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BİREYSEL YATIRIM KARARLARINDA BİLİŞSEL ÖNYARGILAR İLE ÜLKENİN KÜLTÜREL BOYUTLARI ARASINDAKİ ETKİLEŞİM[1]

THE INTERACTION BETWEEN COGNITIVE BIASES AND THE CULTURAL DIMENSIONS OF THE COUNTRY IN INDIVIDUAL INVESTMENT DECISIONS

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Öz

Karar verme sürecini etkileyen birçok fiziksel, psikolojik ve sosyal faktör vardır. Bu süreç üzerinde etkili olan sübjektif bilişsel faktörlere bilişsel önyargılar denir. Bilişsel önyargılar, insanların karar vermedeki nesnel davranışlarını etkileyerek doğru kararlar vermelerini engelleyebilmektedir. Bu durum özellikle finansal yatırım kararlarında ön plana çıkmakta ve çeşitli bilişsel önyargılar nedeniyle yatırımcılar optimal karar vermekten uzaklaşmaktadır. Kültür, bir ülkede yaşayan insanların yaşam biçimleri ve düşünceleri üzerinde önemli bir etkiye sahiptir. Ülkenin kültürel özellikleri farklı bilişsel önyargıların öne çıkmasında etkili olabilir. Bu çalışmada kültürün boyutları ile bilişsel önyargılar arasındaki ilişki Türkiye'deki bireysel finansal yatırımlar açısından incelenmiştir.

Anahtar Kelimeler: Bilişsel Önyargı, Bireysel Yatırım Kararları, Kültür

JEL Sınıflaması: G40, G41, G11

Abstract

There are many physical, psychological, and social factors that have an impact on the decision-making process. Subjective cognitive factors that affect this process are called cognitive biases. Cognitive biases can impede people from making the right decisions by affecting their objective behavior in decision-making. This situation comes to the fore, especially in financial investment decisions and investors move away from making optimal decisions due to various cognitive biases. Culture has a significant impact on the way of life and thinking of people living in a country. The cultural characteristics of the country may have an impact on the prominence of different cognitive biases. In this study, the relationship between cultural dimensions and cognitive biases was examined in terms of individual financial investments in Türkiye.

Keywords: Cognitive Bias, Personal Investment Decisions, Culture

JEL Classification: G40, G41, G11.

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1. Introduction

Individuals are under the influence of many misconceptions that prevent them from making the best decision in their decision-making processes. These are called cognitive biases. Many cognitive biases have been revealed in various studies. The origin of these cognitive biases may be due to the life-long experiences of the person, the type and level of education one has received, as well as various factors such as culture and interaction with other people can affect the emergence of cognitive biases. Individuals are affected by communication channels as well as by other individuals and society in their micro and macro environment. In this context, it can be said that traditional and new media channels (television, radio, social media, etc.) may also cause the emergence and formation of cognitive biases.

Individuals take action to implement the decision they have taken at the end of a decision-making process. The driving force in this decision-making and action process is motivation, and motivation is linked to the individual's needs. In this case, it can be said that different needs are effective in the emergence of different cognitive biases. It's not just psychological factors that reveal cognitive biases. The economic structure of the country in which one lives and the income level of the individual, social norms, and the official and informal reference groups in which the individual is included also affect the cognitive biases he or she has.

Cognitive biases come in many forms. Many studies in the literature have included different cognitive biases. Some of these cognitive biases, which are frequently mentioned in finance and business literature, are listed as overconfidence bias, self-serving bias, herd mentality, loss aversion, framing, narrative fallacy, anchoring, confirmation, hindsight bias and representativeness heuristic.

Although cognitive biases can create misconceptions in all kinds of decision-making processes of the individual, they constitute a subject of detailed examination, especially in the financial decision-making process, as they prevent the individual from reaching the optimal decision in accordance with objective criteria and reveal the possibility of financial loss.

One of the factors that affect the emergence of cognitive biases that are effective in individuals' financial decision-making process is the culture. The cultural dimensions introduced by Hofstede differ from country to country (Hofstede Insights, 2023). In this study, the relationship between Türkiye's cultural dimensions and cognitive biases was examined.

