognitive flexibility can be measured with Stoop Test, Wisconsin Card Sorting Task (WCST) and as well as its own assessment scales (Çuhadaroğlu 2013, Karakaş et al. 1999). In this thesis, cognitive flexibility is defined by scores that are taken from Cognitive Flexibility Scale.

In general terms, money is a tool of barter (Davies 2010). When the term of money is examined, it can be seen that there is an evolution from exchange of good and service to notable banknotes then unrequited nominal papers. In present, that term is shifting towards virtual money as well as people's cognitive progress through abstraction day by day. Especially recent years, the usage of physical money is decreasing and instead of it, the new generation digital payment methods are being chosen. Digital payment system can be described as any kind of technology that provides value changing between individuals and it contains payments with credit and debit cards, mobile payment applications and crypto currency systems. Thanks to this system, there is a virtual but direct linkage between seller and customer. There are advantages such as its practicality and rapidity. However, it does not help to explain why individuals choose that payment method and which factors have an impact on this decision.

This research project aims investigation of relationship between the preferences of usage digital payment methods and cognitive flexibility and analytic/intuitive thinking.

2. THEORETICAL BACKGROUND

In this section, information about the theories of decision making, thinking styles, cognitive flexibility, digital payment methods and the relationship between the historical development of money and cognitive functions are given respectively.

2.1 DECISION MAKING

Decision making can be defined as a mental process end with the selection of one of the alternatives. Mintzberg et al. (1976) considered decision making as a process. Defined this process as a sequence of actions and dynamic factors that begin with specified an action - oriented stimulus, ending with the commitment of a particular action. There is always an ambiguity in decision making because of the uncertainty of the information, vagueness of the future and existence of the possibilities in the process. This is called as bounded rationality (Gigerenzer and Goldstein 1996, Simon 1990). Harris (1998) defined two motivations in decision making; first is the tendency to decide according to one's own morals and desires, and the second is the tendency to decrease the possibilities and ambiguities. At this point, decreasing the possibilities rather than eliminating them is crucial because it is impossible to gather all the information about all the possibilities. Therefore, every decision making contains certain amount of risks. In general, decision making can be defined as physical and mental efforts for making a choice and preference between various circumstances.

Hypothetically, decision making can be analyzed as a result oriented approach and process oriented approach. Result oriented approach is focused on the outcome of the decision, while process oriented approach is focused on the process previous to the decision. In this thesis decision making will be examined by process oriented approach.

2.1.1 Models of Decision Making in Economy: Consumer Behavior

In literature, decision making is addressed by different approaches on different bases. In general, decision making is modeled as either rational-logical (quantitative) or intuitive (qualitative). Analytical thinking is important in rational model which is based on numerical analysis. Moreover, it contains modeling based on numerical facts and data. On the other hand, intuitive model is originated from insight, judgement and experience. It is related to the mental and psychological phases of decision making. Factors affecting those phases and effects of those factors are subject to the intuitive model. Behavioral aspects are important in intuitive model. In classical economy, human beings are defined as rational and economic decision makers. Human beings are in struggle of maximizing their benefit as consumers and profit as producers. Therefore, decision makers decide in an effort to maximize their gains by evaluating all the alternatives systematically.

2.1.1.1 Rational-logical decision making model

Decision making contains the recognition of alternatives, categorizing, comparing and reasoning the data gathered. Therefore, it is more than just a "yes-no" answer. In rational model, the first step can be defined as the sense of the need and/or realization of the problem Kuzgun (1992) defined 3 conditions for the emergence of decision making behavior: sense of the need, existence of multiple alternatives and having the freedom of choice. After the first step; defining the alternatives, choosing the proper alternative and evaluating the feedback related to that decision comprise the rational model. Rational decision making model is first described by Adam Smith who is the founder of the Rational Approach (Glimcher and Fehr 2013). Afterwards, social scientist Herbert Simon criticize the rational decision making model with Administrative Model of Decision Making in 1959. Later on, multiple decision making processes containing similar steps systematized. Mann (1991) developed 5 steps decision making systematic named GOFER. According to this method, by defining the goals, specifying the options, gathering the facts, evaluating the effects of the options and reviewing the applications of the options steps the decision making process is

done. Berglan (1974) defined 7 steps, Brown (2007) defined 7 steps too, Guo (2008) defined 6 steps and Pijanowski (2009) defined 8 steps decision making methods.

Nevertheless, rational-logical model is criticized by psychologists and behavioral economists because of reductionist approach to the human behavior to a simpler state (Foka-Kavalieraki and Hatzis 2011). By definition, rationality refers to the decisive, prudential and intentional nature of the human behavior. Therefore, human behavior has to be always rational (Augier and Krenier 2000, Simon 1987). However, accuracy of assumptions and stages of rational decision making in practice is questioned. Especially, the term "bounded rationality" and "perfect rational man" paradigm of classical economy are criticized. (Simon 1960, Simon 1982). Bounded rationality underlines the limited processing capacity of the human brain. Assuming the decision-maker has complete knowledge of all alternatives, reach entire information about the results of all alternatives; make certain choice about that results and compare the results of the alternatives is not coherent with both real life and limited mental processing capacity of human brain. According to Simon, rationality is not a mathematical concept but a psychological one and in order to understand the economic behaviors of the consumers psychological perspective is also needed besides classical economics (Simon 1960, Simon 1982). In psychology, decision making is depending on the processing of external stimulus (senses), emotions, intuitions and opinions. Moreover, it considers both irrational and rational properties of the human being.

2.1.1.2 Intuitive decision making model

One of the most important contributions to emergence of the behavioral finance is made by Tversky and Kahneman (1979) via Prospect Theory. Prospect Theory states that the most of the decision made under the pressure of vagueness is based on beliefs and people trusts some short and shortcut paths and intuitions in order to simplify complicated phenomenon. Moreover, Kahneman and Tversky asserted in their theory that people make decision in a way that it is impossible to explain. Similarly, intuitive decision making model which is grounded on the Uncertainty Theory is based on the biases and shortcuts/heuristics which are

the results of the mental processes that people initiated when deciding under complicated circumstances and for vague alternatives (Tversky and Kahneman 1974). Some of those shortcuts are; representation, existence and anchoring while some of the fallacies resulted by those shortcuts are overconfidence, optimism, conservatism, groupthink, status quo bias, fallacy of "I knew it", gambler's fallacy (Shefrin and Hersh 2007, Ritter & Jay 2003, Tversky and Kahneman 1974).

In the most general sense, intuitive decision making can be described as the process of deciding with past experiences, emotional inputs and most importantly with less knowledge when the situation requires extra knowledge. Psychology mostly contains the intuitiveness concept that is used in this theory. Those intuitive with experiences gained over time find out shortcuts and ease the decision making process. That saves time. Nevertheless, decisions made this way are not always the optimum ones nor they achieve the goals every time. Moreover, sometimes it leads to prejudiced decision making, biases and underachieved results (Ritter and Jay, 2003). Those biases - which are also called mental biases- are repetition bias, attribution asymmetry, framing bias (Maqsood et al. 2004, Benartzi and Thaler 1995). Furthermore, Brown (1993) stated that intuitive can be serious obstacles when learning new concepts. Representments in the human consciousness are in relation with the intuitive thinking of subconscious. False intuitive information may mislead the individual when learning new concepts. They may oversimplify some facts.

In contrast to rational decision making model, intuitive decision making model is not systematized in detail. This is because of the nature of the intuitive decision making model. Decision making systematic is not linear and sequential in intuitive decision making model. Steps are not independent. One idea triggers the other one and they interact simultaneously. Steps in intuitive decision making model can be sometimes repetitive, circular, skipping and recycling. Therefore, it is more accurate to describe a flow of ideas rather than a systematic. Gestalt's holistic approach is in the foreground in intuitive decision making (Ariely and Carmon 2000). Each part of the whole may be meaningless and when an individual sees those parts he may find different outcomes each time he repeats.

For sure, decision makers are not just using one these models. In reality, any person can use one of the models in substitution for the other. Although rational and intuitive decision making models are used together, some people approach to the problems rationally and some other intuitively. On the other hand, assuming that one of the models is superior to the other is wrong.

2.2 ANALYTICAL AND INTUITION THINKING

With the effects of hereditary tendencies and first experiences, each person uses different methods to achieve his / her goals and to solve encountered problems. In order to reach the truth in this process, the individual collects and arranges data in different ways and make decisions. Thereby, the individual comprise different types of information processing (thinking styles) (Buluş 2003).When the literature is examined, it is seen that there are many definitions about thinking styles. Thinking style is defined as; the individual path adopted by a person in perceiving, thinking, learning, problem solving and relating to others (Witkin et al. 1977); the way of individuals organize and process the information and make decisions based on observation (Hunt 1989); the usual approach that a person prefers to organize, represent and process information (Streufert and Nogami 1989) ; individual characteristic styles of people adopt in sensing, recalling and problem solving (Messick 1984). Although thinking style is classified in different forms, it is observed that the distinction between analytical and intuitive thinking is generally accepted. Analytical thinking uses external knowledge to establish a relationship between causes and results. Accordingly, it refers to the logical, objective, detailed and critical thinking process based on decision making. Intuitive thinking refers to the way of thinking that unconscious processes are effective and based on feelings rather than holistic and external data (Vance et al. 2007). The difference between analytical and intuitive thinking reflects the cognitive width or limitation in the mind of the person (Cools and Van den Broeck 2007).

Individuals with analytical thinking are dominant in their cognitive processes; who emphasize facts and data (Wenhong and Liuying 2010), who analyze issues by effort, logic and reasoning rather than by intuition (Sánchez et al. 2011). In analytical thinking, actions are slow, ordered, laborious and deliberately controlled (Barbosa et al. 2008, Kahneman 2003). In the intuitive of thinking, experience and symbols matter great importance and the source of knowledge is personal experiences. Intuitive thinkers consider explicit representations of objects or events, rather than adopting logical rules and symbolic codes such as words or numbers (Wenhong and Liuying 2010). Actions are fast, automatic, effortless, associative, and often emotional, and they are difficult to control or manipulate because they are routinely managed (Barbosa et al. 2008, Kahneman 2003). Even though their thinking style is accepted as a personal trait, general observations and systematic research suggest that people use both thinking styles (Barbosa et al. 2008).

2.2.1 Dual Processing Theory

The rational and intuitive decision - making models developed to understand consumer behavior in the economy can be explained by up to date the dual-process theory. In psychology, dual process theory explains how thought can emerge in two different ways or as a result of two different processes. In psychology, dual process theory explains how thinking can emerge in two different ways or as a result of two different processes. Generally, the two processes consist of an implicit (automated) unconscious process and an explicit (controlled) conscious process. This approach was first introduced to literature by William James as an associative reasoning and true reasoning. The associated reasoning is based on reproductive concept, which is related to senses and memory material (Sloman 1996). The true reasoning includes the independent inferences from the past and the ability to approach problems objectively (Sloman 1996). After these works, the theories of dual processing have been developed in both social psychology and cognitive psychology. Jonathan Evans described the analytical processes and heuristic processes. Afterwards Jonathan Evans described the analytical processes and heuristic/intuitive processes (Evans 1984, Evans 2008).

In 2003, Kahneman developed the dual process model of the mind with a dualist approach, named type 1 and type 2. According to this model, the mind acts on the basis of two basic systems (Frankish 2010, Evans 2008, Kahneman 2003). The process described as Type 1 corresponds to the automatic, low-effort, intuitive processes of the mind. Type 1 system is also thought to be relatively primitive in earlier periods and this system is common to most animals. While the process defined as Type 2 corresponds to a later evolutionary process, it corresponds to more analytical, high effort and controlled processes as it is a structure specific to human species (Frankish 2010, Frederick 2005, Kahneman 2003, Kahneman 2002). In this respect, the rational decision - making model defined in the economy can be explained by Type 2 processing and the intuitive decision - making model by Type 1 processing.

2.3 COGNITIVE FLEXIBILITY

The cognitive flexibility, which is a part of the executive functions, has been defined more than once in the literature. The most common definitions are the ability to regulate person's information processing strategies to confront new and unexpected situations around him (Canas 2006) or the adaptability capacity of the individual (Payne et al. 1993). Martin and Rubin (1995), who developed the 12-item Cognitive Flexibility Scale defined cognitive flexibility as; the individual, be aware of the options and appropriate alternatives in any case, be willing to be flexible and adapt to the situation, and feeling competent to be flexible. People who can see the eventualities are more cognitively flexible than people who can only see a single behavioral response and have more complex information processing processes (Martin et al. 1998, Martin 1995). When the individual encounters a situation, has alternatives to how to behave, and it is important to be aware of the possible solutions before making the choice, rather than choosing the most important alternative (Bilgin 2009). Cognitive flexibility also includes individual’s motivation of flexibility. Because individual can be aware that there are multiple ways of behavior; however, this awareness may not be sufficient to move away from the standard behavior. Cognitively flexible individuals; they try to communicate, try new ways, face unfamiliar situations, they are willing to adapt their

behavior according to needs and feel self-confidence in this sense (Martin et al 1998). People benefit from cognitive flexibility not only in a specific situation or certain time point, but they also benefit from it in their daily life such as problem solving, communication etc. (Martin and Anderson 2001).

Cognitive flexibility is considered as a part of frontal functions it can be described as the ability of the adaption of the ongoing behavior to the new/changing situations, the ability of the individual to change the strategy in the presence of disturbing effect, ability to suppress the usual behavioral pattern and perform an unusual behavior . Cognitive flexibility is a multi-component process. It's closely related to find out the relation between the new stimulus and the reward, conceptualization, problem solving, inhibition and divided attention skills (Karakaş and Karakaş 2000). In cases where cognitive flexibility ability is impaired, it is known that perseverative, stereotypic, noncompliant behaviors occur (Karakaş et al. 1999). The cognitive flexibility, imaging and lesion studies have been correlated with frontal areas, especially the prefrontal cortex (Fuster 1989, Luria 1966). The cognitive flexibility can be measured with neuropsychological tests as WCST and Stroop tests (Karakaş et al. 1999). In the WCST test, participants decide the appropriate behavior based on the feedback received. The Stroop Test is also measured by Stroop Effect on cognitive flexibility. The Stroop Effect is obtained when the word is not the same as the color in which a word is written, when the word is written in the color (Karakaş et al. 1999). The effect stems from the tendency of the individual who focuses on color to read the color name at the same time (Burke and Light 1981). The cognitive flexibility can be measured by self-assessment scales. In this study, the cognitive flexibility is defined on the scores obtained from the Cognitive Flexibility Scale.

2.4 DIGITAL PAYMENT METHODS

2.4.1 Payment with Credit Cards and Debit Cards

Payment cards are distributed to customers by financial institutions such as banks; which allows the cardholders to access funds in their debit accounts or to make payments electronically with a credit account (Kaya 2009). First time the concept of card payment is mentioned by Edward Bellamy in 1887 in the science fiction novel "Looking Backward or Life in the Year 2000". In the novel; he refers that the payments can be performed by the ripped pieces of the card and these payments can be continued until the card is finished (Kaya 2009).

