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DOES SELF CONTROL PREDICT FINANCIAL BEHAVIOR AND FINANCIAL WELL
BEING?

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**DOES SELF CONTROL PREDICT FINANCIAL BEHAVIOR AND FINANCIAL
WELL BEING?**

**ÖZ DENETİM, FİNANSAL DAVRANIŞLARI VE FİNANSAL REFAHI TAHMİN
EDEBİLİR Mİ?**

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LIST OF ABBREVIATIONS

BLC	Behavioral Life Cycle Hypothesis
DT	Deliberative Thinking
FA	Financial Anxiety
FMBS	Financial Management Behavioral Scale
FS	Financial Security
MD	Master's Degree
SC	Self Control

ABSTRACT

We have been taught that throughout our educational life, people are rational and make smart choices when it comes to financial ones. People make rational decisions and with the help of this rationality, it is possible to estimate the results of financial decisions. Rational people make the best decisions by reaching every possible information before making investment decisions. In this way, the markets maintain their productive structure. Efficient market, which is one of the basic principles of traditional finance narrative, and rational investor acceptance is losing its validity day by day.

As seen in both our social life and financial markets, people do not always make good choices. Based on the idea that people and investors do not always make the most accurate and rational decisions, with the influence of emotions and characteristic features included in decision mechanisms, researches on behavioral finance have been conducted and a way of thinking has been created.

There is a lot of research that measures the ability of some emotional developments and characteristics to explain financial decisions, investor behavior or financial well-being. In this study, it is aimed that people discuss about self-control's ability to predict financial behavior and well-being.

Keywords: Behavioral Finance, Self Control, Financial Behavior, Financial Well Being, Financial Anxiety.

ÖZET

Bize tüm eğitim yaşamımız boyunca insanların rasyonel oldukları ve finansal olanlar söz konusu olduğunda akıllıca seçimler yaptıkları öğretilmiştir. İnsanlar rasyonel kararlar alırlar ve söz konusu rasyonalitenin yardımıyla finansal kararların sonuçlarını tahmin etmek mümkün olabilmektedir. Rasyonel insanlar, yatırım kararları vermeden önce mümkün her bilgiye ulaşarak en doğru kararları alırlar. Bu sayede de piyasalar verimli yapısını muhafaza ederler. Geleneksel finans anlatısının en temel prensiplerinden olan verimli piyasa, rasyonel yatırımcı kabulleri ise günden güne geçerliliğini kaybetmektedir.

Hem sosyal yaşantımızda hem de finansal piyasalarda görüldüğü üzere, insanların her zaman iyi seçimler yapmamaktadır. İnsanların ve yatırımcıların karar mekanizmalara dahil olan duygular ve karakteristik özelliklerinin etkisiyle her zaman en doğru ve rasyonel kararları almadığı fikrine dayanarak orataya çıkan davranışsal finans üzerine araştırmalar yapılmış ve bir düşünüş şekli oluşturulmuştur.

Bazı duygusal gelişmelerin ve karakteristik özelliklerin finansal kararlar, yatırımcı davranışları veya finansal refahı açıklayabilirliğini ölçen çokça araştırma yapılmaktadır. Bu araştırmada, insanların öz denetimin finansal davranış ve refahı tahmin etme yeteneği hakkında tartışmaları amaçlanmıştır.

Anahtar Kelimeler: Davranışsal Finansal, Öz Denetim, Finansal Davranış, Finansal Refah, Finansal Endişe

INTRODUCTION

Putting the behavior of individual investors and the problematic in making financial investment decisions on a meaningful and reasonable basis has been one of the subjects that finance and economy people have been interested in for many years. Despite the hypotheses, theories and models produced in this context and used to explain individual investor behaviors, observations and practices made, the investor behavior could not produce the desired results. In the past years, the behavioral finance field has made great progress to support people in their investment decisions (Hirshleifer, 2015).

Both the decisions taken by humans in their daily lives and their financial decisions are too different to be monotonous as suggested by the aforementioned approaches. For this reason, human behaviors in the field of human and social behaviors such as psychology, sociology, and efforts to explain the complex decision-making process of people have spread the field of economy over time, and paved the way for studies to reveal the way that people make decisions in financial area. In this context; Behavioral finance approach has emerged as a result of the hypothetical human model, which makes its decisions based on its preferences and knowledge and mental filtering, in the face of increasingly complex economic developments.

Crises, panic, collapse, children and balloons in the markets are indicators that people do not always behave rationally. If people exhibit rational attitudes in their interests, what are the differences of investors who react differently to the same economic development, some of them lose all assets, while others earn big money?

It is not possible to explain this difference only through education or experience. Because there are many examples showing that well-trained and experienced investors also suffered great losses as a result of irrational decisions.

Behavioral finance tries to answer the questions like what shapes investor behavior, what are the factors behind individual investor thoughts, what kind of information is taken into account when making investment decisions, how much it takes into account the basic information about the stock, and how correctly it interprets, besides the financial factors of a company. According to behavioral finance people's decision making processes are different.

In line with the behavioral finance approach, some people make good financial decisions while others make bad financial decisions. Some people spend more than their budget, some people do not save any money, some people pay the rent late. Nevertheless, we don't always make wrong decisions, some people are more inclined to make wrong decisions, while some people make better decisions at the same conditions.