2. Cognitive Biases in Finance Literature

Cognitive biases have direct effects on investment decisions. They are often seen as the cause of irrational decisions made by investors. It is not expected that people make decisions without prejudice (Kübilay & Bayrakdaroğlu, 2016). A large number of biases have a direct effect on the decision processes of individuals. For example, Holliday (2017) mentioned 50 different cognitive biases in his article in Capital. Vipond (2019) listed ten most important cognitive biases in terms of behavioral finance:

- Overconfidence Bias,
- Self-Serving Bias,
- Herd Mentality Bias,
- Loss Aversion Bias,
- Framing Bias,
- Narrative Fallacy Bias,
- Anchoring Bias,
- Confirmation Bias,
- Hindsight Bias and
- Representativeness Heuristic.

2.1 Overconfidence Bias

Excessive self-confidence is a situation that leads individuals to make mistakes. The overconfident individual becomes prone to take unmeasured risks and makes his decisions subjectively, not objectively, but under the influence of his overconfidence. Overconfidence bias stands out as one of the cognitive biases which have an impact on the financial decisions of individual investors. This situation may arise from the decisions taken beforehand and that have come true either by chance or logically, as well as personality traits, personality type, intelligence level one possesses.

American Psychological Association (2023) made a definition of overconfidence as follows: "Overestimation of one's actual ability to perform a task successfully, by a belief that one's performance is better than that of others,

or by excessive certainty in the accuracy of one's beliefs". According to this definition, the person has a positive thought about the positivity of the results he will get from the task he undertakes, but this thought cannot be explained with logical reasons.

Excessive self-confidence can cause individuals to make mistakes and experience losses in their financial decisions. In other words, the investor who acts with overconfidence bias moves away from thinking rationally about the markets with the confidence he has in his own knowledge and experience. For this reason, it is a concept that is frequently discussed together with other biases in behavioral finance related studies.

Overconfidence has been discussed in many studies in the literature. In one of these studies, Scott et al. (2003) showed that stock prices and overconfidence bias are two interrelated concepts in international markets. In one other study, Statman et al. (2006) determined that investors' overconfidence in valuation and trading skills has a positive effect on trading volume.

2.2 Self Serving Bias

When making decisions, people tend to act not only under the influence of rational facts, but also under the influence of their emotions. The reactions of individuals about positive and negative situations encountered in daily life vary depending on their emotions.

Individuals have a tendency of attributing positive results to inner factors like their own character and negative outcomes to external factors, and this is called self-serving bias (Moosa & Ramiah, 2017). When people get positive results in their individual investment decisions, they explain this situation with their personal abilities, while they tend to attribute the negative results to the factors such as the economic situation of the country, political developments, etc.

Self-serving bias has also attracted the attention of researchers in the field of behavioral finance, and there are many studies in the literature that deal with self-serving bias in finance. In one of these studies, Chin et al. (2018) examined the relationship between self-serving bias and "better-than-average influence (BTA)" and found that investors with this bias had a higher degree of better-than-average influence and traded more than those who did not. In another study conducted in India, Shukla et al. (2022) examined the relationship between investors' self-serving bias and stock selection.

2.3 Herd Mentality Bias

Human beings are in a structure that adopts to act under the leadership of someone else, especially in areas where they are not very expert. This situation is explained by the concept of herd mentality, which is often criticized. Herd mentality has become a concept that is examined in terms of behavioral finance, as it is not only a situation in daily life, but also affects financial decisions.

Individual investors, in particular, may be inclined to follow the decisions of large investors who have the power to influence the market or the majority while making their investment decisions and shape their own decisions accordingly. For example, the tendency of small investors investing in cryptocurrency markets to follow the whales that drive these markets is an example of this.

There are many studies on herd mentality bias in the behavioral finance literature. In one of these studies, Dang and Lin (2016) examined the intentional and unintentional herd behavior of investors with heterogeneous information using aggregate market data for stocks. In another study, Bikhchandani & Sharma (2000) presented a comprehensive review of herd mentality in financial markets in the report they prepared for the International Monetary Fund. One of the interesting studies on this subject was done by Alnori & Ahmad (2022). In this study, the authors examined the herd mentality among Saudi Arabian investors during COVID-19 pandemic and as a result they found out that demographics such as age, gender and education level have a negative moderator effect on the herd behavior of individual stock investors.