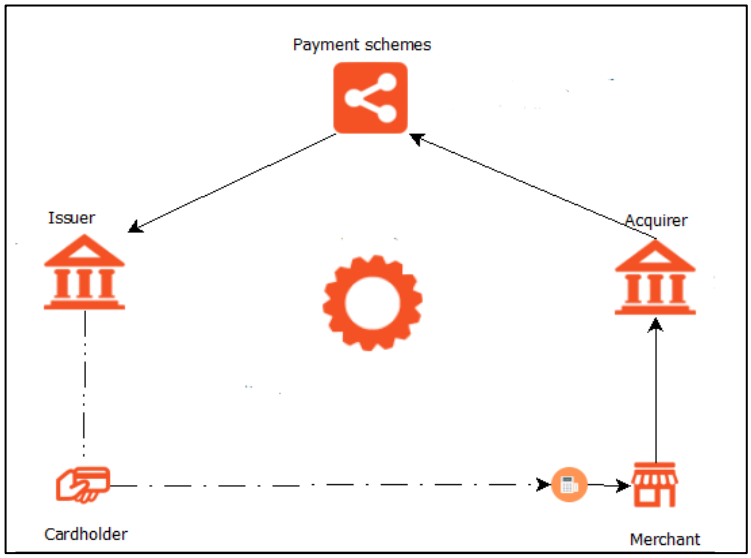
In the world; the first practice of credit cards which enable to purchase products or services without cash was commenced in USA in late 18th century (Montgomerie 2006). In 1894, the first credit card was issued by the Hotel Credit Letter Company in the United States. In 1914 Western Union distributed a payment card which known as "Metal Money". After that in 1924 General Petroleum Company was issued first petroleum payment card. After these practices; the major stores gave their customers metal coins which customer's account numbers were printed. After these first practices, the big stores gave their customers metal coins which customer account numbers were printed. The first credit card which was not limited to a specific region and accepted payment instead of cash in various sectors, was issued in 1950 by Diners Club, in New York. In 1958 American Express Card and in 1959 a card was issued by Bank of America which was named in 1977 Visa Card (Montgomerie 2006). Thereafter; several banks which issued credit cards in all states of the United States collaborated and disturbed a card brand named Mastercard. Nowadays, the most common international payment card brands are Visa, Mastercard, American Express and Diners Club cards (Kaya 2009, Montgomerie 2006).

In 1993 and 1994 Visa, Mastercard, Europay established the technical standards of payment cards named EMV. EMV is a payment method which based on a standard for smart cards,

POS terminals, ATMs. At the present time, these standards are managed by EMVCo, an equally divided control consortium between Visa, Mastercard, JCB, American Express, China Unionpay and Discover (Ward 2006). MV cards are smart cards that store data in integrated circuits in addition to magnetic strips (for backward compatibility), also card chip cards or IC cards. Smart cards include; contactless cards that can be read from a short distance using RFD technology or can be inserted physically into a reader (Ward 2006). Payment cards that comply with EMV standards are generally referred to as chip and pin or chip and signature cards. ISO / IEC 7816 standards for smart payment cards, ISO / IEC 14443 standards for contactless cards are identified (Ouerdi 2013, Ward 2006). Figure 2.1 shows payment system processing. In order to explain the payment card systems processing, it is necessary to explain the relationships between the parties involved in this payment system.

i. Cardholder: Consumer buying goods or services by using cards.
ii. Merchant: Goods or service provider which accept cards for payments
iii. Issuer: Bank or financial institution issues credit or debit cards to consumers
iv. Acquirer: Bank or financial institution process payment transactions behalf of merchants.

Figure 2.1: Schema of payment system processing



Consumer insert credit card to POS terminal for purchasing goods or services. The POS terminal sends the card information to the acquirer (financial institution). Acquirer uses the network of the card schemes to contact the issuer. Issuer institution; response the approval status to the acquirer institution via using the card scheme network. When the acquirer transmits the issuer message to the merchant's POS system, the transaction is completed.

2.4.2 Mobile Payment Methods

2.4.2.1 Payment methods with QR code

The QR code is named the initials of the words "Quick Response". It is a special designed matrix barcode (or two-dimensional barcode) that can be read from the cameras of mobile devices (Lee et al, 2011). The QR code is developed by Japanese company Denso in 1994 (Baik 2012, Kieseberg et al. 2010). QR codes can be used for storing card data while processing payment transactions. It can be designed specifically to operate with payment service provider applications (Baik 2012, Lee 2011). The QR Code is widely used in Far East countries as a payment method (Örücü 2013, Kieseberg et al. 2010).

Nowadays, the use of QR Code has become widespread due to the effect of mobile phones with digital cameras. The code usually consists of black motifs on a square white background. The consumer can be directed to Internet address, e-mail address, phone number, contact information or geolocation information by the recorded barcode (Örücü 2013, Kieseberg et al. 2010)

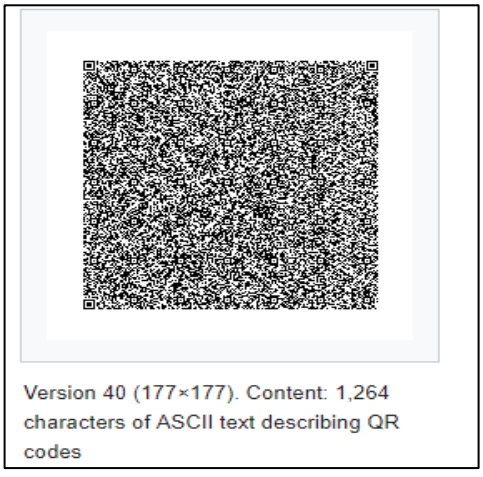
The QR code is detected as a 2D digital image and is digitally analyzed by a processor. Processor normalizes image for size, orientation and viewing angle by use of positioning three different frames at the corners and using a smaller square (or multiple frame) near the fourth corner of the QR code (Örücü 2013). Then the small dots along the QR code are converted to binary numbers and verified by an error correction algorithm. The size of the

data in the QR code differs according to the QR code versions. 1. Version (Figure 2.2), 21x21-module version (Figure 2.3), 40 is composed of 177x177 module (Soon 2008). In Version 40, 4,296 alphanumeric characters can be stored (Soon 2008).

Figure 2.2: 2 version 1 QR code

Source: Sharma, V., 2012. A study of malicious QR codes. International Journal of Computational Intelligence and Information Security.

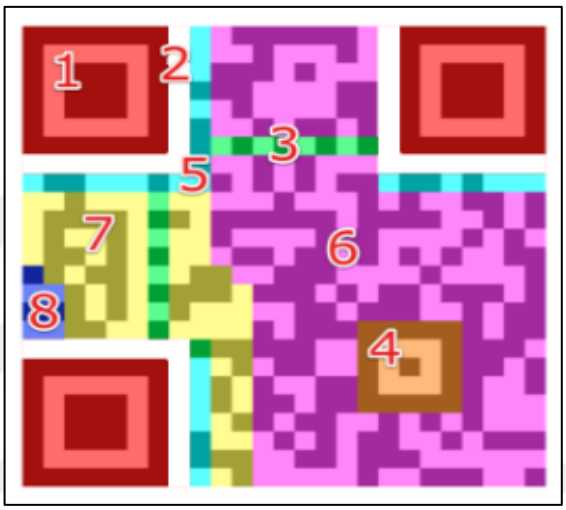
Figure 2.3: 3 version 40 QR code



Source: Sharma, V., 2012. A study of malicious QR codes. International Journal of Computational Intelligence and Information Security

The QR code image is divided into eight different parts and each section has different functions and features (Kieseberg et al. 2010). It is shown in Figure 2.4.

Figure 2.4: Patterns of QR Code

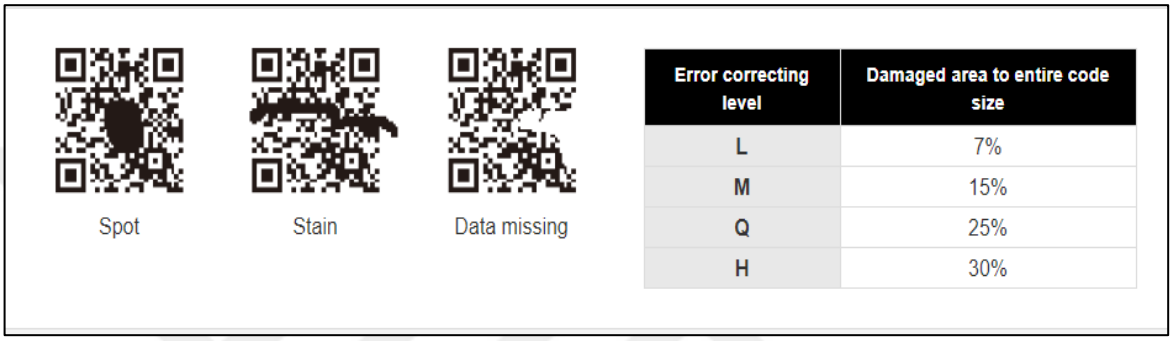


Source: Kieseberg et al. 2010. QR code security. In Proceedings of the 8th International Conference on Advances in Mobile Computing and Multimedia.

Section 1 (Finder Pattern) is located in the lower left and right and upper left corners of the QR code. The finder patterns are consist of black, then white, then black modules. These are used for accurate and fast detection of the QR code with a 360 degree angle. Section 2 (Separators) Allow easier identification of finding patterns by separating from original data. They are always white. Section 3 (Timing Pattern) Black and white modules are rotated to determine the coordinate. Section 4 (Alignment Patterns) Used for position detection if modules cannot be found due to deformation. Section 5 (Format Information) Contains the error correction rate and data mask pattern of the code. Section 6 (Data) The section which data is stored in 8 bit parts also called code word. Section 7 (Error Correction) Similar to the data section, error correction codes are stored in 8 bit code-words in the error correction section. When a portion of the QR code is missing or corrupt; use the Reed-Solomon code to restore data. The restoration rate varies according to 4 different error correction levels

(Figure 2.5). Section 8 (Remainder Bits) This section consists of empty bits, if data and error correction bits cannot be divided into 8 bit code words without remainder (Kieseberh et al. 2010).

Figure 2.5: Error correction levels



Error correcting level	Damaged area to entire code size
L	7%
M	15%
Q	25%
H	30%

Source: Error correcting Code [online], https://www.keyence.com/ss/products/auto_id/barcode_lecture/basic_2d/qr/ [accessed 21 April 2019].

2.4.2.2 Payment methods with NFC

NFC (Near Field Communication) is a wireless data transmission method that allows devices at close range communication (Fisher et al. 2016). This technology can be used as a payment method in stores or transport services. The consumer who activates the payment card defined in mobile payment application; performs the transaction by bringing the mobile phone closer to a reader module (contactless POS, etc.) (Fisher et al. 2016, Timalsina et al. 2012). According to payment service provider transaction limits, transactions can be completed without cardholder verification.

NFC has been developed through Radio Frequency Identification (RFID) systems using magnetic field induction to establish a communication link between devices (Timalsina et al. 2012, Steffen et al. 2010, Broll et al. 2009) NFC provides secure data transfers. In mobile payments, ticketing, electronic switching and identification etc. services. The operating frequency of NFC technology is 13.56 MHz (Timalsina et al. 2012, Haselsteiner and Breitfuß 2006). It can communicate at 424 Kbps up to 10 cm distance between two devices. Three different operating methods are (Timalsina et al. 2012) shown in Table 2.1.

Table 2.1: Interaction styles of NFC

Operating Mode	Initiator Device	Target Device
Reader/Writer	NFC handset (active)	NFC tag (passive)
Peer-to-peer	NFC handset (active)	NFC handset (active)
Card emulation	NFC reader (active)	NFC hand (passive)

Source: Nadarajah, V. R. & Singh, M. M., 2017. Privacy-by-Design (PbD) IoT Framework: A Case of Location Privacy Mitigation Strategies for Near Field Communication (NFC) Tag Sensor.

In the reader/writer method, NFC-enabled devices can read or write data from an electronic label.

This communication setting allows your system to operate as a contactless reader / writer. The NFC device initiates communication with another NFC device (with an NFC device running on a contactless card, NFC tag, or other card emulation setting). The NFC device that initiates communication generates the RF field; reads data from the other device or writes the data to the other device.

Another method is peer to peer which allows information sharing between NFC devices. The communication setting enables two NFC devices to communicate in two-way communication. Thus, both devices can initiate communication. In this setting, passive communication can be used as well as active communication.

The last method is card emulation. In this method, the NFC-compatible device operates in the existing contactless card standards. Allows devices to operate as an ISO / IEC 14443 compliant contactless smart card. The user can transfer all payments cards to his / her phone by using NFC system on his / her smartphone and holds them in a virtual wallet. The smart card defined NFC device works by using the radio waves initiated by the contactless reader. Because of using passive communication, card emulation method has low power consumption. Therefore, it is the preferred method in battery powered devices.

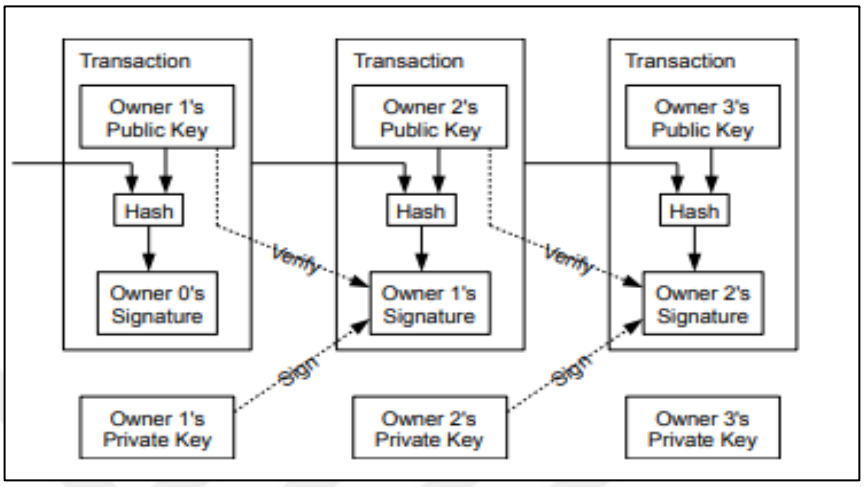
2.4.3 Cryptocurrencies

A cryptocurrency is a cryptographically strong virtual asset that ensure security and verification of financial transactions which is designed as medium of exchange. Unlike central digital currencies and central banking systems, crypto currencies use decentralized control. With the aid of technology such as computers, smartphones and the internet, digital currencies can be transferred between assets or users. Although it is similar to physical currencies, digital money provides unrestricted ownership as well as transferring funds.