This study consists of 3 parts. In the first part, literature review and theoretical information about the establishment, historical developments, basic theories and outlines of behavioral financial concept are presented.

In the second part of the study, the behavioral tendencies of individuals within the framework of behavioral finance are grouped and explained in detail. This grouping was made within the framework of factors such as age, gender, education level, profession, income level and saving level as well as the subject of the thesis questionnaire.

It is very important to analyze which psychological factors are involved in this process in order to better measure people's financial decision making mechanisms. In line with the empirical and descriptive characteristics of this study, part 3 was designed as a part of a study that measures the ability to predict the financial behavior and financial well-being of self-control, albeit with an Istanbul scale study. In the survey, the effects of self-control and other cognitive factors on financial behavior and financial well-being were tried to be measured. In order to do so A survey of financial behavior, relative financial well-being, self-control,

optimism, prudent thinking, and other demographic questions was conducted on a sample of 206 people online.

A study prepared by Stromback, et al (2017) was the only study that focuses in particular on self-control and the ability of self-control to predict financial behavior. Aforementioned study was prepared in Sweden. This thesis work is differentiated from that work with Turkey to take the sample and the population is of originality.

As a result, this study, which has an originality with the features mentioned above, aims to contribute to behavioral finance studies that have gained an important place in the field of finance over time. However, with the increase in studies especially in the field of behavioral finance, especially in self-control, investors, who are the general acceptance of financial education, can change their perception of rationality.

CHAPTER 1

BEHAVIORAL FINANCE AND THEORIES

In this chapter, behavioral finance concept is explained in general terms. Secondly, It is aimed to give information about basic theories in behavioral finance.

1.1 BEHAVIORAL FINANCE: IN GENERAL TERMS

According to Behavioral Finance, people do not act rationally and cannot always make the right decisions. People shape their decision making behavior under the influence of various psychological factors and many factors such as living conditions (Tekin, 2018), they can make mistakes so that they can take different movements in the markets. Behavioral finance is a area of science that tries to measure people's psychology and its impact on financial decision-making. Kahneman and Tversky (1979) tried to reexamine the effects of the on attitudes and other psychological aspects of people on financial decisions of people. In general, behavioral finance has added the human factor to the middle of individuals' efforts to understand the underlying investment decisions (Thaler, 1999). This area works to uncover the mismatches of people's financial behavior by loosening the assumption that people's rationality exists in standard finance theories. These mismatches are associated with certain behaviors, and the effects of these behaviors on making non-ideal financial decisions are tried to be measured. If such decisions are in large scales, they may cause deterioration in financial markets. these distortions can be called market anomalies. The causes of these anomalies are tried to be determined by behavioral finance researches due to the negative effects of such anomalies. To give an example Statman (2019) argues that while rational prices reflect the effect of determinable variables such as risk, they cannot reflect the effect of immeasurable values such as emotions.

The price perception that varying from person to person can be considered as one of the obstacles to the markets to operate in the most effective way.

While writing about behavioral finance, it would be useful to give brief information about decision making mechanisms.

Every person makes decisions and implements them in different ways. the places where people were born, the culture they grew up, their environment, their priorities, their view of life, the value judgments they developed and their emotional states were effective factors in the change of decision-making mechanisms from person to person.

In Behavioral Finance, people are considered “normal” rather than rational (Estrada, 2001). In this context, it is argued that investors consider other variables apart from risk and return while making investment decisions, and since the process of evaluating all the possibilities is not an easy process, the results cannot be the results that make the return the most., but the decisions that the decision maker is satisfied at best. “Green funds” that invest in companies that have a good relationship with the environment, or “socially responsible funds” that refuse to invest in companies that produce harmful products such as cigarettes and alcohol.

Psychologists argue that decision making process is largely emotional (Lerner et al, 2005). The assumptions and stages of rational decision making in real life applicability is questioned. (Ayyildiz Ünnü, 2014) The basis of this is the role of emotions, intuition and cognitive methods, and the concept of bounded rationality (Simon, 1982; Gigerenzer ve Goldstein, 1996; Bardone and Secchi, 2005) in parallel with these elements. Within the framework of these inquiries, the idea that people can act emotionally while making financial decisions has emerged.

1.2. A BRIEF OVERVIEW OF TRADITIONAL FINANCE THEORIES

Effective and efficient use of capital has been an important issue for many years. In the last century, many assumptions and theories have been developed about what investment alternatives can be used to ensure the efficient and efficient use of capital, how resources can be created and how assets can be increased. In this regard, it is possible to gather the theories and approaches developed within the scope of financial management in two main groups: Traditional Finance Theories and Behavioral Finance Theories.

Many scientific studies have been carried out for many years within the scope of Traditional Finance Theories. Today, although these studies give the impression of being replaced by the studies of Behavioral Finance Theories, Traditional Finance Theories are still the basic theories that are still used in understanding the investor behavior and expectations. Considering that people are rational on the basis of traditional finance theories, they assume that the mistakes made in previous investment decisions are not repeated and accept that investor preferences are based on mathematical basis and revise the expectations of investors in line with new information updated and gained.