2.4 Loss Aversion Bias

Individuals care more about the probability of experiencing loss when gains and losses seem equal or very close to each other. This situation brings the behavior of not taking the risk in cases where the risk is equal. This is especially important in cases of financial gain and loss.

According to Liberto (2022) loss aversion bias is "the observation that human beings experience losses asymmetrically more severely than equivalent gains" and this type of fear from loss drives investors to respond irrationally to the changes in the financial markets. In other words, "Loss aversion bias" can be explained by the "principle that losses are seen as greater than gains", which is widely accepted in social sciences (Gal & Rucker, 2018). According to Yang (2019), loss aversion affects financial markets by influencing the risk attitudes of market participants and helps to better understand financial markets.

One of the studies on loss aversion bias in the literature is the study by Arora & Kumari (2015). In this study conducted in India, the relationship between "loss aversion bias" and regret and age and gender on the ability of investors to take risks in their financial decisions was examined. As a result of the study, it was revealed that loss aversion and regret have a mediating effect on the effect of age and gender on decision-making ability. Merckle (2020) conducted a panel survey study in the United Kingdom. As a result of this panel survey, he determined that the loss aversion behavior of investors is strong for expected results, and they are twice as sensitive to negative expected returns than positive expected returns.

2.5 Framing Bias

Although individuals think that they follow a rational path in their decision processes, it is a well-known fact that they do not always behave in this way. The fact that the same individual can make different decisions in the face of the same situation is an indicator of this, and this is due to the framework in which the situation is presented.

The same bias exists in financial investment decisions. The individual may make different decisions in the face of the same investment alternative approached from different frameworks or presented to him from different frameworks. For example, one may decide to invest in a stock that he heard has gained 20% in January of last year, but he may take a different decision when the annual performance of the same stock is emphasized. This situation is called "framing bias".

In one of the studies on framing bias in the behavioral finance and economics literature, Gianinazzi (2019) examined the issue of framing bias in refinancing decisions and monetary policy. In another study, Sachan & Chugan (2021) examined the relationship between framing bias and "big five personality traits" in individual investors, and as a result of their study, they found a positive relationship between high agreeableness and framing bias.

2.6 Narrative Fallacy Bias

People tend to tell stories and believe the stories they are told. Taleb (2010) explained this situation with the concept of "Narrative Fallacy" in his book "The Black Swan: The Impact of the Highly Improbable" and mentioned that people deceive themselves with stories to quench their Platonic thirst for different patterns. They try to establish logical connections in order to make sense of the world in which individuals live. By trying to explain the coincidental situations in the story they are told with these logical ties, they can actually reach unrealistic conclusions. Narrative Fallacy Bias, which explains this situation, stands out as a concept related to the tendency of individuals to establish logical connections between different realities (Kunst & Van de Wiel, 2016). Kahneman (2011) states that the essence of this error is that people understand the past and accordingly believe that the future can be known, but that people understand the past less than they think.

In financial investment decisions, individuals look for logical connections in the stories they hear about these issues, and thus they may be mistaken about the risk they will undertake and the profit they aim for. Stories told about investment alternatives and companies are often in the minds of investors, and in some cases, they can replace rational data and become a decision criterion. Investors often make decisions based on narratives about the financial asset they are investing in, not actual financial data.

In one of their studies examining the issue of Narrative Fallacy Bias in finance, Johnson and Tuckett (2022) revealed that the use of publicly available historical information in financial forecasting is often used by investors as a result of their experiment, although it is not correct within the scope of Neoclassical Economics. Research results revealed that the effects of the narrative were consistent across all levels of expertise studied, including professional financial analysts.