Specific digital currencies such as Bitcoin etc. are supported by distributed ledger technology (block chain) that records and verifies financial transactions (Treleaven et al. 2017). Blockchain is a decentralized data logging system that monitors all encrypted processes on a peer-to-peer network. Transactions are approved by use of this network without any necessity of a central exchange authority (Treleaven et al. 2017, Mills et al. 2016). In the transaction process, the blocks created by the data are connected to each other as a chain with encryption algorithms. The blocks are stored in chains and issued to many people as distributed. With this method, the blocks in the network cannot be deleted or modified (Mills et al. 2016).

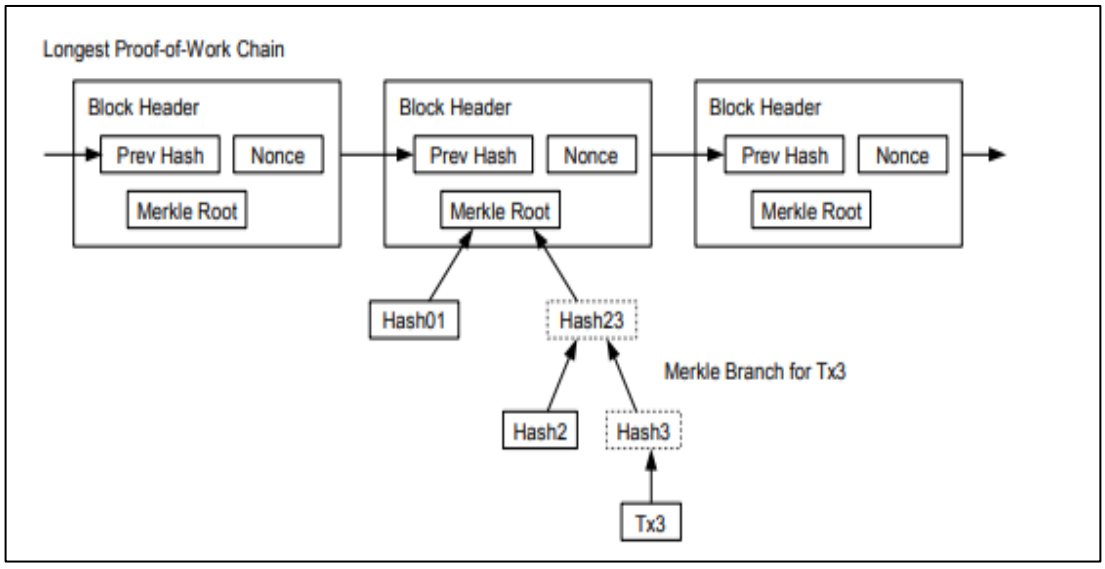
The transaction is an asset transfer between the cryptocurrency wallets in the blockchain network (Treleaven et al. 2017). Digital wallets store a private key for signing transactions. It provides a mathematical proof of a transaction that validates the transaction come from the owner of the wallet (Nakamoto 2008).The sign also stores who requested the transaction and the transaction not changed during the process (Figure 2.6).

Figure 2.6: Transaction process



The pending transaction before being inserted in the blockchain network; the authenticity of the blocks in the process is controlled by the miners. Miners is a distributed consensus system used for approving pending transactions. The control of the transaction sign and the verification of blocks which encoded by Merkle tree method are committed by miners (Merkle 1980). After this verification process, the pending block is ready to be included in the chain (Nakamoto 2008). It is shown in Figure 2.7.

Figure 2.7: Longest proof of work chain



2.5 HISTORICAL DEVELOPMENT OF MONEY AND COGNITIVE FUNCTIONS

Turkish Language Association defines money as a paper or metallic payment instrument that contained its value on and issued by state[1]; money is ideational concept discovered by human. Its root goes to barter. The first findings about barter is recorded in Egypt (Davies 2010). The problem about the value of the goods used for bartering was solved with invention of money by Lydia (Yükçü and Atağan 2011). However, it is known that shells, leather, ivory, yarns, minerals such as salt and coffee beans were also used as a barter tool before the invention of the money (Davies 2010). Different than the other civilizations, Lydia standardized the value of the money. That situation does not happen quantity of the money but weight of it so at that times money was weighed instead of counting. As a result of that process, and thanks to the technology, coins' shapes and sizes were different. These were made with electrum which is mixture of gold and silver (Davies 2010).

While the volume of the trade was increasing, unstandardized coins became inefficient. To solve this problem banknotes was invented. Chinese used leather money, at BC 118, and paper money, at AD 806 (Birch 2017, Davies 2010). Before that time, bill was being used and it evolved to banknotes. Usage of banknotes spread firstly to Europe then to the America via the trade routes (Birch 2017). The roots of the structure of the modern banking go to the 15th century by Medici family in Florence. The first Central Bank was founded at 1609 in Amsterdam (Bech et al. 2017, Fazzini et al. 2016).The machine which allows to mint nearly perfect and standardized coins was created by Isaac Newton at the end of the 17th century for English Royalty (Rosinsky 2007). Thanks to the developments on the area of telecommunication, Western Union did money transfer between two distant points via telegraph. This can be seen as a root of the electronic fund transfer (Swineahart 2018). After the World War II in 1944, states signed Bretton Woods Agreement for global monetary system. The most significant outcome of that agreement is foundation of International Monetary Fund and World Bank. All the other currencies fixed to US Dollar. Gold in which

[1] www.tdk.gov.tr/index.php, Access date: 24.04.2019

weight is 1 ounce considered as 35 US Dollars then United States of America accepted to sell gold according to this price. However, devaluation of the US Dollar, in 1971, affected United States' decisions and she gave up that balance between gold and dollar. It resulted with abandoning Bretton Woods Agreements by industrialized countries (Öztürk 2010). After these events value of the money was starting to measure with reputation. Today, all the currencies can be seen as a states' independence manifestos. The first modern payment card was occurred in United States, after the Second World War too. Frank X. McNamara established Diners Club in 1949 (Montgomerie 2006). In 80s telephone banking, early 90s internet banking (Oliveria and Hippel 2011) and late 90s contactless payment (Speedpass) was used first time (Alliance 2003). 'Chip and pin' method was invented to prevent fraud activities by EVM in mid 2000s (Furnell 2006). This situation makes payment system with card safer. In 2009, the first cryptocurrency, Bitcoin, was invented (Çarkacıoğlu 2016). Today, there are hundreds of cryptocurrencies and in general these are called "alternative cryptocurrencies".

David Birch (2017) splits up five thousand years of evolution of the money 3 parts: Money 1.0, Money 2.0, Money 3.0. Era of Money 1.0 is between the first usage of money and 1871. In this time period, money was accepted as concrete goods such as seeds, valuable stones and paper. The usage of money just is in real world. Money 2.0 covers the time period starts with Western Union's first electronic fund transfer via telegraph network and as a result of it, the evolution of money from real world to virtual one with the tools such as credit card and ATM. Lastly, Money 3.0 period represents the loss of tangible reflection of money as an outcome of the quitting the fixing US Dollar to gold. Today, money is becoming more abstract day by day with crypto currencies, thanks to the progress of technology. Digital money is transferring to tangible money to electronic environment and there is no changings in the main structure of money. On the other hand, for the crypto currency, the structure of the money was changed too.

To sum up, money is not natural but constructed by human. Its form should be seen as continuously progressing technology. In principal of money is social agreement and tool of

trust but today, it is “debt”. Money does not represent the value of the good anymore. It becomes to represent debt which is given to the trust of the people.

There is no doubt, mental evolution of the people and money, which is the product of the people are highly related. Mental evolution of the people is progressing from simple mental function through advanced cognitive functions (executive functions) (Van Horik et al. 2011). Low cognitive functions are primitive, and it contains functions such as attention, perception, sense and memory. Mostly it represents reflexes, orienting, taxis, and simple forms of learning, such as habituation and sensitization (Van Horik et al. 2011). Evaluation of these primitive abilities to advanced cognitive functions such as functions problem solving, abstraction, decision making, reasoning, controlled attention, creativeness, planning, analytical thinking, cognitive flexibility affects the historical progress of money. However, cognitive evolution is not only outcome of biological evolution. Symbolic and cultural evolutions have a significant role on progress of cognitive functions (Van Horik et al. 2011, Richerson et al. 2010). Baldwin is the one of the first researchers who say that the effect of social heredity on the selection of biological characteristics. According to Baldwin, Cultural facts which is produced by humanity determine the peoples’ who have different mental and physical personalities survive abilities and chance of reproduction (Baldwin 1896). In this context, there is a double-sided interaction between cognitive evolution and progress of the money.

It is not possible to think selection, creation and transferring of the cultural variance, such as money, separately. It is same for the politics, which is the product of the human mind, and technological system on the one hand and the human activities that created these systems on the other. In the cultural evolution, it is not important loyalty for the transformation but functionality of the changes. Transformed element (money) takes role of the original one and there will not be contradictory with the other components in this whole process (Jablonka and Lamb 2014). When the historical continuum of the money is observed, it can be seen that the evolution of the money will be as following through: Firstly from bartering to money as commodity, then gold/silver, valuable papers that represent gold follows them, money,

which has no linkage between gold, based on reputation and finally virtual money (Çarkacıoğlu 2016). In this long journey of money, it does not lose main aim of itself: tool for bartering. It just modifies itself according to adaptation to environment in which political and technological systems are constantly changing in then it finds new form with the virtual money. From this perspective, money is becoming more abstract with the cognitive and scientific progression of the humanity day by day (Çarkacıoğlu 2016).

3. DATA AND METHOD

In this section, information about the purpose of research, research sample, data collection tools, data collection and statistical analysis used for data evaluation is given respectively.

3.1 PURPOSE OF RESEARCH

This research is a survey study to analyze outcomes to find if there is a relationship between cognitive flexibility levels of individuals, analytical and intuitive thinking, and decisions to use digital payment methods.

3.2 RESEARCH SAMPLE

186 volunteers were included in this study in total.

3.2.1 Inclusion Criteria

i. Being in 18-45 of age range
ii. Not having any psychiatric or neurological diseases
iii. Not using psychiatric or neurological medicine

3.2.2 Exclusion Criteria

Those who did not comply with the inclusion criteria, were excluded from the study.

3.3 DATA COLLECTION TOOLS

3.3.1 Collection of Demographic Data

A questionnaire developed by the researchers was used to reveal the demographic data of the participants. Questions about gender, age, education level etc. are contained in demographic data form. The form consists of 6 questions in total.

3.3.2 Cognitive Reflection Test (CRT)

Cognitive Reflection Test was made by Frederick in 2005. This test aims to reveal the differences between cognitive styles, rational-logical and intuitive decision-making models. Starting from 2003, in 26 months period, CRT was implemented to 3,428 participants in 35 different studies (Frederick 2005). CRT questions are easily understood by participants when their solutions are explained and does not required advanced calculation.

However, in order to reach the correct answer, it is often necessary to suppress the wrong answer that comes to mind in an intuitive way. In this thesis, CRT's short form consisting of 3 questions was used. Frederick (2005), in his analysis, compared the low group (those who answered all 3 questions incorrectly) and the high group (those who answered all 3 questions correctly). In this study, despite of Frederick's analysis, participants were divided into two groups. Similar as the study of Oechssler, Roider, and Schmitz (2008), participants are represented at two levels; intuitive thinking styles and analytical thinking styles. The level of intuitive thinking styles is composed of participants who cannot answer any questions correctly and answer at least one question correctly. The level of analytical thinking styles is composed of participants who can answer more than one questions correctly and answer all of the questions correctly.

3.3.3 Cognitive Flexibility Scale (CFS)

Cognitive flexibility level was determined using cognitive flexibility scales developed by Martin and Rubin (1995). CFS is a scale consisting of 12 items and 6-point Likert Type Scale (1 -Strongly Disagree, 2- Disagree, 3 – Slightly Disagree, 4 - Slightly Agree, 5- Agree, 6- Strongly Agree) (52). Total score is calculated by gathering answers to each item. The lowest score is 12, while the highest score is 72. Low scores show low level of cognitive flexibility, while high scores show high level of cognitive flexibility (Martin and Rubin 1995). Items were arranged using three dimensions of cognitive flexibility (awareness, willingness and self-sufficiency).In original and in other studies, scale is used not as subscale, is used with total score. Both in original and other studies, scale is not used as subscale but its total score.

When the items are examined, they can be classified as; 1. , 5. and 9. items as awareness dimension, 2. , 3. , 6. and 11. items as willingness dimension, 4. , 7. , 8. , 10. and 12. items as self-sufficiency dimension. However as in the original form, it was decided using total score is more appropriate than using scale is as subscale (Altunkol 2011). Cronbach alpha coefficient obtained from different studies about scale, changes between .72 and .87 (Altunkol 2011). As a result of two applications with one week interval, test-retest reliability coefficient of the scale was reported to be .83 (Martin and Rubin 1995). In this study, the version of the scale translated into Turkish by Altunkol (2011), was used.

3.3.4 Survey for the Preferences of Digital Payment Methods

A survey developed by the researcher was used to measure participants' preferences for using digital payment methods. Payment methods were classified as payment with credit card and/ or debit card, contactless payment with credit card and/ or debit card, payment with mobile payment applications, payment with QR code, payment with NFC payment method, and payment with cryptocurrency. Questionnaire consists of 13 questions. First two questions are descriptive and they are multiple-choice, the remaining 11 questions are 5-point Likert Type Scale (never, rarely, sometimes, usually, and always). Questionnaire of participants'

preferences for using digital payment methods consists questions such as “Which of the following payment methods have you heard?”. Questionnaire measuring the frequency of participants using digital payment methods consists questions such as “How often do you use cash when you are shopping from store” and “How of the do you use QR code payment method when you are shopping on online?”. In the questionnaire measuring the frequency of using payment methods, 3 levels of user preferences were identified. They are; the older generation users who use older generation payment methods more frequently, mobile payment methods users who use mobile payment methods more frequently, and the new generation users who have announced that they will use cryptocurrency as payment, transfer, and investment tool in the future. The old generation users consist of the participants who prefer to use payment with credit card and/ or debit card, contactless payment with credit card and/ or debit card sometimes (3 points), usually (4 points), and always (5 points). The mobile payment methods users consist of the participants who prefer to use mobile payment applications, NFC and QR code payment methods sometimes (3 points), usually (4 points), and always (5 points). The participants who have announced that they will use at least two of these three options, the payment, transfer and investment instruments in the future since cryptocurrency payment methods are not legal yet, have been appointed as new generation users.