While traditional finance theories dealt with the human phenomenon, which differs greatly from each other, in rational patterns, it has been suggested that in the stage of making investment decisions, people compare the benefits they will achieve at the end of this action with the difficulties in making this decision and that people can estimate the results of their decisions while having equal knowledge. According to these theories that deal with investor behaviors in rational patterns; Investors will make an investment decision in all cases where the expected returns are more than the cost they incur during the investment decision. However, the fact that the expected return at the end of the investment is greater than the costs incurred does not mean that the process will result in an absolute investment decision in practice. This is the case in the literature. It takes place as the St. Petersburg Paradox and states that investors may not be willing to

invest, even though the return they expect to achieve at the end of the investment is more than the cost they incur. St. The St. Petersburg Paradox is covered in detail later in the study.

Traditional Finance Theories include Expected Utility Theory, Modern Portfolio Theory, Pricing Model for Financial Assets and Effective Markets Hypothesis.

1.3. BEHAVIORIAL FINANCE : BASIC THEORIES

1.3.1. Efficient Market Hypothesis

To understand the starting point of behavioral finance, the first thing to do is to look at Efficient Market Hypothesis suggested by Fama (1965). Because there are suggestions that behavioral finance emerged as an idea to falsify Efficient Market Hypothesis.

Effective market hypothesis, as the form of full competition market model applied to the price formation process in the stock market, tries to explain the speed, duration and accuracy of the reaction of investors in the stock market by changing the current market prices. According to the effective market hypothesis, investors aiming to maximize their utility function are competing with each other to accurately predict the future value of stocks. The equilibrium price resulting from many buying and selling decisions is the result of the consensus created by the parties in the market on the value of a stock using the information they have. Therefore, the prices observed at a given moment are an objective estimate of the real value of the stocks.

Investors analyze and interpret this information correctly when there is a new flow of information into the market, apart from the existing and reflected information. If the newly arrived information is likely to affect the value of stocks, a rapid

change occurs in the current balance price. This price will not change until new information is available to the market.

The effective market hypothesis is theoretically based on the following assumptions (Tamer, Kayadere, 2002):

- The main aim of the investor is to maximize the benefit of its ultimate wealth.
- The investor makes her choices based on risk and return.
- Investors' risk and return expectations are similar
- Time horizons of investors are same
- Information can be freely obtained by every investor in the market.

Considering that almost all of the above assumptions can change, the feasibility of efficient market hypothesis can be questioned.

1.3.2. Prospect Theory

Prospect theory is behavioral finance theory that reveals how people decide between options involving risk and uncertainty. According to prospect theory, people benefit from certain points rather than definitive results while creating their return expectations. The theory has emerged by showing risky preferences showing that people are avoiding them. People show this tendency because they are afraid of losing more than their earnings. When a study is made by weighting the risks of risk taking and risk avoidance, a structure as follows is observed. (Kahneman & Tversky, 1979).

Table 1 : PROSPECT THEORY PATTERN

Possibility	WINNING	LOSINGS
HIGH POSSIBILITY	90% chance to win \$5,000	90% chance to lose \$5,000
	Afraid of frustration	Wants not to lose
	RISK-AVERSE	RISK-SEEKING
LOW POSSIBILITY	10% chance to win \$10,000	10% chance to lose \$10,000
	Wants to win big	Wants not to lose big one
	RISK-SEEKING	RISK-AVERSE

1.3.3. Anchoring

As a result of researches in the Behavioral Finance field, it has been discovered that if there is an explanation or information that the human brain already trusts about the subject in question, this previously acquired knowledge will affect decision making (Fuller, 2000).

Anchoring can be an important force for price strategists. When a price is mentioned before the sale of an asset, bargaining generally concentrates around this price.

However, anchoring for past figures can be very damaging. For example, if a long-term investment is made in the stock, the promise is made if the past 3-4-year returns are made, it can be entered in such a period that no return can be obtained in the next 3-4 years.

The anxiety effect is common in investor behavior. If any specialist mentions the price level for a stock or investment instrument, the investor focuses on that level. Whatever new conditions bring, they are in the illusion and expectation that that entity will reach the level mentioned. Another effect of anchoring is the target and

expectation figures. The strongest movements in the markets occur when there are significant deviations from these figures.

1.3.4. Over-Confidence

In behavioral finance, over-confidence is classified as a common mistake. Therefore, it is frequently, stated that pricing errors and unnecessary volatility have been created in the market due to over-confidence. But there are some studies that proves otherwise. In line with that, according to Odean (1999) over-confidence has an aspect that explains higher than necessary liquidity and trading volumes. In addition, according to study that was made by Ko and Huang (2007) irrational decisions do not always cause the market to work inefficiently. According to aforementioned study, over-confidence may enable the market to operate efficiently by increasing the acquisition of more information that usual.

1.3.5. Representativeness Heuristic

For the solution of a problem in a short time, the shortcuts used to achieve the closest result to the best result can be called heuristic analysis. Representativeness heuristic sometimes called as Misperceiving Randomness.

Representativeness heuristic, aims to understand the possibility that varies according (subjective probability) to the person. According to Kahneman and Tversky (1972), subjective probability of an incident related to:

- Its similarity in essential characteristics with the universal set
- Its similarity in the general features of the process by which it is formulated.

Another possible outcome of representativeness heuristic in financial markets is; is that investors are very hasty to uncover examples in randomly distributed data.

If a company has increased its profits for several consecutive quarters, it leads investors to conclude that the company will achieve high profit growth in the long run, as per the agency rule. In other words, past profits are representative of the high growth rate.