2.7 Anchoring Bias

People tend to take the first information they encounter as a reference point in their decision-making processes. This reference point can cause a misconception about the decision-making process. This is called the anchoring effect. Anchoring bias is defined by Andersen (2010) as "the common human tendency to rely too heavily (anchor) on one piece of information when making decisions". On the other hand, Kıyılar & Akkaya (2016) defined anchoring bias as "the value people take as a reference when estimating, influencing their predictions".

From a financial point of view, the anchoring effect emerges as the first information learned about a financial product affects the whole decision process. For example, if the profit rate from an investment instrument becomes a reference point in the first period, it will increase the amount of profitability estimated for the future, and it will reveal the situation that profits lower than this are seen as losses.

In their study on anchoring effect, Maniadis et al. (2014) provide new evidence to demonstrate the power of anchoring results in economic valuations and provide a theoretical framework that provides insights into why one should be wary of initial empirical findings.

In another study, Cen et al. (2013) examined the role of this bias on the equity market in their study. In another study, Kaustia et al. (2008) examined whether expertise could reduce the effect of this bias. Hur and Singh (2019) found in their research that the momentum profit gets stronger when the disposition effect and anchoring bias act on each other.

2.8 Confirmation Bias

People validate the new information they have obtained by filtering the knowledge and experience they have previously gained. While the new information obtained is accepted when it is compatible with the existing information of the individual, those that are inconsistent with the existing information may not be accepted. This is due to confirmation bias. Confirmation bias can be defined as "the tendency of human beings to actively search for, interpret, and retain information that matches their preconceived notions and beliefs" (Scott, 2022).

Confirmation bias is also effective in financial decision making. Investors may make the mistake of making a decision by confirming new information about investment alternatives with their existing information about that investment alternative. For example, an investor who believes that gold is a profitable investment in the light of his current knowledge expects that he will always gain from his investments on gold.

In one of the studies on confirmation bias, Park et al. (2010) used an experimental method to investigate the effects of information provided by virtual communities on investment decisions. The findings of the study indicate that investors exhibit confirmation bias when processing information from message boards, and investors with stronger confirmation bias have higher self-confidence.

In their study on value and glamor stocks, Duong et al. (2014) reported that their results are compatible with the model of investors' asymmetrical response to good and bad news due to confirmation bias. Cafferata and Tramontana (2019) developed a "financial market model with heterogeneous agents who can be affected by confirmation bias" in their study.

2.9 Hindsight Bias

In the mental evaluation they make after an event has happened, people think that the probability of that event happening is already high. However, if they had actually made the same evaluation without the incident, they would have thought that the same probability would be lower. This situation is called "Hindsight Bias". Hindsight bias is defined by Roese & Vohs (2012) as "the belief that an event is more predictable after it becomes known than it was before it became known". From a financial point of view, an investor's claim that he predicts that the location of the real estate will increase in value after the real estate increases in value can be an example of this bias.

From a behavioral finance perspective, it can be said that investors can easily make erroneous decisions because they believe that they are making better predictions than they actually are under the influence of this bias (Monti & Legrenzi, 2009).

In the study by Hölzl et al. (2002), participants were asked to evaluate the possibilities for various economic developments six months before and after the introduction of the euro as the official book currency of the European Monetary Union. As a result of the study, it was found that participants supporting the euro reported a stronger bias toward positive economic developments than negative ones, while those opposing the euro showed the opposite tendency.

2.10 Representativeness Heuristic Bias

One of the biases that has an impact on financial decisions is Representativeness Heuristic. Venkatapathy & Sultana (2016) defined the representative heuristic as "a cognitive action in which an individual categorizes a situation based on a pattern of previous experiences or beliefs about the scenario". In representativeness heuristic, human intent to make decisions according to the stereotypes created in mind by previous experiences. As Bilek et al. (2018) mentioned representativeness heuristic is one of the cognitive shortcuts that simplify human decision making. Although cognitive biases are thought to have a misleading effect on the decision-making process, the 17 studies examined by Bilek et al (2018) in their article did not confirm this misleading effect. Similarly, it has also been studied in terms of finance in many academic studies, including Boussaidi (2013), Luo (2013), Chong (2011).