3.3 DATA COLLECTION

Survey is done online and had been sent via social media sites and instant messaging applications to different users in 2019 during two weeks period. Survey form consists of 4 subtitles. A total 34 questions were asked to participants for responding. Respectively, 6 of them are about-the form in which demographic data saved in, 3 of them are about Cognitive Reflection Test, 12 of them are about Cognitive Flexibility Scale, and 13 of them are about the form which is measuring the preference of using digital payment methods. Questionnaires and scales were answered in an average 10 minutes and in a single session.

3.4 STATISTICAL ANALYSIS

The data obtained from the research were analyzed in SPSS 25.0 program. In order to determine the relationship between cognitive flexibility levels, analytical and intuitive thinking, and the preference of using digital payment methods, the total scores obtained from the scales were calculated with using Pearson Correlation Coefficient and the Spearman Rho Correlation Coefficient was used when the normal distribution was not met. Then, Independent Sample t Test and One-Way Analysis of Variance (ANOVA) were used to determine whether the cognitive flexibility levels of the participants varied according to their demographic characteristics (gender, socioeconomic level and age) and their knowledge / use of payment methods. In ANOA analysis within-subjects factor were assigned for age as 18-25, 26-33, 34-41, above 42, for education as primary, secondary, graduate and postgraduate, for profession as education, finance, IT, service industry, health, student and the other, for monthly income as below TL 2.000, TL 2.001- TL 5.000, TL 5.001- TL 8.000, TL 8.001-TL 11.000 and above TL11.000. When the distribution was not normal and necessary condition were not provided in the measurements, Mann-Whitney U Test, which is one of the nonparametric tests, was used. While calculation of participants' demographic characteristics, the frequency and percentage were calculated. Significance was defined by Greenhouse-Geisser correction and significance level was defined as $p < 0.05$.

4. RESULTS

In this section, the relationship between the preference of payment methods of the participants and their cognitive flexibility levels, analytical and intuitive thinking related to whether these variables change according to age, gender and socioeconomic level are included.

4.1 PARTICIPANTS' SCORES TAKEN FROM SURVEYS AND SCALES

Participants' attended the survey demographic characteristics were shown below Table 4.1.

Table 4.1: Participants' demographic characteristics

		N	Percent
Gender	Female	99	53,2
	Male	87	46,8
	Total	186	100,0
Age Range	18-25	46	24,7
	26-33	103	55,4
	34-41	27	14,5
	42 and older	10	5,4
Education	Primary	0	0
	Secondary	6	3,2
	Graduate	111	59,7
	Post graduate	69	37,1
Employment Status	Employed	135	27,4
	Non-employed	51	72,6

Profession	Education	16	8,6
	Finance	35	18,8
	IT	13	7,0
	Service Industry	14	7,5
	Health	29	15,6
	Student	30	16,1
	Others	49	26,3
Monthly income	2000 TL below	11	5,9
	2001 TL-5000 TL	90	48,4
	5001 TL-8000 TL	42	22,6
	8001 TL-11000 TL	23	12,4
	11000 TL above	20	10,8

Table 4.2: Answers of participants to CRT

		N	Percent
Question 1	True	107	57,5
	False	79	42,5
Question 2	True	105	56,5
	False	81	43,5
Question 3	True	104	55,9
	False	82	44,1
Groups by decision styles	Analytic	102	54,8
	Intuitive	84	45,2

The numbers and percentages of the correct and incorrect answers of the participants in the CRT are shown in Table 4.2. Participants were divided into the 2 groups which are

predisposed to analytical thinking and intuitive thinking according to their answers for the questions in CRT. The number and percentages of the participants in these 2 groups are shown in Table 4.2 too.

The mean, standard deviation, the highest and the lowest scores of the participants in the measurement of Cognitive Flexibility Scale and digital payment habits are shown in Table 4.3.

Table 4.3: Scores of the CFS and digital payment habits survey

	N	Min	Max	$\bar{x}$	S
Cognitive Flexibility Scale	186	34	75	58,35	7,726
Digital Payment Habit Survey	186	12	36	18,20	5,009

4.2 RESULTS ABOUT ANALYTICAL AND INTUITIVE THINKING

In this research, participants' analytical and intuitive thinking skills are evaluated with CRT. In this test, participants who have one or no right answer are considered as a group inclined to intuitive thinking; participants who have two or three right answers are considered as a group inclined to analytical thinking. To find out there is any relationship between participants' gender-employment status and thinking styles, chi-square test was applied. According to test results, it is not statistically significant that there is a relationship between gender and thinking styles. However, it is statistically significant that there is a relationship between employment status and thinking styles ($p<.05$). To find out relationship between CRT's scores means and education level, age, income, profession, one tailed ANOVA test is applied. According to analysis, there is no significant differences between CRT's score and age, education and income; but there is a significant difference between CRT's score and profession ($F=2,495$; $p<.05$). To analyze CRT's scores differences in which sub-group of

the professions, post hoc Tukey test was applied. Results show that, there is a statistical difference in favor of sub-groups of the finance and student ($p=p<0.05$). Pearson's product-moment correlation analysis was applied to find relationship between CRT's and CFS's scores. Outcome of the analysis is that there is a relationship as a positive way in the $p<.05$ level ($r=.175$; $p<.05$).

Chi-square test was applied to find relationship between participants' familiarity status and using patterns of digital payment methods and their thinking styles. According to outcomes, there is a statistically significant relationship between thinking styles and knowing contactless payment with credit/debit card and knowing payment with NFC ($p<.05$).

4.3 RESULTS RELATED COGNITIVE FLEXIBILITY

In this study, participants are analyzed with cognitive flexibility scale. Independent group t test was applied according to find relationship between CFS's scores and gender, employment status and participants' thinking styles. According to analyses' outcomes, relationship between CFS's scores and participants' thinking styles, analytical thinking or intuitive thinking is statistically significant ($t=-1.976$ $p<.05$). Moreover, scores taken from CFS are changing significantly due to the gender ($t=-4.447$ $p<.00$) but there is significant difference for employment status. One tailed variance analysis (ANOVA) was applied according to find significant differences between mean of the CFS's scores and education level, age, income and profession. The outcome of the analysis shows that statistically, there is no relationship between demographic variables and CFS scores.

Independent group t test was applied according to find relationship between participants' cognitive flexibility skills and knowing and usage of digital payment methods. According to results of the test, there is statistically significant relationship between cognitive flexibility skills and knowing payment with mobile application ($t=-2,375$ $p<.50$), knowing payment

with QR code (t=-3,335 p<.50), knowing payment with NFC (t=-3,193 p<.50), knowing payment with cryptocurrency (t=-2,685) p<.50), using contactless payment with credit and debit card (t=-2,049 p<.50), using payment with cryptocurrencies if legal regulations are made (t=-2,529 p<.50), using crypto currencies as a money transferring way with if legal regulations are made (t=-2,944 p<.50), using crypto currencies as an investing method if legal regulations are made (t=-1,688 p<.50). Correlations between participants' cognitive flexibility scores and digital payment methods could not be found.

One tailed variance analysis (ANOVA) was applied according to determine statistically significant relationship between participants' scores' means, which are taken from the survey of the scaling to cognitive flexibility levels, and both of old and new generations users and participants who use the mobile payment method. According to outcome of the analysis, participants' cognitive flexibility levels change significantly due to the old and new generations users and participants who use the mobile payment method (F=3,668; p<.05). Post huc Hochberg GT2 test was applied according to find for which users' cognitive flexibility score is changing. Finally, analysis shows that cognitive flexibility levels are significant as a positive way for the new generations (p<0.05).

4.4. RESULTS RELATED TO MEASUREMENT OF DIGITAL PAYMENT HABIT OF PARTICIPANTS

The frequencies and percentages of the participants to know and use digital payment methods are shown in Table 4.4. The potential attitude of the participants to use of cryptocurrency are presented in Table 4.5.

Table 4.4: Characteristics of digital payment habits of participants

		N	Percent
Payment with credit/debit card	Familiar	184	98,9
	Unfamiliar	2	1,1
Contactless Payment with credit/debit card	Familiar	172	92,5
	Unfamiliar	14	7,5
Payment with Mobile Payment Applications	Familiar	164	88,2
	Unfamiliar	22	11,8
Payment with QR Code	Familiar	135	72,6
	Unfamiliar	51	27,4
Payment with NFC	Familiar	118	63,4
	Unfamiliar	68	36,6
Payment with Cryptocurrency	Familiar	125	67,2
	Unfamiliar	61	32,8
Payment with credit/debit card	Familiar	182	97,8
	Unfamiliar	4	2,2
Contactless Payment with credit/debit card	Familiar	143	76,9
	Unfamiliar	43	23,1
Payment with Mobile Payment Applications	Familiar	117	62,9
	Unfamiliar	69	37,1
Payment with QR Code	Familiar	85	45,7
	Unfamiliar	101	54,3
Payment with NFC	Familiar	38	20,4
	Unfamiliar	148	79,6
Payment with Cryptocurrency	Familiar	8	4,3
	Unfamiliar	178	95,7

Table 4.5: Participants' attitude of cryptocurrency usage in the future

		N	Percent
Usage of Cryptocurrency as Investment Instrument	Yes	94	50,5
	No	92	49,5
Usage of Cryptocurrency as Transfer Method	Yes	88	47,3
	No	98	52,7
Usage of Cryptocurrency as Payment Method	Yes	85	45,7
	No	101	54,3

The chi-square test was applied to determine whether the behavior of participants using digital payment methods changed according to knowledge of these methods.

As a result of the statistical analysis, the dependence of variables, the methods of familiarity and using mobile payment methods, knowing and using payment with QR code method, and familiarity and using payment with NFC method, was statistically significant (p=.00) among each other and the results were shown in Table 4.6.

The dependence of variables, the methods of knowing and using credit/debit card payment methods, knowing and using contactless payment with credit/debit card method, and knowing and using payment with cryptocurrency method, is not significant among each other.

Table 4.6: Relationship between familiarity and usage

Mobil Payment Methods (N)		Mobile Payment Methods (N)		$\chi 2$	p Value
		Using	Not Using		
	Familiar	112	52	$\chi 2$=15,362	p=.000
	Unfamiliar	5	17		
Payment QR Code (N)		Payment with QR Code (N)			

		Using	Not Using		
	Familiar	81	72	$\chi 2$=16,619	p=.000
	Unfamiliar	4	29		
Payment NFC (N)		Payment with NFC (N)			
		Using	Not Using		
	Familiar	35	83	$\chi 2$=15,401	p=.000
	Unfamiliar	3	65		

Independent Sample t Test was applied in order to determine whether the scores of participants in the survey, in which digital payment habits were measured, differed significantly according to gender and employment status. There is no significant difference between payment habits, and gender and employment status.

One-Way Analysis of Variance (ANOVA) was applied in order to determine whether the mean of scores of participants in the survey, in which digital payment habits were measured, differed significantly according to education level, age, monthly income, profession etc. As a result of analysis; there is no significant difference between mean of scores, and demographic variables.

5. DISCUSSION AND CONCLUSION

This study found evidences of relation between analytical or intuitive thinking capabilities, cognitive flexibility and digital payment methods. Participants with analytical thinking capabilities and intuitive thinking capabilities have varying knowledge about the payment methods of contactless payment cards and NFC. Similarly, participants who have different degrees of cognitive flexibility have different levels of familiarities to mobile application payment, QR code payment, NFC payment, cryptocurrency payment and contactless payment methods. Moreover, cognitive flexibility may have an impact on the usage of contactless payment, cryptocurrency payment/transfer/investment methods, but it has not got an impact on digital payment methods in general. The most striking finding is the influence of the cognitive flexibility on the tendency of using the cryptocurrency payment method. The analysis showed that participants who have higher cognitive flexibility scores are more prone to use cryptocurrency methods. Another notable finding is the relationship between the usage habits and the knowledge of different payment methods. If a participant is familiar with mobile payment methods, QR code payment method or NFC payment method, he / she is more likely to use that method but this is not valid for payment cards, contactless cards payment and digital payment methods. Last but not the least, a relation between cognitive flexibility scores and CRT scores is found.

Participants are categorized by their tendencies of using different payment methods. New generation users, participants who prefer mobile payment methods and old generation users are defined by their preferences of payment methods as users who are willing to use cryptocurrency, who uses mobile payment methods and who uses cash payment method, payment cards methods, contactless payment cards methods respectively. New generation users have higher scores of cognitive flexibility than participants who prefer mobile payment methods and old generation users. Cognitive flexibility is a reflection of the ability to adapt changes. Since cryptocurrency is a new kind of payment method, it is not surprising that the more cognitively flexible participants are more open minded to this new payment method.

David Birch (2017) postulated 5 reasons for a consumer to prefer different kinds of payment methods. These reasons are conservativeness, infrastructure, privacy, security and freedom. According to Birch (2017) conservativeness is one of the causes for choosing the older payment methods. Moreover, conservativeness and cognitive flexibility can be considered to be falling at the opposite sides of the spectrum of cognitive agility. Therefore, it can be suggested that consumers who are less cognitively flexible than others are more likely to use older payment methods. Furthermore, our results showed that cognitive flexibility scale scores have an impact on the decision of using old generation payment methods, mobile payment methods and new generation payment methods. This finding may be interpreted as the tradition change is slow and this change needs a social acceptance.

When analyzed independently from other variables, usage behavior of different payment methods and the familiarity to those methods were related in general. This evidence is consistent with the consumer behavior, since consumers are probably less likely to use unfamiliar financial methods. In order for the emergence of the knowledge, there has to be the information exposure but exposure to the information alone is not sufficient for the knowledge. When an information is handled by the cognitive processes, some aspects of the mind are probably responsible for the transformation of that information to the knowledge. In this study, it is found that the cognitive flexibility differences between the participants who are familiar with the payment methods of QR code, mobile applications, NFC and cryptocurrency and who are not familiar with those methods are statistically significant. Therefore, if it is assumed that both the cognitively flexible and cognitively less flexible consumers are exposed to the same amount of information, cognitively flexible consumers probably transformed that information to their knowledge more. Same results are not reflected on the usage behavior differences between two kinds of consumers. This is most probably because of the infrastructure problem Birch referred in his book named Before Babylon, Beyond Bitcoin. In Turkey, cryptocurrency as a payment method is illegal, infrastructure for NFC, QR code, mobile applications methods are not sufficient yet. Whether consumers are familiar to those payment methods or not, they are not able to use those

methods as they would want to. This is probably why the results are not identical for usage behavior of and familiarity to those payment methods.

Studies in which the relationship between cognitive flexibility and gender investigated, no significant difference is reported (Martin and Rubin 1995). In contrast to that, in this study a significant relationship between cognitive flexibility and gender of the participants is found. There is not significant relationship between the cognitive flexibility and age of the participants. This result can be interpreted as the small age range of the participants could be the reason behind the result. In the analysis, if the range is large enough the analysis will be more meaningful. In previous studies, males generally score significantly higher on the CRT than females (Frederick 2005). However, in this study, there was no significant difference between CRT scores of males and females.