Shleifer (2000), stated that when the law of small numbers and the impact of representation are examined together, the sources of many anomalies seen in financial markets can be found. For example, it can be said that the excessive reaction of the market to a positive news about a stock is due to the investors' overestimating the effect of the news based on the small number rule.

1.3.6. Avoidance Tendency of Regret

Regret is the pain felt when it is understood that the other option has a better outcome and that it is too late to change it. In other words, it is defined in psychology as the emotion exposed due to a wrong decision. Avoiding regret is on the emotional reaction caused by people acting incorrectly. Regret develops relatively late in childhood approximately at between the age of five to seven years (Guttentag, et al, 2004).

Investors do not give up the hope of earning money from a particular investment because they invested money because they wanted to earn more than they originally invested. The urge to compensate expresses the difficulties of people being at peace with their losses when viewed psychologically. Research shows that the tendency to compensate affects both experts and ordinary investors. Compensation encourages people to take risks, which is perhaps more harm to portfolio investments than other factors will do, rather than avoiding losses.

Avoiding regret also affects the transactions in the stock market. Researches show that investors are reluctant to sell their stocks while making losses. The fact that investors are slow to sell while they are making losses in the equity markets is related to the fact that they do not want to experience the feeling of regret when

they make a profit when they make a profit. The investor, who does not want to experience the regret that he will suffer while the prices go down, will avoid realizing this loss.

1.3.7. Wishful Thinking Bias

In finance, this issue takes place in the conflict between what one believes and desires. The decision maker often focuses on what makes her happy during the thought process, rather than evaluating the evidence that she has been working on and acquiring for a long time. Accordingly, the decision maker thinks that the decisions they take will give negative results as a low probability, and that it will produce a positive result as a high probability (O'Sullivan, Owen, 2015).

1.3.8. Loss Aversion

If psychologically speaking, it is known fact that people do not want to lose. It can even be said that people hate losing more than they like to win. Doviak (2016) suggested that when an investment proceeds as expected, one's happiness is a calmer and longer-term happiness but when losses occur within the framework of the investment, the reaction of the person will be much faster and impulsive. According to Thaler (1999), losses feel twice as bad as earnings feel good.

Loss aversion, is a situation where it makes it difficult for a person to sell an investment that will cause loss in the future by forcing the investment decision making mechanism more than an equivalent gain.

In addition, evaluating financial markets from a short term loss avoidance perspective has a devastating effect on investment decisions. All in all, when people make an investment decision with the instinct to avoid losses, they encounter less returns than they can get.

1.3.9. Herding

From time to time, investors fall into the trap of doing what the investors around do. This instinct is called herding. According to Sinha (2005), people repeat what someone else around did, thinking that their knowledge was weaker than others. This is also related to the fact that people have less confidence in themselves than others. There are also many opinions about herding's being a social behavior structure. People in a certain social environment feel happy by staying in agreement with others regardless of their own opinions.

There is a basic belief that if many analysts are mistaken about a financial investment decision at the same time, it will not harm the analysts. However, if a single analyst differentiates and is wrong about a decision, this may even cause the person to lose his job (Roider & Voskort, 2016; Spyrou, 2013).

In the framework of the reasons listed above, instead of making the most accurate decision with the information they have, people have to settle for the returns they can get by doing the same things other ones do.

1.3.10. Mental Accounting

Jordan et al. (2015) defines mental accounting as a tendency for people to distribute their money in mental buckets. Mental accounting refers to the tendency of people to divide their money into separate accounts based on various subjective criteria, such as the source of money and the intention to use for each account. According to the theory, individuals assign different functions to each group of assets that often have an unreasonable and harmful effect on consumption decisions and other behavior.

Although many people use mental accounting, they may not realize how illogical this line of thought really is. For example, while people have significant credit card debt, they often have a special fund reserved for a vacation or a new home.

For example;

To see the real life reflections of mental accounting, the following example can be given:

Suppose that; You will get a croissant for \$ 20 for breakfast. While waiting, the following situations arose.

- you spent your money but you forgot that or;
- the croissant slides and falls off your hand as you start eating the croissant

Assuming you have a credit card on you, would you consider buying another croissant?

If we think rationally, the answer should be the same for both cases. The question is whether you should spend \$ 20 or not. But mental accounting comes into play here.

Due to prejudiced approaches, people exposed to the first scenario do not consider the forgotten money as part of the business, considering that money has not yet been spent.

As a result, it is more likely to buy another sandwich, while in the second scenario money is already spent.

Another prejudice in this regard is the source of the money to be spent within a transaction. Thaler (1999) has given her example on this subject under the name “house Money effect”. In this context, if a gambler uses home money in the game, she will refrain from taking risks. In general, people behave more cautiously while buying something with their hard-earned wages. But they are more wasteful in spending with resources such as bonuses or bonuses.

CHAPTER 2

FACTORS THAT AFFECT INDIVIDUAL INVESTMENT DECISIONS

People who make financial investments without being under the umbrella of an institution are called individual investors. The differences of individuals in certain respects create differences in areas that have a strong effect on financial investment, for example investment appetite with risk perception.

There are many issues that affect people's investment decisions. These may be individual issues such as age, educational background, social issues such as family, or some financial matters.