2.11 Other Cognitive Biases

In addition to the ten cognitive biases explained above, “familiarity bias”, "sunk cost fallacy", "status quo bias" and "present bias" are also very effective in the decision making of individual investors.

It has always been easier for people to interact with beings they already know and are familiar with. It can be said that knowing that person beforehand has a positive effect on interacting with an object, just as knowing that person beforehand makes it easier to communicate with a person. When approaching unfamiliar objects, people may be under the influence of uneasiness, fear and similar feelings. It is observed that this effect increases as the unknown towards this object increases. Considering the opposite situation, people are expected to act with a higher sense of trust towards familiar objects.

People have similar concerns when making financial decisions, so they tend to turn to investment instruments they are familiar with when making investment decisions. This phenomenon can be explained by the fact that many families in Türkiye invest their individual investments in precious metals and keep their investments at home. In the same way, it can be mentioned that the young generations, who live intensely in technology, invest in cryptocurrencies.

It is explained with the completeness, which is one of the assumptions of the rational choice theory, that investors will decide among well-defined alternatives while making financial decisions and that they will act according to utility maximization in these decisions (Seiler et al., 2008). However, this approach ignores the possible influence of the psychological factors of the decision maker on the decision. People do not always act rationally in their decisions. Cognitive biases sometimes hinder rational decision making and irrational decisions can be made.

Sunk cost fallacy occurs as continuing to invest in a resource that has already been invested compared to investing in a new resource (Strough et al., 2008). This cognitive bias shows the misconception that the risk of a known investment is more acceptable than a new investment.

Status quo bias comes from the Latin origin "status quo" concept and can be explained as maintaining the current situation. In their study Rubaltelli et al. (2005) conducted two experiments and examined status quo bias and found that proportional definition of stock returns had an increasing effect on status quo bias.

One other important bias is present bias. It can be defined as “the inclination to prefer a smaller present reward to a larger later reward, but reversing this preference when both rewards are equally delayed” (Chakraborty, 2021).

3. Cultural Dimensions and Cognitive Biases in Türkiye

Although cognitive biases are seen as universal phenomena, their presence and intensity may differ in different cultures. Yiend et al. (2019) state that most of the studies on cognitive biases have been conducted to address western culture and presented a cross-cultural study that reveals cognitive biases in east Asians. From the perspective of Türkiye, it is possible to see a synthesis of both western and eastern cultures. This situation reveals the necessity of a separate examination of cognitive biases in Türkiye. The aim of this study is to reveal the foundations for the effects of cognitive biases on investors' decisions in Türkiye.

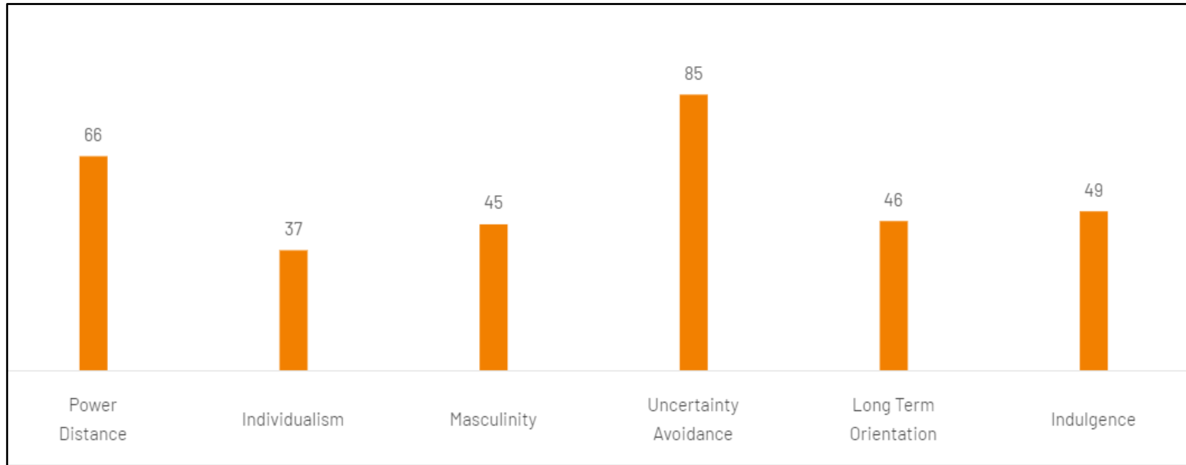
The Dictionary of the Turkish Language Association defines culture as "all the material and spiritual values created in the historical and social development process and the tools used in creating and transmitting them to the next generations, showing the extent of man's dominance over his natural and social environment". According to Solomon (2018), “culture is a society's personality and includes both abstract ideas, such as values and ethics, and material objects and services” or “it is the accumulation of shared meanings, rituals, norms, and traditions among the members of an organization or society”. Hofstede defines culture as “The programming of the human mind by which one group of people distinguishes itself from another group” (Hofstede, 1980).