The heterogeneous distribution of the sample profile in terms of age and occupation, and online self-report measurement are limitations of this study. In particular, the participants are likely to have been exposed to the CRT test earlier. This may have caused a ceiling effect (with only 37% of participants answering all three problems correctly, %22 of participants answering all three problems incorrectly). Therefore, measurement of thinking styles may not be sensitive enough. The strengths of the study are equal distribution of the participant profile in terms of gender, large sample size and approach to the digital payment methods preference in two axes (familiarity and usage).

As a conclusion; this study revealed that old generation payment methods are used more than the newer ones. This difference can be explained by conservatism, infrastructure, freedom, privacy and security. Conservatism is traditional behavior of the people when they are choosing a payment method. Nowadays especially in developed people who prefers countries cash payment are decreasing while cash is still an important payment method. Many people probably do not want to switch to another payment method than cash because of their habits and they think that cash is safer. However, the belief that the cash is fast, simple and safe is not true. Quite the contrary producing cash, transfer, keep, destroy and

reproduce is a big burden and high cost for people and governments. Another reason for people to use old generation payment methods can be the lack of infrastructure. This reason will lead to the inaccessibility of newer generation payment methods. The third reason could be the states' desire of printing the money itself because banknotes are used as an independence indicator. The existence of digital money could be regarded as a threat to the independence of their financial policies. Privacy as a fourth reason is about the anonymous usage of cash. The last reason is privacy which is mainly about cyber pirates' threat to digital payment systems. Although security concerns are trying to be revealed by blockchain, cloud services and biometric methods there is still not an absolute solution. Other than these reasons, decisions of people as consumers are affected by their cognitive flexibility levels in this study. Cognitive flexibility can be described as the ability of adaptation to changing conditions. In the light of these findings, participants who adapt changes easier in general would adapt to changing payment method technologies too.

Future studies should consider the newer payment methods, work with a more homogenous sample profile and higher number of participants. In addition focusing on cryptocurrency and other potential payment methods will also be important.

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APPENDICES

Appendix A.1 Survey Questions

PART 1

1. Gender

Male

Female

Others

2. Range of your age

18-25

26-33

34-41

42 and older

3. Education status

Primary

Secondary

Graduate

Post Graduate

4. Do you work?

Yes

No

5. Profession

Education

Finance

IT

Service Industry

Health

Student

Others

6. Your monthly income

2000 TL and below

2001 TL - 5000 TL

5001 TL - 8000 TL

8001 TL - 11000 TL

11000 TL and above

PART 2

(1) A pen and an eraser cost TL1.10 in total. The pen costs 1.00 TL more than the eraser.

How much does the pen cost?

0.05

1.05

5

(2) If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?

1

5

100

(3) In a lake, there is a patch of lily pads. Every day, the patch doubles in size.

If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

2

24

47

PART 3

The following statements deal with your beliefs and feelings about your own behavior. Read each statement and respond by selecting how much you agree or disagree with each statement.

Scale: agree

- {score=6} strongly agree

- {score=5} agree

- {score=4} slightly agree

- {score=3} slightly disagree

- {score=2} disagree

- {score=1} strongly disagree

10- I can communicate an idea in many different ways.

11- I avoid new and unusual situations.

12- I feel like I never get to make decisions.

13- I can find workable solutions to seemingly unsolvable problems.

14- I seldom have choices when deciding how to behave.

15- I am willing to work at creative solutions to problems.

16- In any given situation, I am able to act appropriately.

17- My behavior is a result of conscious decisions that I make.

18- I have many possible ways of behaving in any given situation.

19- I have difficulty using my knowledge on a given topic in real life situations.

20- I am willing to listen and consider alternatives for handling a problem.

21- I have the self-confidence necessary to try different ways of behaving

PART 4

22. Which of the following payment methods have you heard?

Multiple options can be marked.

Pay with bank card and/or credit card

Contactless pay with bank card and/or credit card

Pay with mobile applications (e.g. BKM Express, Masterpass, Bonusflaş, Yapıkredi Mobil etc.)

Pay with QR Code (e.g. Starbucks mobile application, BKM Express etc.)

Pay with NFC (Contactless payment via smartphone)

Pay with Crypto Currency (e.g. Bitcoin, Etherium, Ripple etc.)

23. Which of the following payment methods have you used?

Multiple options can be marked.

Pay with bank card and/or credit card

Contactless pay with bank card and/or credit card

Pay with mobile applications (e.g. BKM Express, Masterpass, Bonusflaş, Yapıkredi Mobil etc.)

Pay with QR Code (e.g. Starbucks mobile application, BKM Express etc.)

Pay with NFC (Contactless payment via smartphone)

Pay with Crypto Currency (e.g. Bitcoin, Etherium, Ripple etc.)

24. How often do you use cash when you are shopping from store?

Never

Rarely

Sometimes

Usually

Always

25. How often do you use bank card and/or credit card when you are shopping from store?

Never

Rarely

Sometimes

Usually

Always

26. How often do you use contactless payment method with bank card and/or credit card when you are shopping from store?

Never

Rarely

Sometimes

Usually

Always

27. How often do you use mobile applications (e.g. BKM Express, Masterpass, Bonusflaş, Yapıkredi Mobil etc.) payment method when you are shopping from store?

Never

Rarely

Sometimes

Usually

Always

28. How often do you use mobile applications (e.g. BKM Express, Masterpass, Bonusflaş, Yapıkredi Mobil etc.) contactless payment method when you are shopping from store?

Never

Rarely

Sometimes

Usually

Always

29. How often do you use QR Code (e.g. Starbucks mobile application, BKM Express etc.) payment method when you are shopping from store?

Never

Rarely

Sometimes

Usually

Always

30. How often do you use QR Code (e.g. BKM Express, Masterpass, Garantipay, Turkcell Mobil Ödeme etc.) payment method when you are shopping on online?

Never

Rarely

Sometimes

Usually

Always

31. How often do you use QR Code payment method when you are shopping on online?

Never

Rarely

Sometimes

Usually

Always

32. If legal regulations are made do you use crypto currencies (e.g. Bitcoin, Etherium, Ripple etc.) as a payment method?

Yes

No

33. If legal regulations are made do you use crypto currencies (e.g. Bitcoin, Etherium, Ripple etc.) as a way of money transferring?

34. If legal regulations are made do you use crypto currencies (e.g. Bitcoin, Etherium, Ripple etc.) as an investing method?

Yes

No

Appendix A.2 SPSS Tables

Descriptives

			Statistic	Std. Error
BYT_SUM	Mean		,55	,037
	95% Confidence Interval for Mean	Lower Bound	,48	
		Upper Bound	,62	
	5% Trimmed Mean		,55	
	Median		1,00	
	Variance		,249	
	Std. Deviation		,499	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,196	,178
	Kurtosis		-1,983	,355
1.Cinsiyet	Mean		1,47	,037
	95% Confidence Interval for Mean	Lower Bound	1,40	
		Upper Bound	1,54	
	5% Trimmed Mean		1,46	
	Median		1,00	
	Variance		,250	
	Std. Deviation		,500	
	Minimum		1	
	Maximum		2	
	Range		1	
	Interquartile Range		1	
	Skewness		,130	,178
	Kurtosis		-2,005	,355
2. Yaş aralıgı	Mean		2,01	,057
	95% Confidence Interval for Mean	Lower Bound	1,89	
		Upper Bound	2,12	
	5% Trimmed Mean		1,95	
	Median		2,00	
	Variance		,611	
	Std. Deviation		,782	
	Minimum		1	
	Maximum		4	
	Range		3	
	Interquartile Range		0	
	Skewness		,677	,178
	Kurtosis		,419	,355
3.Eğitim	Mean		3,34	,039
	95% Confidence Interval for Mean	Lower Bound	3,26	
		Upper Bound	3,42	
	5% Trimmed Mean		3,36	
	Median		3,00	

	Variance		,290	
	Std. Deviation		,539	
	Minimum		2	
	Maximum		4	
	Range		2	
	Interquartile Range		1	
	Skewness		,044	,178
	Kurtosis		-,798	,355
4.Çalışma	Mean		,73	,033
	95% Confidence Interval for Mean	Lower Bound	,66	
		Upper Bound	,79	
	5% Trimmed Mean		,75	
	Median		1,00	
	Variance		,200	
	Std. Deviation		,447	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-1,021	,178
	Kurtosis		-,969	,355
5.Meslek	Mean		4,56	,155
	95% Confidence Interval for Mean	Lower Bound	4,26	
		Upper Bound	4,87	
	5% Trimmed Mean		4,63	
	Median		5,00	
	Variance		4,474	
	Std. Deviation		2,115	
	Minimum		1	
	Maximum		7	
	Range		6	
	Interquartile Range		5	
	Skewness		-,328	,178
	Kurtosis		-1,368	,355
6.Aylık Hane Geliriniz	Mean		2,74	,081
	95% Confidence Interval for Mean	Lower Bound	2,58	
		Upper Bound	2,90	
	5% Trimmed Mean		2,71	
	Median		2,00	
	Variance		1,211	
	Std. Deviation		1,101	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		,760	,178
	Kurtosis		-,346	,355
7.BYT1	Mean		,58	,036
		Lower Bound	,50	

	95% Confidence Interval for Mean	Upper Bound	,65	
	5% Trimmed Mean		,58	
	Median		1,00	
	Variance		,246	
	Std. Deviation		,496	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,307	,178
	Kurtosis		-1,927	,355
8.BYT2	Mean		,56	,036
	95% Confidence Interval for Mean	Lower Bound	,49	
		Upper Bound	,64	
	5% Trimmed Mean		,57	
	Median		1,00	
	Variance		,247	
	Std. Deviation		,497	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,262	,178
	Kurtosis		-1,952	,355
9.BYT3	Mean		,56	,037
	95% Confidence Interval for Mean	Lower Bound	,49	
		Upper Bound	,63	
	5% Trimmed Mean		,57	
	Median		1,00	
	Variance		,248	
	Std. Deviation		,498	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,240	,178
	Kurtosis		-1,964	,355
BEO_TOPLAM	Mean		58,35	,566
	95% Confidence Interval for Mean	Lower Bound	57,24	
		Upper Bound	59,47	
	5% Trimmed Mean		58,58	
	Median		59,00	
	Variance		59,690	
	Std. Deviation		7,726	
	Minimum		34	
	Maximum		75	
	Range		41	
	Interquartile Range		9	

	Skewness		-,402	,178
	Kurtosis		,499	,355
Duyma_Banka kartı_kredi kartı	Mean		,99	,008
	95% Confidence Interval for Mean	Lower Bound	,97	
		Upper Bound	1,00	
	5% Trimmed Mean		1,00	
	Median		1,00	
	Variance		,011	
	Std. Deviation		,103	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		-9,565	,178
	Kurtosis		90,456	,355
Duyma_Temassiz	Mean		,92	,019
	95% Confidence Interval for Mean	Lower Bound	,89	
		Upper Bound	,96	
	5% Trimmed Mean		,97	
	Median		1,00	
	Variance		,070	
	Std. Deviation		,265	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		-3,246	,178
	Kurtosis		8,629	,355
Duyma_Mobil	Mean		,88	,024
	95% Confidence Interval for Mean	Lower Bound	,83	
		Upper Bound	,93	
	5% Trimmed Mean		,92	
	Median		1,00	
	Variance		,105	
	Std. Deviation		,324	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		-2,383	,178
	Kurtosis		3,720	,355
Duyma_QR	Mean		,82	,028
	95% Confidence Interval for Mean	Lower Bound	,77	
		Upper Bound	,88	
	5% Trimmed Mean		,86	
	Median		1,00	
	Variance		,147	
	Std. Deviation		,383	
	Minimum		0	

	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		-1,703	,178
	Kurtosis		,908	,355
Duyma_NFC	Mean		,63	,035
	95% Confidence Interval for Mean	Lower Bound	,56	
		Upper Bound	,70	
	5% Trimmed Mean		,65	
	Median		1,00	
	Variance		,233	
	Std. Deviation		,483	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,563	,178
	Kurtosis		-1,702	,355
Duyma_Dijita_para	Mean		,67	,035
	95% Confidence Interval for Mean	Lower Bound	,60	
		Upper Bound	,74	
	5% Trimmed Mean		,69	
	Median		1,00	
	Variance		,222	
	Std. Deviation		,471	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,739	,178
	Kurtosis		-1,470	,355
Kullanma_Banka kartı_kredi kartı	Mean		,98	,011
	95% Confidence Interval for Mean	Lower Bound	,96	
		Upper Bound	1,00	
	5% Trimmed Mean		1,00	
	Median		1,00	
	Variance		,021	
	Std. Deviation		,145	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		-6,651	,178
	Kurtosis		42,693	,355
Kullanma_Temassiz	Mean		,77	,031
	95% Confidence Interval for Mean	Lower Bound	,71	
		Upper Bound	,83	
	5% Trimmed Mean		,80	
	Median		1,00	

	Variance		,179	
	Std. Deviation		,423	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		-1,286	,178
	Kurtosis		-,351	,355
Kullanmaa_Mobil	Mean		,63	,036
	95% Confidence Interval for Mean	Lower Bound	,56	
		Upper Bound	,70	
	5% Trimmed Mean		,64	
	Median		1,00	
	Variance		,235	
	Std. Deviation		,484	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		-,539	,178
	Kurtosis		-1,729	,355
Kullanma_QR	Mean		,46	,037
	95% Confidence Interval for Mean	Lower Bound	,38	
		Upper Bound	,53	
	5% Trimmed Mean		,45	
	Median		,00	
	Variance		,249	
	Std. Deviation		,499	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		,174	,178
	Kurtosis		-1,991	,355
Kullanma_NFC	Mean		,20	,030
	95% Confidence Interval for Mean	Lower Bound	,15	
		Upper Bound	,26	
	5% Trimmed Mean		,17	
	Median		,00	
	Variance		,163	
	Std. Deviation		,404	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		1,479	,178
	Kurtosis		,189	,355
Kullanma_Dijita_para	Mean		,04	,015
		Lower Bound	,01	

	95% Confidence Interval for Mean	Upper Bound	,07	
	5% Trimmed Mean		,00	
	Median		,00	
	Variance		,041	
	Std. Deviation		,203	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		0	
	Skewness		4,542	,178
	Kurtosis		18,829	,355
24.Mağazadan alışveriş nakit ödeme	Mean		2,46	,072
	95% Confidence Interval for Mean	Lower Bound	2,32	
		Upper Bound	2,60	
	5% Trimmed Mean		2,44	
	Median		2,00	
	Variance		,953	
	Std. Deviation		,976	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		,230	,178
	Kurtosis		-,508	,355
25.Mağazadan alışveriş banka ve/veya kredi kartıyla	Mean		3,94	,056
	95% Confidence Interval for Mean	Lower Bound	3,82	
		Upper Bound	4,05	
	5% Trimmed Mean		3,99	
	Median		4,00	
	Variance		,590	
	Std. Deviation		,768	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		0	
	Skewness		-,757	,178
	Kurtosis		1,100	,355
26.Mağazadan alışveriş banka ve/veya kredi kartıyla temassız ödeme	Mean		2,67	,086
	95% Confidence Interval for Mean	Lower Bound	2,50	
		Upper Bound	2,84	
	5% Trimmed Mean		2,65	
	Median		3,00	
	Variance		1,368	
	Std. Deviation		1,169	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	