In this study, the factors affecting individuals were analyzed in 3 different titles individually, socially and financially.

2.1. INDIVIDUAL FACTORS

2.1.1. Education Level of the Person

People who do not have enough information about financial issues have difficulties in accessing and evaluating the information available in the market when making an investment decision. People who invest in this way will be deprived of the returns they can get with the funds they have.

Incorrect investments made due to lack of information will cause the market fund not to be directed to companies that need additional liquidity to continue their activities under normal conditions. Companies that are able to access these funds and contribute to the economy will be bankrupt due to wrong investment decision that are made via financial literacy absence.

In order to prevent these situations, there are companies providing financial consultancy services. Individual investors with a certain capital but lack of knowledge can make the right investment decisions through these companies.

2.1.2. Age and Health Status of the Person

According to the investment theory, there is an inverse relationship between age and risk perception. There are three stages of human life according to the individual life cycle:

- Accumulation Period
- Consolidation Period
- Spending Period

It can be said that the young people at the beginning of her career are in the accumulation period. People in the accumulation period make more aggressive investment decisions.

They are counted in the consolidation period of people who are in the middle of their career and have made certain gains. People in the consolidation period act more conservatively in investment decisions with the instinct to protect what they have achieved.

According to Bodie et al (2007) investors approaching retirement are assumed to be in the spending period. It is expected that people in the spending period will make investment decisions that will keep the current rather than obtaining high returns.

On the other hand, the health status of individuals also plays an important role in investment decisions. People with poor health may make shorter-term decisions.

2.1.3. Profession and Income Status of the Person

People must have a profession to obtain funds to invest. In order to earn high amounts of income on a regular basis, people must be employed in the professions that will provide them. People with high income will have more funds to invest. This situation may vary according to the lifestyle and spending habits of the people. For example, people with high incomes but who have adopted a luxurious life invest in a lower portion of their income.

2.1.4. Personality and Mental Status of the Person

Personality is the most important factor that separates people. Personality is a very complex structure formed by the combination of many different points.

Personality directly affects all decision-making mechanisms, not only financial. For example, people who find enough to be satisfied with their hands will be calmer in investment decisions, while people with high eyes will make much more aggressive and risky investment decisions.

In this study, it is tried to measure whether some personality traits have effects on financial behaviors.

2.2. SOCIAL FACTORS

2.2.1. Relatives

The dynamics of family and relatives relationships in which people grew have influence on decision-making mechanisms. People who constantly and regularly get their family's approval while growing up may be looking for some approval

when making an investment decision. People who are more free and make their own decisions often can make faster and aggressive investment decisions.

Of course, these effects can vary from person and family to family.

2.2.2. Social and Cultural Environment

In general, culture is the total of collective values that countries and people derive from the past and carry to the future.

In the social environment, in which people are located, they are influenced by general cultural structure. From the moment they are born, people are exposed to different cultural and social approaches in their childhood, adulthood or old age. In this context, Social and cultural structures affect people's decision-making mechanisms in terms of the characteristics they contain. Religious, political or sportive resources fed by these circles participate in these mechanisms.

2.2.3. Other Impact Groups

People may also be affected by certain people outside the family, relative or social environment. A teacher, a politician or other title that people take as role models as they grow up can sometimes directly affect people's decision-making mechanisms.

2.3. FINANCIAL FACTORS

People use the money they earn to invest. Therefore, people can make investment decisions by considering different motivations. People's desire to protect their

capital, the desire to increase the value they create and their desire to maintain income are examples of these motivations.

2.3.1. Desire to Protect Fund and Maintain Value

In high-inflation countries, people find it important to maintain the value of their money while aiming to generate returns while investing. Interest rates rise due to the reduced purchasing power of money due to inflation. It is difficult to find a balance in countries where these indicators are high. For this reason, both individuals and investors spend time trying to make money while protecting the value of their money against inflation.

To make it more clear, for example, Turkey is one of the high inflationary countries. In Turkey, due to the very low investment instrument that provides high level of inflation rates, too many people and companies have experienced significant capital losses. It can be a nice thesis topic to analyze the investment decisions differences of the people between high and low inflationary countries.

2.3.2. Desire to Sustain Certain Income Level

People who earn high income in high-yield periods may have a tendency to make it regular thing. In case of failing to maintain the income level at these levels, the person whose investment amount will decrease will also lose his income. This shows a kind of spiral effect. Emotional factors may have a high impact on investment decisions of people with this tendency.

While the high income level in the fluctuating markets is desired to be maintained, the loss of the capital may also be in question by experiencing the opposite effect. In this context, a trend in this direction may harm one's rational finance decision-making mechanism.

CHAPTER 3

DOES SELF CONTROL PREDICT THE FINANCIAL BEHAVIOR AND FINANCIAL WELL BEING: ANALYSIS FOR TURKEY WITH THE BEHAVIORAL FINANCE APPROACH

It is important to give information about Behavioral Life Cycle Hypothesis (BLC) and Self Control that are cited within the scope of the study before proceeding to the survey analysis.