Considering the above definitions, it is possible to say that culture will have an impact on the behavior of the individual with the influence of the society in which he/she lives and, accordingly, on the way he/she makes decisions. Individuals are faced with numerous decision-making situations on a daily basis. The financial decisions included in these have a special importance as they will have a direct impact on the welfare of the individual. As mentioned above, cognitive biases that create an obstacle to making these decisions correctly are also affected by culture, in other words, they differ with the effect of culture.

Country cultures are evaluated in six different dimensions by Hofstede Insights (2023). These dimensions are listed as “power distance, individualism, masculinity, uncertainty avoidance, long term orientation, indulgence”[2]. The graphic showing the cultural dimensions for Türkiye on the website in question is presented below:

[2] The results obtained from the studies conducted on a country basis for these cultural dimensions and a comparison tool can be accessed on the Hofstede-insights.com website.

Figure 1. Cultural Dimensions in Türkiye



Source: https://www.hofstede-insights.com/country-comparison-tool?countries=Türkiye

With the light of Hofstede's dimensions Gray (1988) identified four accounting dimensions of culture as follows: 1) Professionalism versus Statutory Control, 2) Uniformity versus Flexibility, 3) Conservatism versus Optimism and 4) Secrecy versus Transparency.

In his study Schwarz (1994) proposed two new dimensions of culture as a supplement to Hofstede's study (Kolesnik, 2013). These dimensions are: 1) Autonomy versus Conservatism, 2) Hierarchy and Mastery versus Egalitarian Commitment. In this study, only the cultural dimensions put forward by Hofstede are discussed.

3.1 Power Distance and Cognitive Biases

Power distance concept has been defined by Hofstede et al. (2010) "the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally".

As it can be understood from the definition above, in societies with high power distance, hierarchical layers are more and the situation of seeing the upper layers as an authority is higher. The power distance in Türkiye is 66% as seen in Figure-1. In this case, it can be said that the power distance is high in Türkiye.

In the light of this information, it can be said that investors can have higher trust in authority figures and will follow them. This is an indication that the effect of herd mentality bias will increase. On the other hand, being able to hold power is important in societies with high power distance, and this is an indication that loss aversion will come to the fore in financial investments. In other words, loss aversion and herd mentality will be more effective in societies with high power distance, such as Türkiye, than in societies with low power distance.

3.2 Individualism vs. Collectivism Dimension of Culture

It is possible to examine countries' cultures from two different perspectives: Individualism vs. collectivism. This creates a bipolar dimension of culture that is individualism at one end and collectivism at the other (Kim, 2001).

As can be seen from Figure-1, it can be said that Türkiye is closer to the collectivism side since the individualism value was determined as 37%.

Collectivist societies are societies where citizens do not consist of individuals acting autonomously, but rather act as part of a society (Schultz et al., 2000). The collectivist structure in Türkiye increases the tendency to conform to the society in individual investment decisions. In the collectivist society, the individual investor tends to act in the direction of maximizing the total interest of the society he is in rather than his own benefit. For this reason, while he is expected to have the prejudices of the society in general, he may also be inclined to not make decisions as a full individual, under the influence of his family or close environment. For example, there is a possibility of anchoring individually in situations that anchor the general population.