	Skewness		-,012	,178
	Kurtosis		-1,058	,355
27.Mağazadan alışveriş mobil ödeme uygulamaları	Mean		1,84	,078
	95% Confidence Interval for Mean	Lower Bound	1,69	
		Upper Bound	2,00	
	5% Trimmed Mean		1,74	
	Median		1,00	
	Variance		1,138	
	Std. Deviation		1,067	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		1,126	,178
	Kurtosis		,489	,355
28.Mağazadan alışveriş mobil ödeme uygulamalar aracılığıyla temassız ödeme	Mean		1,74	,078
	95% Confidence Interval for Mean	Lower Bound	1,59	
		Upper Bound	1,90	
	5% Trimmed Mean		1,63	
	Median		1,00	
	Variance		1,122	
	Std. Deviation		1,059	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		1,305	,178
	Kurtosis		,876	,355
29.Mağazadan_ mobil ödeme uygulamaları aracılığıyla QR kod	Mean		1,81	,081
	95% Confidence Interval for Mean	Lower Bound	1,65	
		Upper Bound	1,97	
	5% Trimmed Mean		1,70	
	Median		1,00	
	Variance		1,235	
	Std. Deviation		1,111	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		1,287	,178
	Kurtosis		,722	,355
30.İnternet alışverişleri_mpbil ödeme	Mean		2,21	,093
	95% Confidence Interval for Mean	Lower Bound	2,03	
		Upper Bound	2,39	
	5% Trimmed Mean		2,12	
	Median		2,00	
	Variance		1,615	
	Std. Deviation		1,271	
	Minimum		1	

	Maximum		5	
	Range		4	
	Interquartile Range		2	
	Skewness		,637	,178
	Kurtosis		-,860	,355
31.İnternet alışverişleri_QR kod ile ödeme	Mean		1,53	,071
	95% Confidence Interval for Mean	Lower Bound	1,39	
		Upper Bound	1,67	
	5% Trimmed Mean		1,38	
	Median		1,00	
	Variance		,932	
	Std. Deviation		,965	
	Minimum		1	
	Maximum		5	
	Range		4	
	Interquartile Range		1	
	Skewness		2,129	,178
	Kurtosis		4,208	,355
32.digital paraları_ödeme aracı	Mean		,46	,037
	95% Confidence Interval for Mean	Lower Bound	,38	
		Upper Bound	,53	
	5% Trimmed Mean		,45	
	Median		,00	
	Variance		,249	
	Std. Deviation		,499	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		,174	,178
	Kurtosis		-1,991	,355
33.digital para_transfer yöntemi	Mean		,47	,037
	95% Confidence Interval for Mean	Lower Bound	,40	
		Upper Bound	,55	
	5% Trimmed Mean		,47	
	Median		,00	
	Variance		,251	
	Std. Deviation		,501	
	Minimum		0	
	Maximum		1	
	Range		1	
	Interquartile Range		1	
	Skewness		,109	,178
	Kurtosis		-2,010	,355
34.digital paralar_yatırım aracı	Mean		,51	,037
	95% Confidence Interval for Mean	Lower Bound	,43	
		Upper Bound	,58	
	5% Trimmed Mean		,51	
	Median		1,00	

	Variance	,251	
	Std. Deviation	,501	
	Minimum	0	
	Maximum	1	
	Range	1	
	Interquartile Range	1	
	Skewness	-,022	,178
	Kurtosis	-2,021	,355

T-Test

Group Statistics

	Duyma_QR	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	duymamış	33	16,21	4,512	,785
	duymuş	153	18,63	5,021	,406
anket1_kredibanka	duymamış	33	9,03	1,591	,277
	duymuş	153	9,08	1,249	,101
anket2_mobil	duymamış	33	8,48	4,757	,828
	duymuş	153	11,13	5,250	,424

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	2,393	,124	-2,556	184	,011	-2,422	,947	-4,291	-,553
	Equal variances not assumed			-2,739	50,613	,008	-2,422	,884	-4,197	-,647
anket1_kredibanka	Equal variances assumed	4,692	,032	-,191	184	,849	-,048	,252	-,546	,450
	Equal variances not assumed			-,163	40,922	,871	-,048	,295	-,643	,547
anket2_mobil	Equal variances assumed	1,935	,166	-2,668	184	,008	-2,646	,992	-4,603	-,689
	Equal variances not assumed			-2,843	50,288	,006	-2,646	,931	-4,515	-,777

Group Statistics

	Kullanma_QR	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	kullanmamış	101	15,78	3,022	,301
	kullanmış	85	21,08	5,381	,584
anket1_kredibanka	kullanmamış	101	8,81	1,339	,133
	kullanmış	85	9,38	1,215	,132
anket2_mobil	kullanmamış	101	8,16	3,091	,308
	kullanmış	85	13,64	5,736	,622

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	19,602	,000	-8,444	184	,000	-5,300	,628	-6,538	-4,062
	Equal variances not assumed			-8,072	126,991	,000	-5,300	,657	-6,599	-4,001
anket1_kredibanka	Equal variances assumed	,415	,520	-2,987	184	,003	-,565	,189	-,937	-,192
	Equal variances not assumed			-3,012	182,951	,003	-,565	,187	-,934	-,195
anket2_mobil	Equal variances assumed	21,841	,000	-8,276	184	,000	-5,477	,662	-6,782	-4,171
	Equal variances not assumed			-7,891	123,862	,000	-5,477	,694	-6,851	-4,103

T-Test

Group Statistics

	Kullanmaa_Mobil	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	kullanmamış	69	15,43	2,768	,333
	kullanmış	117	19,84	5,317	,492
anket1_kredibanka	kullanmamış	69	8,84	1,346	,162
	kullanmış	117	9,21	1,277	,118
anket2_mobil	kullanmamış	69	7,75	2,872	,346
	kullanmış	117	12,38	5,583	,516

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	23,810	,000	-6,382	184	,000	-4,403	,690	-5,764	-3,042
	Equal variances not assumed			-7,414	181,662	,000	-4,403	,594	-5,575	-3,231
anket1_kredibanka	Equal variances assumed	,001	,978	-1,843	184	,067	-,365	,198	-,755	,026
	Equal variances not assumed			-1,818	136,715	,071	-,365	,200	-,761	,032
anket2_mobil	Equal variances assumed	22,408	,000	-6,392	184	,000	-4,622	,723	-6,049	-3,196
	Equal variances not assumed			-7,441	181,214	,000	-4,622	,621	-5,848	-3,397

T-Test

Group Statistics

	Duyma_Banka kartı_kredi kartı	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	duymamış	2	14,50	,707	,500
	duymus	184	18,24	5,021	,370
anket1_kredibanka	duymamış	2	9,50	,707	,500
	duymus	184	9,07	1,317	,097
anket2_mobil	duymamış	2	6,00	,000	,000
	duymus	184	10,71	5,258	,388

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	2,524	,114	-1,052	184	,294	-3,745	3,560	-10,769	3,280
	Equal variances not assumed			-6,019	2,393	,017	-3,745	,622	-6,041	-1,448
anket1_kredibanka	Equal variances assumed	,956	,330	,465	184	,642	,435	,934	-1,408	2,278
	Equal variances not assumed			,854	1,077	,542	,435	,509	-5,042	5,912
anket2_mobil	Equal variances assumed	3,069	,081	-1,264	184	,208	-4,712	3,728	-12,067	2,643
	Equal variances not assumed			-12,155	183,000	,000	-4,712	,388	-5,477	-3,947

T-Test

Group Statistics

	Duyma_Temassiz	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	duymamış	14	20,50	7,112	1,901
	duymuş	172	18,02	4,779	,364
anket1_kredibanka	duymamış	14	9,00	1,359	,363
	duymuş	172	9,08	1,311	,100
anket2_mobil	duymamış	14	13,50	7,959	2,127
	duymuş	172	10,43	4,931	,376

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	5,428	,021	1,794	184	,074	2,483	1,384	-,248	5,213
	Equal variances not assumed			1,283	13,972	,220	2,483	1,935	-1,669	6,634
anket1_kredibanka	Equal variances assumed	,047	,829	-,207	184	,836	-,076	,365	-,796	,645
	Equal variances not assumed			-,201	15,039	,844	-,076	,377	-,878	,727
anket2_mobil	Equal variances assumed	7,509	,007	2,123	184	,035	3,070	1,446	,217	5,923
	Equal variances not assumed			1,421	13,824	,177	3,070	2,160	-1,569	7,708

Group Statistics

	Duyma_Mobil	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	duymamış	22	16,41	4,876	1,040
	duymuş	164	18,45	4,992	,390
anket1_kredibanka	duymamış	22	8,91	1,269	,271
	duymuş	164	9,09	1,319	,103
anket2_mobil	duymamış	22	8,86	5,410	1,153
	duymuş	164	10,90	5,201	,406

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	1,353	,246	-1,801	184	,073	-2,036	1,131	-4,267	,194
	Equal variances not assumed			-1,834	27,252	,078	-2,036	1,110	-4,313	,241
anket1_kredibanka	Equal variances assumed	,524	,470	-,612	184	,542	-,182	,298	-,771	,406
	Equal variances not assumed			-,630	27,455	,534	-,182	,289	-,776	,411
anket2_mobil	Equal variances assumed	,172	,679	-1,719	184	,087	-2,039	1,186	-4,379	,302
	Equal variances not assumed			-1,667	26,477	,107	-2,039	1,223	-4,550	,472

Group Statistics

	Duyma_Dijita_para	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	duymamış	61	17,87	4,784	,612
	duymuş	125	18,37	5,127	,459
anket1_kredibanka	duymamış	61	9,07	1,365	,175
	duymuş	125	9,07	1,290	,115
anket2_mobil	duymamış	61	10,30	5,270	,675
	duymuş	125	10,84	5,255	,470

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	,814	,368	-,637	184	,525	-,499	,784	-2,045	1,047
	Equal variances not assumed			-,652	126,832	,515	-,499	,765	-2,013	1,015
anket1_kredibanka	Equal variances assumed	,065	,799	-,031	184	,975	-,006	,205	-,412	,399
	Equal variances not assumed			-,031	113,312	,976	-,006	,209	-,421	,408
anket2_mobil	Equal variances assumed	,003	,958	-,663	184	,508	-,545	,822	-2,166	1,076
	Equal variances not assumed			-,663	118,816	,509	-,545	,822	-2,173	1,084

T-Test

Group Statistics

	Duyma_NFC	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	duymamış	68	17,51	4,676	,567
	duymuş	118	18,60	5,169	,476
anket1_kredibanka	duymamış	68	8,94	1,268	,154
	duymuş	118	9,14	1,335	,123
anket2_mobil	duymamış	68	9,99	5,092	,617
	duymuş	118	11,05	5,325	,490

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	1,288	,258	-1,429	184	,155	-1,087	,761	-2,587	,413
	Equal variances not assumed			-1,468	151,553	,144	-1,087	,740	-2,550	,376
anket1_kredibanka	Equal variances assumed	,723	,396	-1,016	184	,311	-,203	,200	-,597	,191
	Equal variances not assumed			-1,031	145,841	,304	-,203	,197	-,592	,186
anket2_mobil	Equal variances assumed	,064	,800	-1,335	184	,183	-1,066	,798	-2,640	,509
	Equal variances not assumed			-1,352	145,075	,179	-1,066	,788	-2,624	,493

T-Test

Group Statistics

	Kullanma_Temassiz	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	kullanmamış	43	16,23	4,879	,744
	kullanmış	143	18,80	4,911	,411
anket1_kredibanka	kullanmamış	43	8,21	1,390	,212
	kullanmış	143	9,33	1,174	,098
anket2_mobil	kullanmamış	43	9,40	5,233	,798
	kullanmış	143	11,04	5,216	,436

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	2,034	,156	-3,007	184	,003	-2,565	,853	-4,247	-,882
	Equal variances not assumed			-3,018	69,586	,004	-2,565	,850	-4,260	-,870
anket1_kredibanka	Equal variances assumed	,321	,572	-5,249	184	,000	-1,119	,213	-1,540	-,699
	Equal variances not assumed			-4,793	61,110	,000	-1,119	,234	-1,586	-,652
anket2_mobil	Equal variances assumed	2,027	,156	-1,814	184	,071	-1,647	,908	-3,438	,145
	Equal variances not assumed			-1,810	69,021	,075	-1,647	,910	-3,461	,168

T-Test

Group Statistics

	Kullanma_Banka karti_kredi karti	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	kullanmamış	4	24,25	11,325	5,662
	kullanmış	182	18,07	4,764	,353
anket1_kredibanka	kullanmamış	4	9,25	2,062	1,031
	kullanmış	182	9,07	1,299	,096
anket2_mobil	kullanmamış	4	18,00	12,193	6,096
	kullanmış	182	10,50	4,951	,367

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	17,086	,000	2,474	184	,014	6,179	2,498	1,251	11,106
	Equal variances not assumed			1,089	3,023	,355	6,179	5,673	-11,798	24,155
anket1_kredibanka	Equal variances assumed	,716	,399	,277	184	,782	,184	,664	-1,127	1,495
	Equal variances not assumed			,178	3,053	,870	,184	1,035	-3,079	3,447
anket2_mobil	Equal variances assumed	18,920	,000	2,880	184	,004	7,500	2,604	2,362	12,638
	Equal variances not assumed			1,228	3,022	,306	7,500	6,107	-11,858	26,858

Group Statistics

	4.Çalışma	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	çalışmıyor	51	17,51	4,415	,618
	çalışıyor	135	18,47	5,207	,448
anket1_kredibanka	çalışmıyor	51	8,57	1,171	,164
	çalışıyor	135	9,26	1,316	,113
anket2_mobil	çalışmıyor	51	10,37	4,508	,631
	çalışıyor	135	10,77	5,519	,475

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	,080	,777	-1,163	184	,246	-,957	,823	-2,580	,666
	Equal variances not assumed			-1,253	105,485	,213	-,957	,764	-2,471	,557
anket1_kredibanka	Equal variances assumed	1,668	,198	-3,288	184	,001	-,691	,210	-1,105	-,276
	Equal variances not assumed			-3,467	100,561	,001	-,691	,199	-1,086	-,295
anket2_mobil	Equal variances assumed	,425	,515	-,460	184	,646	-,398	,865	-2,105	1,309
	Equal variances not assumed			-,504	109,562	,616	-,398	,790	-1,963	1,168