3.1. INFORMATION ABOUT BEHAVIORAL LIFE CYCLE HYPOTHESIS

In Behavioral Life-Cycle Hypothesis, published by Thaler and Sheffrin in 1988, people's savings and money spending habits were tried to be explained by certain psychological factors. According to Thaler and Sheffrin, Behavioral Life Cycle is an enriched version of the traditional life cycle. This also creates situations that can be called opposed to traditional economic theories. Accordingly, people cannot control their wealth due to their impatience. Therefore, people apply some accounting in their minds that distorts the situation they should be. As a result, it is rational that the value of today's earnings is more valuable than future earnings. Because, according to the perception, future earnings involve some risks, but today's earnings can be increased by certain investment ways.

Accordingly, with the effect of loss being stronger in people's minds, more brutal discounts are applied than they should be when evaluating earnings in the future (Thaler and Kahneman, 1991).

Another estimate of BLC is that the household cannot plan their expenses in the most correct way. According to BLC, people's spending habits should be evaluated by taking into account the psychological factors described above (mental accounting, herding etc.). According to BLC, wealth is divided into three.

- Current Income
- Current Assets
- Future Income.

In consumption habits, the highest impact is in Current Income and the lowest effect is in Future Income.

Consequently, when evaluating people's investment and spending habits, people's tendency to make mistakes should be taken into account in the framework of behavioral finance. Behavioral finance, maybe by considering BLC as a basis, examines the financial decision making mechanisms of people when they are not rational.

3.2. WHAT IS SELF CONTROL?

Self-control, or to put it differently, the ability to manage emotions, instincts, behaviors, and reflexes, is the most important, may be the only, thing that separates people from animals on nature. Self-control is primarily rooted in the prefrontal cortex—the planning, problem-solving, and decision making center of the brain—which is significantly larger in humans than in other mammals.

The idea that self-control is constant is not true. Self-control of the person is likely to vary throughout the day. It is more correct to evaluate self-control not as a constant emotional state, but as a physical interaction that changes energy throughout the day. Successful self-control requires seeing the bigger picture rather than small details. For example; successful dieters, for example, must prioritize their broader weight-loss concerns over the narrower desire to eat this pizza (Fujita et al, 2017)

According to numerous studies, successful self-control is an important feature for having improved psychological and physical health, high academic success and healthy social relationships (Duckworth & Seligman, 2005; Moffitt et al., 2011; Tangney, Baumeister, & Boone, 2004).

In this context, we can examine in the literature that self-control is an important factor for people to make more accurate decisions.

In this study, the effect of self-control on financial behavior is tried to be observed. Although the effects of certain characteristics on financial decisions have been measured in the field of behavioral finance, the number of studies conducted in the context of self-control is very limited.

3.3.EVALUATION OF THE DATA PROVIDED BY THE SURVEY

3.3.1. Subject and Objectives of the Study

The differences in people's personality traits, accumulation habits, cultural development, and the environment in which they grow also create differences in financial decision-making mechanisms. In the traditional finance approach, while investors are evaluated as completely rational, the traditional finance approach is questioned due to the above-mentioned features and their effects on financial decisions. For this and many other reasons, behavioral finance emerged. In the field of behavioral finance, studies are conducted on the effects of different characteristics on financial decision making mechanisms. Self-control is a character feature that is evaluated in terms of behavioral finance.

Self-control, an aspect of inhibitory control, is the ability to regulate one's emotions, thoughts, and behavior in the face of temptations and impulses (DeLisi, 2014). In other words, self-control is a person's responsibility to keep her present state responsible for her future. People often know that if they work hard today, they will be better off in the future (Ariely and Wertenbroch, 2002). It can be stated that such interpretations conform to the hypothesis Behavioral Life Cycle Hypothesis (BLC) that was put forth by Shefrin and Thaler (1988). As stated in the BLC theory, people continue their lives by assuming as if there was a conflict between the “planner” those who plan their things for a long time and the “doer”

who are more interested in current trend. Furthermore, according to BLC, people's ability to suppress instantaneous impulses taking into account the costs and returns of the decisions to be taken is an important determinant of their financial behavior. The cost of saving money for the future varies from person to person, depending on how the person classifies money mentally.

The ability to control instant impulses is key to long-term success. According study that was published by Converse, et al (2014), childhood self-control predicts positive and negative adolescent behavior; this behavior predicts educational attainment; education predicts the complexity and income associated with one's job; job complexity predicts income and job satisfaction; and income predicted job satisfaction.

The study, prepared by Stromback, et al (2017) and conducted in Sweden, analyzed whether self-control can explain issues such as financial behavior and financial well-being and no other study examining self-control and its ability to predict financial behavior and financial well being in behavioral finance has been found. Within the scope of the study, besides self-control, other cognitive characteristics' effects on financial behavior and financial well-being were also analyzed. The cognitive characteristics were grouped as Self Control, Optimism and Deliberative Thinking.

Applying aforementioned study in Turkey adds academic value for the study.

3.3.2. Data and Sample

Survey method was applied to obtain the data to be included in the study. The participants was responded the survey via Google Survey. The survey was responded by 206 people who all live in Turkey, mostly in Istanbul between 10th and 30th April 2020. In the survey, the participants were asked to respond the questions which were asked in the study that Stromback, et al (2017) prepared. The sample was conventional, there was no targeted sampling.

The questions were mildly modified in order to be applicable for Turkey. The survey answers were evaluated with EViews programme.

3.3.3. Methodology

In the first part of the survey, In order to reveal the demographic structure of the participants, the participants were asked questions of gender, education, profession, financial literacy and income.