3.3 Masculinity vs. Femininity Dimension of Culture

Hofstede et al. (1998) explained another cultural dimension in detail in their book Masculinity and Femininity: The Taboo Dimensions of National Cultures. This dimension of culture examines the structure of societies as masculine and feminine societies.

The value of the masculinity dimension in Türkiye has been calculated as 45%. In this case, it can be said that Turkish society has a predominantly feminine cultural structure. In feminine cultures, the dominant values in society are caring for others and quality of life and avoiding conflicts and reconciliation gain importance (Hofstede Insights, 2023). Therefore, loss aversion behavior is expected to be higher in feminine cultures than in masculine cultures. In feminine cultures, individuals evaluate the investment decisions presented to them with the context in which they are presented, instead of evaluating them from an objective point of view. This shows that the framing effect is high in feminine cultures.

3.4 Uncertainty Avoidance Dimension

One other dimension of culture is "uncertainty avoidance" which is described by Hofstede (2001) as "the extent to which the members of a culture feel threatened by uncertain or unknown situations". In addition, in societies with high uncertainty, individuals tend not to want uncertainties about other members of society (Hofstede et al., 2008).

From the perspective of Türkiye, it is seen that the value of avoiding uncertainty with 85% is quite high. Avoidance of uncertainty brings along with it to act more cautiously financially and to prefer investment alternatives with lower risk. At the same time, in societies such as Türkiye, where uncertainty avoidance is high, individuals find it more reliable to act in the light of their previous knowledge and experience. This is an indication that the confirmation bias is high. Cultures with high uncertainty avoidance tend to stick to the known option. This situation can also be explained by Status quo bias.

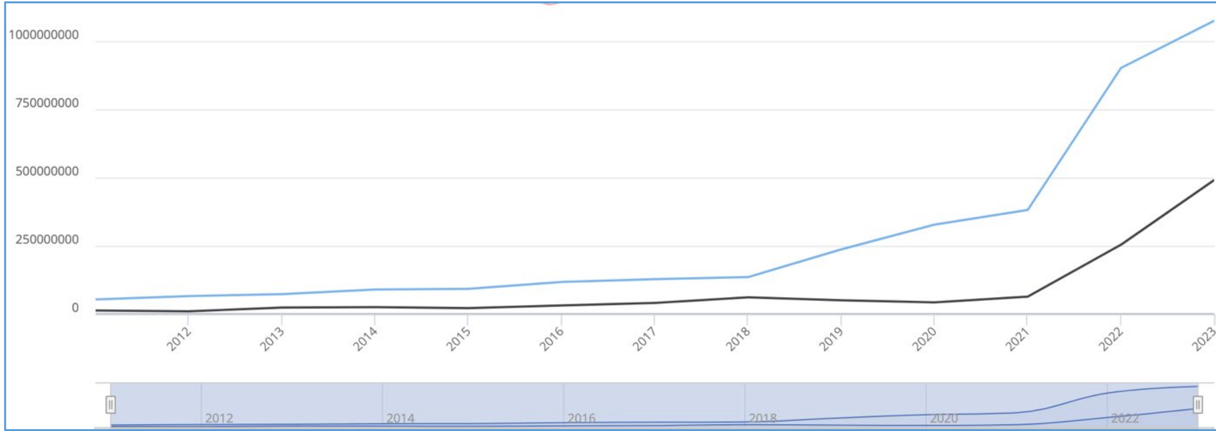
3.5 Long vs. Short Term Orientation Dimension

Long Term Orientation, previously called "Confucian Dynamic" by Hofstede and Bond (1988), was later added as a cultural dimension. This dimension of culture can be described as "how every society has to maintain some links with its own past while dealing with the challenges of the present and future" (Hofstede Insights, 2023).

Türkiye is very close to short term orientation with 46% in this dimension. In short term-oriented cultures, people tend to make short-term decisions, save the moment, and deal with everyday events. This situation coincides with the present bias, which is explained as the preference of instant rewards over future rewards. In this case, it can be evaluated that short-term investments are preferred to long-term investments in short-term oriented cultures.