T-Test

Group Statistics

	1.Cinsiyet	N	Mean	Std. Deviation	Std. Error Mean
anket_toplam	kadın	99	18,27	4,618	,464
	erkek	87	18,13	5,447	,584
anket1_kredibanka	kadın	99	8,96	1,253	,126
	erkek	87	9,20	1,371	,147
anket2_mobil	kadın	99	10,81	4,776	,480
	erkek	87	10,49	5,771	,619

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
anket_toplam	Equal variances assumed	,569	,451	,198	184	,843	,146	,738	-1,310	1,602
	Equal variances not assumed			,196	169,575	,845	,146	,746	-1,326	1,619
anket1_kredibanka	Equal variances assumed	1,626	,204	-1,225	184	,222	-,236	,192	-,615	,144
	Equal variances not assumed			-1,218	175,562	,225	-,236	,194	-,618	,146
anket2_mobil	Equal variances assumed	,387	,535	,406	184	,685	,314	,774	-1,212	1,840
	Equal variances not assumed			,401	167,452	,689	,314	,783	-1,232	1,860

*Duyma_Banka kartı_kredi kartı * Kullanma_Banka kartı_kredi kartı Crosstabulation*

			Kullanma_Banka kartı_kredi kartı		
			kullanmamış	kullanmış	Total
Duyma_Banka kartı_kredi kartı	duymamış	Count	0	2	2
		Expected Count	,0	2,0	2,0
	duymus	Count	4	180	184
		Expected Count	4,0	180,0	184,0
Total		Count	4	182	186
		Expected Count	4,0	182,0	186,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,044[a]	1	,833		
Continuity Correction[b]	,000	1	1,000		
Likelihood Ratio	,087	1	,767		
Fisher's Exact Test				1,000	,957
Linear-by-Linear Association	,044	1	,833		
N of Valid Cases	186				

a. 3 cells (75,0%) have expected count less than 5. The minimum expected count is ,04.

b. Computed only for a 2x2 table

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Duyma_Banka kartı_kredi kartı * Kullanma_Banka kartı_kredi kartı	186	100,0%	0	0,0%	186	100,0%

*Duyma_Banka kartı_kredi kartı * Kullanma_Banka kartı_kredi kartı Crosstabulation*

Count

		Kullanma_Banka kartı_kredi kartı		
		kullanmamış	kullanmış	Total
Duyma_Banka kartı_kredi kartı	duymamış	0	2	2
	duymus	4	180	184
Total		4	182	186

*Duyma_Temassiz * Kullanma_Temassiz Crosstabulation*

			Kullanma_Temassiz		
			kullanmamış	kullanmış	Total
Duyma_Temassiz	duymamış	Count	11	3	14
		Expected Count	3,2	10,8	14,0
	duymuş	Count	32	140	172
		Expected Count	39,8	132,2	172,0
Total		Count	43	143	186
		Expected Count	43,0	143,0	186,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	26,193[a]	1	,000		
Continuity Correction[b]	22,928	1	,000		
Likelihood Ratio	21,322	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	26,052	1	,000		
N of Valid Cases	186				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,24.

b. Computed only for a 2x2 table

*Duyma_Mobil * Kullanmaa_Mobil Crosstabulation*

			Kullanmaa_Mobil		
			kullanmamış	kullanmış	Total
Duyma_Mobil	duymamış	Count	17	5	22
		Expected Count	8,2	13,8	22,0
	duymuş	Count	52	112	164
		Expected Count	60,8	103,2	164,0
Total		Count	69	117	186
		Expected Count	69,0	117,0	186,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	17,259[a]	1	,000		
Continuity Correction[b]	15,362	1	,000		
Likelihood Ratio	16,857	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	17,166	1	,000		
N of Valid Cases	186				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 8,16.

b. Computed only for a 2x2 table

*Duyma_QR * Kullanma_QR Crosstabulation*

			Kullanma_QR		
			kullanmamış	kullanmış	Total
Duyma_QR	duymamış	Count	29	4	33
		Expected Count	17,9	15,1	33,0
	duymuş	Count	72	81	153
		Expected Count	83,1	69,9	153,0
Total		Count	101	85	186
		Expected Count	101,0	85,0	186,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	18,227[a]	1	,000		
Continuity Correction[b]	16,619	1	,000		
Likelihood Ratio	20,523	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	18,129	1	,000		
N of Valid Cases	186				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 15,08.

b. Computed only for a 2x2 table

*Duyma_NFC * Kullanma_NFC Crosstabulation*

			Kullanma_NFC		
			kullanmamış	kullanmış	Total
Duyma_NFC	duymamış	Count	65	3	68
		Expected Count	54,1	13,9	68,0
	duymuş	Count	83	35	118
		Expected Count	93,9	24,1	118,0
Total		Count	148	38	186
		Expected Count	148,0	38,0	186,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	16,918[a]	1	,000		
Continuity Correction[b]	15,401	1	,000		
Likelihood Ratio	20,276	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	16,827	1	,000		
N of Valid Cases	186				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 13,89.

b. Computed only for a 2x2 table

*Duyma_Dijita_para * Kullanma_Dijita_para Crosstabulation*

			Kullanma_Dijita_para		
			kullanmamış	kullanmış	Total
Duyma_Dijita_para	duymamış	Count	59	2	61
		Expected Count	58,4	2,6	61,0
	duymuş	Count	119	6	125
		Expected Count	119,6	5,4	125,0
Total		Count	178	8	186
		Expected Count	178,0	8,0	186,0

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,231[a]	1	,631		
Continuity Correction[b]	,009	1	,924		
Likelihood Ratio	,241	1	,623		
Fisher's Exact Test				1,000	,479
Linear-by-Linear Association	,229	1	,632		
N of Valid Cases	186				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 2,62.

b. Computed only for a 2x2 table

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
anket_toplam	klasik ödeme yöntemlerini tercih edenler	25	15,92	2,857	,571	14,74	17,10	12	24
	mobil ödeme yöntemlerini tercih edenler	36	19,22	5,388	,898	17,40	21,05	12	34
	3	125	18,37	5,127	,459	17,46	19,28	12	36
	Total	186	18,20	5,009	,367	17,48	18,93	12	36
BEO_TOPLAM	klasik ödeme yöntemlerini tercih edenler	25	56,68	8,980	1,796	52,97	60,39	35	72
	mobil ödeme yöntemlerini tercih edenler	36	55,89	7,913	1,319	53,21	58,57	34	68
	3	125	59,40	7,235	,647	58,12	60,68	34	75
	Total	186	58,35	7,726	,566	57,24	59,47	34	75
BYT_Toplam	klasik ödeme yöntemlerini tercih edenler	25	1,28	1,308	,262	,74	1,82	0	3
	mobil ödeme yöntemlerini tercih edenler	36	1,53	1,183	,197	1,13	1,93	0	3
	3	125	1,83	1,155	,103	1,63	2,04	0	3
	Total	186	1,70	1,193	,087	1,53	1,87	0	3

Oneway

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
anket_toplam	Between Groups	171,102	2	85,551	3,502	,032
	Within Groups	4471,134	183	24,432		
	Total	4642,237	185			
BEO_TOPLAM	Between Groups	425,585	2	212,793	3,668	,027
	Within Groups	10616,996	183	58,016		
	Total	11042,581	185			
BYT_Toplam	Between Groups	7,656	2	3,828	2,742	,067
	Within Groups	255,484	183	1,396		
	Total	263,140	185			

Oneway

Descriptives

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
anket_toplam	18-25	46	17,46	4,103	,605	16,24	18,67	12	28
	26-33	103	18,95	5,379	,530	17,90	20,00	12	36
	34-41	27	17,04	4,256	,819	15,35	18,72	12	25
	42 ve üstü	10	17,10	6,064	1,917	12,76	21,44	12	31
	Total	186	18,20	5,009	,367	17,48	18,93	12	36
anket1_kredibanka	18-25	46	8,78	1,348	,199	8,38	9,18	6	12
	26-33	103	9,31	1,291	,127	9,06	9,56	7	13
	34-41	27	8,70	1,171	,225	8,24	9,17	7	11
	42 ve üstü	10	8,90	1,370	,433	7,92	9,88	7	11
	Total	186	9,07	1,311	,096	8,88	9,26	6	13
anket2_mobil	18-25	46	10,15	4,152	,612	8,92	11,39	6	23
	26-33	103	11,27	5,804	,572	10,14	12,41	6	30
	34-41	27	9,63	4,334	,834	7,92	11,34	6	20
	42 ve üstü	10	9,50	5,874	1,857	5,30	13,70	6	24
	Total	186	10,66	5,252	,385	9,90	11,42	6	30

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
anket_toplam	egitim	16	17,75	4,091	1,023	15,57	19,93	13	25
	finans	35	18,60	4,577	,774	17,03	20,17	12	31
	bilişim	13	21,62	5,781	1,603	18,12	25,11	13	34
	hizmet	14	18,29	5,622	1,502	15,04	21,53	12	34
	saglık	29	17,76	4,180	,776	16,17	19,35	13	28
	öğrenci	30	17,43	4,812	,878	15,64	19,23	12	28
	diğer	49	17,88	5,622	,803	16,26	19,49	12	36
	Total	186	18,20	5,009	,367	17,48	18,93	12	36
anket1_kredibanka	egitim	16	8,94	,929	,232	8,44	9,43	8	11
	finans	35	9,06	1,162	,196	8,66	9,46	7	11
	bilişim	13	9,77	1,301	,361	8,98	10,56	7	12
	hizmet	14	8,93	1,141	,305	8,27	9,59	7	10
	saglık	29	9,34	1,421	,264	8,80	9,89	7	13
	öğrenci	30	8,47	1,408	,257	7,94	8,99	6	11
	diğer	49	9,18	1,349	,193	8,80	9,57	7	12
	Total	186	9,07	1,311	,096	8,88	9,26	6	13
anket2_mobil	egitim	16	10,06	4,389	1,097	7,72	12,40	6	18
	finans	35	11,20	4,807	,813	9,55	12,85	6	24
	bilişim	13	13,69	6,061	1,681	10,03	17,35	6	27
	hizmet	14	11,00	6,610	1,767	7,18	14,82	6	30
	saglık	29	9,83	4,063	,754	8,28	11,37	6	19
	öğrenci	30	10,57	4,840	,884	8,76	12,37	6	23
	diğer	49	10,12	5,964	,852	8,41	11,84	6	30
	Total	186	10,66	5,252	,385	9,90	11,42	6	30

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
anket_toplam	Between Groups	188,960	6	31,493	1,266	,275
	Within Groups	4453,276	179	24,879		
	Total	4642,237	185			
anket1_kredibanka	Between Groups	20,667	6	3,444	2,073	,059
	Within Groups	297,425	179	1,662		
	Total	318,091	185			
anket2_mobil	Between Groups	171,585	6	28,597	1,038	,402
	Within Groups	4932,077	179	27,554		
	Total	5103,661	185			

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		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
anket_toplam	egitim	16	17,75	4,091	1,023	15,57	19,93	13	25
	finans	35	18,60	4,577	,774	17,03	20,17	12	31
	bilişim	13	21,62	5,781	1,603	18,12	25,11	13	34
	hizmet	14	18,29	5,622	1,502	15,04	21,53	12	34
	saglık	29	17,76	4,180	,776	16,17	19,35	13	28
	öğrenci	30	17,43	4,812	,878	15,64	19,23	12	28
	diğer	49	17,88	5,622	,803	16,26	19,49	12	36
	Total	186	18,20	5,009	,367	17,48	18,93	12	36
anket1_kredibanka	egitim	16	8,94	,929	,232	8,44	9,43	8	11
	finans	35	9,06	1,162	,196	8,66	9,46	7	11
	bilişim	13	9,77	1,301	,361	8,98	10,56	7	12
	hizmet	14	8,93	1,141	,305	8,27	9,59	7	10
	saglık	29	9,34	1,421	,264	8,80	9,89	7	13
	öğrenci	30	8,47	1,408	,257	7,94	8,99	6	11
	diğer	49	9,18	1,349	,193	8,80	9,57	7	12
	Total	186	9,07	1,311	,096	8,88	9,26	6	13
anket2_mobil	egitim	16	10,06	4,389	1,097	7,72	12,40	6	18
	finans	35	11,20	4,807	,813	9,55	12,85	6	24
	bilişim	13	13,69	6,061	1,681	10,03	17,35	6	27
	hizmet	14	11,00	6,610	1,767	7,18	14,82	6	30
	saglık	29	9,83	4,063	,754	8,28	11,37	6	19
	öğrenci	30	10,57	4,840	,884	8,76	12,37	6	23
	diğer	49	10,12	5,964	,852	8,41	11,84	6	30
	Total	186	10,66	5,252	,385	9,90	11,42	6	30

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
anket_toplam	Between Groups	188,960	6	31,493	1,266	,275
	Within Groups	4453,276	179	24,879		
	Total	4642,237	185			
anket1_kredibanka	Between Groups	20,667	6	3,444	2,073	,059
	Within Groups	297,425	179	1,662		
	Total	318,091	185			
anket2_mobil	Between Groups	171,585	6	28,597	1,038	,402
	Within Groups	4932,077	179	27,554		
	Total	5103,661	185			

Oneway

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
anket_toplam	lise	6	15,17	3,061	1,249	11,95	18,38	12	20
	lisans	111	18,23	5,039	,478	17,28	19,17	12	36
	lisans üstü	69	18,43	5,063	,609	17,22	19,65	12	34
	Total	186	18,20	5,009	,367	17,48	18,93	12	36
anket1_kredibanka	lise	6	8,00	1,095	,447	6,85	9,15	7	10
	lisans	111	9,03	1,297	,123	8,78	9,27	6	12
	lisans üstü	69	9,23	1,319	,159	8,92	9,55	7	13
	Total	186	9,07	1,311	,096	8,88	9,26	6	13
anket2_mobil	lise	6	8,17	2,401	,980	5,65	10,69	6	11
	lisans	111	10,68	5,224	,496	9,70	11,67	6	30
	lisans üstü	69	10,84	5,468	,658	9,53	12,15	6	30
	Total	186	10,66	5,252	,385	9,90	11,42	6	30

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
anket_toplam	Between Groups	59,077	2	29,539	1,179	,310
	Within Groups	4583,159	183	25,045		
	Total	4642,237	185			
anket1_kredibanka	Between Groups	8,883	2	4,441	2,629	,075
	Within Groups	309,209	183	1,690		
	Total	318,091	185			
anket2_mobil	Between Groups	39,618	2	19,809	,716	,490
	Within Groups	5064,044	183	27,672		
	Total	5103,661	185			