In the second part of the survey, the participants were asked questions measuring their financial behavior and financial well-being. In order to evaluate financial behavior first twelve items of the Financial Management Behavior Scale (FMBS) were used. In order to evaluate financial well-being, two different scales were used. First scale was evaluate financial anxiety the other one was evaluate the financial security. (Stromback, et al, 2017)

In the third part of the survey, the participants were asked questions about cognitive characteristics. In the survey, there were different scales that measured cognitive differences, such as self-control, optimism and deliberate thinking. These questions were used as predictors in the regressions. None of them had any financial aspects. Self-control questions were taken and blended from Brief Self Control questionnaire (Tangney, et al., 2004) and Short-Term Future Orientation Scale (Antonides et al., 2011). In order to evaluate the optimism; Life Orientation Scale partially used (Scheier and Carver, 1985) and lastly, Deliberative Thinking were evaluated via 2 questions from Unified Scale to Assess Individual Differences in Intuition and Deliberation were used (Pachur and Spaar, 2015)

In the survey, Likert Scale with 5 answers were used. The answers were ranging between 1 (never) and 5 (strongly agree).

The table below lists the propositions directed to people under the survey.

Table 2: SURVEY QUESTIONS

#	Financial Management Behavioral Scale (Dew and Xiao, 2011)
1	Comparison shopped when purchasing a product or services
2	Paid all your bills on time
3	Kept a written or electronic record of your monthly expenses
4	Stayed within your budget or spending plan
5	Paid off credit card balance in full each month
6	Maxed out the limit on one or more credit cards
7	Made only minimum payments a credit card debts
8	Began or maintained an emergency savings fund
9	Saved money from every paycheck
10	Saved for long term goal
11	Contributed money to a retirement funds
12	Bought bonds, stock or mutual funds
	Financial Anxiety (Fünfgeld and Wang, 2009)
1	I get unsure by the lingo of financial experts
2	I am anxious about financial and money affairs
3	I tend to postpone financial decisions
4	After making a decision, I am anxious whether I was right or wrong
	Financial Security (Fünfgeld and Wang, 2009)
1	I feel secure in my current financial situation
2	I feel confident about my financial future
3	I feel confident about having enough money for retirement
	Self-Control (Tangney et al., 2004)
1	I have a hard time breaking bad habits
2	I get distracted easily
3	I'm good at resisting temptation
4	I do things that feel good in moment but regret later on
5	I often act without thinking through all the alternatives
6	I only focus on the short term
7	The future will take care of itself
8	I live more for the day of today than tomorrow
9	My convenience plays an important role in the decision I make
	Optimism (Scheier and Carver, 1985)
1	In uncertain times, I usually expect the best
2	If something can go wrong for me, it will
3	I'm always optimistic about my future
4	I hardly ever expect things to go my way
5	I rarely count on good things happening to me
	Deliberative Thinking (Pachur and Spaar, 2015)
1	Developing a clear plan is very important to me
2	I like to analyze problems
In total (excluding sociodemographic questions), 35 questions were asked.	

3.4. EVALUTION OF THE FINDINGS

3.4.1. Sociodemographic Characteristics of the Participants

In the first part of the questionnaire, the participants were asked about their individual characteristics by asking about their age, gender and educational background.

Accordingly, information on the general characteristics of the survey participants is presented in the tables below.

Table 3: GENDER DISTRIBUTION OF THE PARTICIPANTS

Gender	Number	Share
Women	86	41,7%
Men	118	57,3%
Don't Want To Answer	2	1,0%
Total	206	100,0%

41.7% of the participants are women, 57.3% are men and 1% did not want to specify gender.

Table 4: AGE DISTRIBUTION OF THE PARTICIPANTS

Age	Number	Share
20-30	115	55,8%
30-40	66	32,0%
40>	25	12,1%
Total	206	100,0%

The ages of 55,8% of the participants are ranging between 20 and 30, ages of 32% of the participants are ranging between 30 and 40, and %12,1 of the participants are older than 40 years.

Table 5: EDUCATION STATUS DISTRIBUTION OF THE PARTICIPANTS

Education Status	Number	Share
Undergraduate	118	57,3%
Graduate	81	39,3%
Other	7	3,4%
Total	206	100,0%

57,3% of the participants hold undergraduate degree, 39,3% of the participants hold graduate degree and 3,4% of the participants hold other degrees (doctorate or high school)

As seen from the above results, most of the participants hold undergraduate degrees.

Table 6: OCCUPANCY STATUS DISTRIBUTIONS OF THE PARTICIPANTS

Occupancy Status	Number	Share
Banker	74	35,9%
Engineer	47	22,8%
Other White Collar	24	11,7%
Retired	12	5,8%
Student	12	5,8%
Consultant	12	5,8%
Attorney	10	4,9%
Teacher	7	3,4%
MD	5	2,4%
Unemployed	3	1,5%
Total	206	100,0%

35,9% of the participants are bankers, 22,8% of the participants are engineers, 5,8% of the participants are retired, student or consultants, respectively, 3,4% of the participants are teachers, 2,4% of the participants are MD and %1,5 of the participants are unemployed.

Interestingly, as seen from the above results, most of the participants are white collar employees.