Short-term investment preference can be given as an example. The "Deposit Money Banks (Thousand TRY)" chart according to maturity differences is shown below. In this chart, comparisons of deposits with a maturity of one month and deposits with a maturity of one year or longer are taken from the CBRT EVDS data system for the period 2011-2023. While the upper line on the chart shows the monthly deposit amount, the lower line symbolizes the annual and longer maturity deposits. According to maturity groups, deposits were created by filtering deposit accounts for one month and one year and longer. It is noteworthy that the amount of deposits in the monthly investment preference, referred to as short-term, is higher than the annual deposit preference, and it is seen that short-term investments are more preferred.

Figure 2. One Month Deposit vs. One Year and Longer Deposits



Source: CBRT-EVDS Data Central

3.6 Indulgence vs. Restraint Dimension

The Indulgence vs. Restraint dimension was the last to be included in the study of culture dimensions and was primarily based on studies conducted by Minkov. "Indulgence stands for a tendency to allow relatively free gratification of basic and natural human desires related to enjoying life and having fun. Its opposite pole, restraint, reflects a conviction that such gratification needs to be curbed and regulated by strict social norms" (Hofstede, Hofstede, & Minkov, 2010).

In this dimension, with 49%, Türkiye is located in the middle of the two ends of the dimension and does not show a distinctive feature. In this case, it is not possible to establish a relationship between any cognitive bias and this dimension of culture for Türkiye.

4. Conclusion, Limitations and Recommendations

In this study, cognitive biases faced by individuals in the process of making investment decisions were examined and the relationship between cultural dimensions and these cognitive biases in Türkiye was evaluated. In general, there are many types of cognitive biases that have an impact on the investor's ability to make objective decisions. Some of these are Overconfidence Bias, Self-Serving Bias, Herd Mentality Bias, Loss Aversion Bias, Framing Bias, Narrative Fallacy Bias, Anchoring Bias, Confirmation Bias, Hindsight Bias, Representativeness Heuristic Bias. Apart from these, familiarity bias, sunk cost fallacy, status quo bias and present bias are cognitive biases worth examining in terms of financial investment decisions.

As it is known, culture has six basic dimensions. It can be thought that power distance size has a direct effect on herd mentality bias and loss aversion bias. The second dimension is individualism vs collectivism. This dimension should especially be evaluated together with the Anchoring Effect. The third dimension is masculinity vs femininity. It can be said that the effect of loss aversion bias increases and the framing effect is high in feminine cultures. The fourth dimension is uncertainty avoidance. In societies with very high uncertainty avoidance values such as Türkiye, confirmation bias and status quo bias will also be highly effective. The fifth dimension of culture is long vs short-term orientation. In societies where short-term orientation is at the forefront, present bias shows itself. The last addition to the cultural dimensions is the Indulgence and Restraint dimension. Since the value of Türkiye is right in the middle in this bipolar dimension, it was considered that it would not be appropriate to assert the dominance of any bias.

The first of the main limitations of this study is that the cognitive biases evaluated within the scope of the study were limited. There are many cognitive biases that were not included in the study. Another main limitation of the study is that in the evaluation of cultural dimensions, the results obtained in the evaluation made by Hofstede Insights were adhered to. Due to the dynamic nature of the culture, the study can be renewed by collecting up-to-date data. Another limitation is related to culture. In the study, cultural dimensions were evaluated over 6 dimensions introduced by Hofstede. The study can be repeated with the culture classifications and dimensions revealed in different studies. Another important limitation is related to the method of the study. In this study, in

which document analysis, which is partly a qualitative research method, was applied, the concepts and relations between them were revealed, and a guiding and informative result was obtained for future researchers. However, it should be taken into account that it cannot be generalized that every individual will have misconceptions in the aforementioned classification. Cultural influences and tendency to fallacy may affect the person's family structure, environment, education, etc. characteristics and may change over time.

In subsequent studies, the relationship between each cognitive bias and culture dimension can be handled separately, and therefore, the use of questionnaire and experimental methods can be applied. In addition, cognitive biases are discussed only in terms of individual investment decisions in this study. In subsequent studies, the subject can be re-examined in terms of institutional investment decisions.

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