Post Hoc Tests

Multiple Comparisons

Dependent Variable		(I) nesil	(J) nesil	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
anket_toplam	Tukey HSD	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	-3,302*	1,287	,030	-6,34	-,26
			3	-2,448	1,083	,064	-5,01	,11
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	3,302*	1,287	,030	,26	6,34
			3	,854	,935	,632	-1,36	3,06
		3	klasik ödeme yöntemlerini tercih edenler	2,448	1,083	,064	-,11	5,01
			mobil ödeme yöntemlerini tercih edenler	-,854	,935	,632	-3,06	1,36
	Gabriel	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	-3,302*	1,287	,032	-6,39	-,21
			3	-2,448*	1,083	,049	-4,89	-,01
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	3,302*	1,287	,032	,21	6,39
			3	,854	,935	,713	-1,30	3,01
		3	klasik ödeme yöntemlerini tercih edenler	2,448*	1,083	,049	,01	4,89
			mobil ödeme yöntemlerini tercih edenler	-,854	,935	,713	-3,01	1,30
	Hochberg	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	-3,302*	1,287	,033	-6,40	-,20
			3	-2,448	1,083	,073	-5,06	,16
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	3,302*	1,287	,033	,20	6,40
			3	,854	,935	,739	-1,40	3,11
		3	klasik ödeme yöntemlerini tercih edenler	2,448	1,083	,073	-,16	5,06
			mobil ödeme yöntemlerini tercih edenler	-,854	,935	,739	-3,11	1,40
BEO_TOPLAM	Tukey HSD	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	,791	1,983	,916	-3,89	5,48
			3	-2,720	1,669	,236	-6,66	1,22
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	-,791	1,983	,916	-5,48	3,89

			3	-3,511*	1,441	,042	-6,92	-,11
		3	klasik ödeme yöntemlerini tercih edenler	2,720	1,669	,236	-1,22	6,66
			mobil ödeme yöntemlerini tercih edenler	3,511*	1,441	,042	,11	6,92
	Gabriel	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	,791	1,983	,970	-3,97	5,55
			3	-2,720	1,669	,227	-6,48	1,04
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	-,791	1,983	,970	-5,55	3,97
			3	-3,511*	1,441	,035	-6,83	-,19
		3	klasik ödeme yöntemlerini tercih edenler	2,720	1,669	,227	-1,04	6,48
			mobil ödeme yöntemlerini tercih edenler	3,511*	1,441	,035	,19	6,83
	Hochberg	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	,791	1,983	,970	-3,99	5,57
			3	-2,720	1,669	,282	-6,74	1,30
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	-,791	1,983	,970	-5,57	3,99
			3	-3,511*	1,441	,046	-6,98	-,04
		3	klasik ödeme yöntemlerini tercih edenler	2,720	1,669	,282	-1,30	6,74
			mobil ödeme yöntemlerini tercih edenler	3,511*	1,441	,046	,04	6,98
BYT_Toplam	Tukey HSD	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	-,248	,308	,700	-,97	,48
			3	-,552	,259	,086	-1,16	,06
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	,248	,308	,700	-,48	,97
			3	-,304	,223	,363	-,83	,22
		3	klasik ödeme yöntemlerini tercih edenler	,552	,259	,086	-,06	1,16
			mobil ödeme yöntemlerini tercih edenler	,304	,223	,363	-,22	,83
	Gabriel	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	-,248	,308	,804	-,99	,49
			3	-,552	,259	,069	-1,13	,03
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	,248	,308	,804	-,49	,99
			3	-,304	,223	,399	-,82	,21

		3	klasik ödeme yöntemlerini tercih edenler	,552	,259	,069	-,03	1,13
			mobil ödeme yöntemlerini tercih edenler	,304	,223	,399	-,21	,82
	Hochberg	klasik ödeme yöntemlerini tercih edenler	mobil ödeme yöntemlerini tercih edenler	-,248	,308	,805	-,99	,49
			3	-,552	,259	,099	-1,18	,07
		mobil ödeme yöntemlerini tercih edenler	klasik ödeme yöntemlerini tercih edenler	,248	,308	,805	-,49	,99
			3	-,304	,223	,437	-,84	,23
		3	klasik ödeme yöntemlerini tercih edenler	,552	,259	,099	-,07	1,18
			mobil ödeme yöntemlerini tercih edenler	,304	,223	,437	-,23	,84

*. The mean difference is significant at the 0.05 level.

Multiple Comparisons

Games-Howell

Dependent Variable	(I) 2. Yaş aralıgı	(J) 2. Yaş aralıgı	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
anket_toplam	18-25	26-33	-1,495	,804	,252	-3,59	,60
		34-41	,419	1,018	,976	-2,28	3,12
		42 ve üstü	,357	2,011	,998	-5,71	6,42
	26-33	18-25	1,495	,804	,252	-,60	3,59
		34-41	1,914	,976	,216	-,68	4,51
		42 ve üstü	1,851	1,989	,790	-4,19	7,89
	34-41	18-25	-,419	1,018	,976	-3,12	2,28
		26-33	-1,914	,976	,216	-4,51	,68
		42 ve üstü	-,063	2,085	1,000	-6,22	6,09
	42 ve üstü	18-25	-,357	2,011	,998	-6,42	5,71
		26-33	-1,851	1,989	,790	-7,89	4,19
		34-41	,063	2,085	1,000	-6,09	6,22
anket1_kredibanka	18-25	26-33	-,528	,236	,122	-1,15	,09
		34-41	,079	,300	,994	-,71	,87
		42 ve üstü	-,117	,477	,994	-1,52	1,28
	26-33	18-25	,528	,236	,122	-,09	1,15
		34-41	,607	,259	,103	-,08	1,30
		42 ve üstü	,411	,452	,800	-,96	1,78
	34-41	18-25	-,079	,300	,994	-,87	,71
		26-33	-,607	,259	,103	-1,30	,08
		42 ve üstü	-,196	,488	,977	-1,61	1,22
	42 ve üstü	18-25	,117	,477	,994	-1,28	1,52
		26-33	-,411	,452	,800	-1,78	,96

		34-41	,196	,488	,977	-1,22	1,61
anket2_mobil	18-25	26-33	-1,120	,838	,542	-3,30	1,06
		34-41	,523	1,035	,958	-2,22	3,27
		42 ve üstü	,652	1,956	,987	-5,23	6,53
	26-33	18-25	1,120	,838	,542	-1,06	3,30
		34-41	1,642	1,011	,374	-1,04	4,32
		42 ve üstü	1,772	1,943	,799	-4,10	7,64
	34-41	18-25	-,523	1,035	,958	-3,27	2,22
		26-33	-1,642	1,011	,374	-4,32	1,04
		42 ve üstü	,130	2,036	1,000	-5,86	6,12
	42 ve üstü	18-25	-,652	1,956	,987	-6,53	5,23
		26-33	-1,772	1,943	,799	-7,64	4,10
		34-41	-,130	2,036	1,000	-6,12	5,86

Multiple Comparisons
Games-Howell

Dependent Variable	(I) 5.Meslek	(J) 5.Meslek	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
anket_toplam	egitim	finans	-,850	1,282	,994	-4,88	3,18
		bilişim	-3,865	1,902	,425	-10,05	2,32
		hizmet	-,536	1,817	1,000	-6,38	5,31
		saglık	-,009	1,284	1,000	-4,05	4,03
		öğrenci	,317	1,348	1,000	-3,90	4,53
		diğer	-,128	1,300	1,000	-4,19	3,94
	finans	egitim	,850	1,282	,994	-3,18	4,88
		bilişim	-3,015	1,780	,628	-8,90	2,87
		hizmet	,314	1,690	1,000	-5,20	5,83
		saglık	,841	1,096	,987	-2,50	4,18
		öğrenci	1,167	1,171	,953	-2,40	4,74
		diğer	,722	1,115	,995	-2,65	4,10
	bilişim	egitim	3,865	1,902	,425	-2,32	10,05
		finans	3,015	1,780	,628	-2,87	8,90
		hizmet	3,330	2,197	,733	-3,71	10,37
		saglık	3,857	1,781	,360	-2,04	9,75
		öğrenci	4,182	1,828	,298	-1,80	10,17
		diğer	3,738	1,793	,400	-2,17	9,65
	hizmet	egitim	,536	1,817	1,000	-5,31	6,38
		finans	-,314	1,690	1,000	-5,83	5,20
		bilişim	-3,330	2,197	,733	-10,37	3,71
		saglık	,527	1,691	1,000	-4,99	6,05
		öğrenci	,852	1,740	,999	-4,77	6,48
		diğer	,408	1,704	1,000	-5,13	5,95
	saglık	egitim	,009	1,284	1,000	-4,03	4,05
		finans	-,841	1,096	,987	-4,18	2,50
		bilişim	-3,857	1,781	,360	-9,75	2,04
		hizmet	-,527	1,691	1,000	-6,05	4,99
		öğrenci	,325	1,172	1,000	-3,26	3,91
		diğer	-,119	1,117	1,000	-3,51	3,27
	öğrenci	egitim	-,317	1,348	1,000	-4,53	3,90
		finans	-1,167	1,171	,953	-4,74	2,40
		bilişim	-4,182	1,828	,298	-10,17	1,80
		hizmet	-,852	1,740	,999	-6,48	4,77
		saglık	-,325	1,172	1,000	-3,91	3,26
		diğer	-,444	1,190	1,000	-4,06	3,17
	diğer	egitim	,128	1,300	1,000	-3,94	4,19
		finans	-,722	1,115	,995	-4,10	2,65
		bilişim	-3,738	1,793	,400	-9,65	2,17
		hizmet	-,408	1,704	1,000	-5,95	5,13
		saglık	,119	1,117	1,000	-3,27	3,51
		öğrenci	,444	1,190	1,000	-3,17	4,06
	egitim	finans	-,120	,304	1,000	-1,07	,83

anket1_kredibanka		bilişim	-,832	,429	,479	-2,23	,56
		hizmet	,009	,383	1,000	-1,22	1,24
		saglık	-,407	,351	,905	-1,50	,68
		öğrenci	,471	,346	,820	-,60	1,54
		diğer	-,246	,302	,982	-1,19	,69
	finans	egitim	,120	,304	1,000	-,83	1,07
		bilişim	-,712	,411	,604	-2,06	,63
		hizmet	,129	,363	1,000	-1,03	1,29
		saglık	-,288	,329	,975	-1,29	,72
		öğrenci	,590	,323	,537	-,40	1,58
		diğer	-,127	,275	,999	-,96	,71
	bilişim	egitim	,832	,429	,479	-,56	2,23
		finans	,712	,411	,604	-,63	2,06
		hizmet	,841	,472	,573	-,68	2,36
		saglık	,424	,447	,960	-1,01	1,85
		öğrenci	1,303	,443	,087	-,12	2,72
		diğer	,586	,409	,779	-,75	1,93
	hizmet	egitim	-,009	,383	1,000	-1,24	1,22
		finans	-,129	,363	1,000	-1,29	1,03
		bilişim	-,841	,472	,573	-2,36	,68
		saglık	-,416	,403	,942	-1,69	,85
		öğrenci	,462	,399	,904	-,79	1,72
		diğer	-,255	,361	,991	-1,41	,90
	saglık	egitim	,407	,351	,905	-,68	1,50
		finans	,288	,329	,975	-,72	1,29
		bilişim	-,424	,447	,960	-1,85	1,01
		hizmet	,416	,403	,942	-,85	1,69
		öğrenci	,878	,368	,224	-,25	2,00
		diğer	,161	,327	,999	-,84	1,16
	öğrenci	egitim	-,471	,346	,820	-1,54	,60
		finans	-,590	,323	,537	-1,58	,40
		bilişim	-1,303	,443	,087	-2,72	,12
		hizmet	-,462	,399	,904	-1,72	,79
		saglık	-,878	,368	,224	-2,00	,25
		diğer	-,717	,321	,295	-1,70	,26
	diğer	egitim	,246	,302	,982	-,69	1,19
		finans	,127	,275	,999	-,71	,96
		bilişim	-,586	,409	,779	-1,93	,75
		hizmet	,255	,361	,991	-,90	1,41
		saglık	-,161	,327	,999	-1,16	,84
		öğrenci	,717	,321	,295	-,26	1,70
anket2_mobil	egitim	finans	-1,137	1,365	,979	-5,43	3,16
		bilişim	-3,630	2,007	,557	-10,15	2,89
		hizmet	-,938	2,080	,999	-7,66	5,79
		saglık	,235	1,332	1,000	-3,98	4,45

	öğrenci	-,504	1,409	1,000	-4,92	3,91
	diğer	-,060	1,389	1,000	-4,41	4,29
finans	egitim	1,137	1,365	,979	-3,16	5,43
	bilişim	-2,492	1,867	,827	-8,66	3,68
	hizmet	,200	1,944	1,000	-6,20	6,60
	saglık	1,372	1,109	,877	-2,01	4,75
	öğrenci	,633	1,200	,998	-3,03	4,29
	diğer	1,078	1,177	,969	-2,48	4,64
bilişim	egitim	3,630	2,007	,557	-2,89	10,15
	finans	2,492	1,867	,827	-3,68	8,66
	hizmet	2,692	2,439	,921	-5,11	10,50
	saglık	3,865	1,842	,396	-2,26	9,99
	öğrenci	3,126	1,899	,657	-3,11	9,36
	diğer	3,570	1,884	,507	-2,63	9,77
hizmet	egitim	,938	2,080	,999	-5,79	7,66
	finans	-,200	1,944	1,000	-6,60	6,20
	bilişim	-2,692	2,439	,921	-10,50	5,11
	saglık	1,172	1,921	,996	-5,18	7,52
	öğrenci	,433	1,975	1,000	-6,03	6,89
	diğer	,878	1,961	,999	-5,55	7,30
saglık	egitim	-,235	1,332	1,000	-4,45	3,98
	finans	-1,372	1,109	,877	-4,75	2,01
	bilişim	-3,865	1,842	,396	-9,99	2,26
	hizmet	-1,172	1,921	,996	-7,52	5,18
	öğrenci	-,739	1,162	,995	-4,29	2,81
	diğer	-,295	1,138	1,000	-3,74	3,15
öğrenci	egitim	,504	1,409	1,000	-3,91	4,92
	finans	-,633	1,200	,998	-4,29	3,03
	bilişim	-3,126	1,899	,657	-9,36	3,11
	hizmet	-,433	1,975	1,000	-6,89	6,03
	saglık	,739	1,162	,995	-2,81	4,29
	diğer	,444	1,228	1,000	-3,28	4,17
diğer	egitim	,060	1,389	1,000	-4,29	4,41
	finans	-1,078	1,177	,969	-4,64	2,48
	bilişim	-3,570	1,884	,507	-9,77	2,63
	hizmet	-,878	1,961	,999	-7,30	5,55
	saglık	,295	1,138	1,000	-3,15	3,74
	öğrenci	-,444	1,228	1,000	-4,17	3,28