Table 7: INCOME STATUS DISTRIBUTION OF THE PARTICIPANTS

Income Status	Number	Share
High	39	18,9%
Medium	108	52,4%
Low	59	28,6%
Total	206	100,0%

Traditionally the salaries of people in Turkey are not asked. Based on this information, in order to avoid getting to many “do not want to say” answers, within the scope of the questionnaire, the participants were asked which income group they consider themselves rather than their income status.

It is seen that most of the participants see themselves in, with %52,4 share, middle income class. 28,6% of the participants consider themselves in low income class and 18,9% of the participants consider themselves that they are member of high income class.

Table 8: FINANCIAL LITERACY STATUS DISTRIBUTIONS OF THE PARTICIPANTS

Financial Literacy Status	Number	Share
High	91	44,2%
Medium	56	27,2%
Low	59	28,6%
Total	206	100,0%

As last demographic characteristic, from the survey questions, the financial literacy level of the individuals was gathered. 44,2% of the participants believe that they have high financial literacy, 27,2% of the participants believe that they have medium financial literacy and %28,6 of the participants believe that they have low financial literacy.

Considering that a significant number of people working in the field of consultancy provide financial consultancy service, it is seen that the number of people with high financial knowledge is parallel with the distribution by

profession groups. This can be regarded as a factor that shows that people give consistent answers to the questionnaire.

3.4.2. Estimation Strategy and Analysis

Many OLS regressions have been carried out to measure the effect of different psychological features on financial behavior.

The main equation used in the study is as follows.

$$Y_i = \beta_0 + \beta_1'X_i + \beta_2SC_i + \beta_3Opt_i + \beta_4Del_i + u$$

In the equation; Y represents the outcome. In this context, in this study, financial behavior, financial security or financial anxiety variables can be seen as Y.

Table 9: ABBREVIATIONS USED IN EQUATION

Abbreviation	Meaning
SC	Self-Control
Opt	Optimism
Del	Deliberative Thinking
i	Index for the Participants

The X vector represents all control variables such as income, age, sex, education and financial literacy. Previous studies have revealed that these variables have an impact on financial behavior. (Achtziger et al., 2015; Biljanovska and Palligkinis, 2015; Fernandes et al.,2014)

In the table named correlations between the independent variables it can be seen that; while there is a positive correlations between self-control and optimism and self-control with deliberative thinking, a negative correlation is observed between optimism and deliberative thinking. Although there are correlations between variables, they are not that great to create multicollineraty in regressions.

Table 10: CORRELATIONS BETWEEN INDEPENDENT VARIABLES

	Self-control	Optimism	Deliberative thinking
Self-control	1,000		
Optimism	0,107	1,000	
Deliberative thinking	0,324	-0,164	1,000

3.5.RESULTS OF THE RESEARCH

Table 11: DEPENDENT VARIABLES

#	Financial Management Behavioral Scale (Dew and Xiao, 2011)	Mean	Std. Dev.
1	Comparison shopped when purchasing a product or services	4,33	0,76
2	Paid all your bills on time	4,73	0,55
3	Kept a written or electronic record of your monthly expenses	3,06	1,31
4	Stayed within your budget or spending plan	3,70	1,05
5	Paid off credit card balance in full each month	4,17	1,26
6	Maxed out the limit on one or more credit cards	4,01	1,18
7	Made only minimum payments a credit card debts	4,33	1,16
8	Began or maintained an emergency savings fund	3,75	1,33
9	Saved money from every paycheck	3,34	1,30
10	Saved for long term goal	3,11	1,43
11	Contributed money to a retirement funds	2,67	1,83
12	Bought bonds, stock or mutual funds	2,27	1,57
	FMBS Average	3,62	0,34
	Financial Anxiety (Fünfgeld and Wang, 2009)		
1	I get unsure by the lingo of financial experts	2,70	1,27
2	I am anxious about financial and money affairs	2,66	1,20
3	I tend to postpone financial decisions	2,67	1,07
4	After making a decision, I am anxious whether I was right or wrong	2,50	1,02
	FA Average	2,63	1,15
	Financial Security (Fünfgeld and Wang, 2009)		
1	I feel secure in my current financial situation	3,22	1,13
2	I feel confident about my financial future	3,09	1,09
3	I feel confident about having enough money for retirement	3,05	1,20
	FS Average	3,12	1,14
	Self-Control (Tangney et al., 2004)		
1	I have a hard time breaking bad habits	3,67	1,13
2	I get distracted easily	3,20	1,16
3	I'm good at resisting temptation	3,23	0,90
4	I do things that feel good in moment but regret later on	3,54	0,88
5	I often act without thinking through all the alternatives	4,16	0,85
6	I only focus on the short term	3,77	1,01
7	The future will take care of itself	3,24	1,10
8	I live more for the day of today than tomorrow	3,37	0,99
9	My convenience plays an important role in the decision I make	2,40	0,94
	Average	3,40	1,12

*Item 6 and 7 were reversed to calculate correctly aggregated mean value.

Table 12: INDEPENDENT VARIABLES

#	Self-Control (Tangney et al., 2004)	Mean	Std. Dev.
1	I have a hard time breaking bad habits	3,67	1,13
2	I get distracted easily	3,20	1,16
3	I'm good at resisting temptation	3,23	0,90
4	I do things that feel good in moment but regret later on	3,54	0,88
5	I often act without thinking through all the alternatives	4,16	0,85
6	I only focus on the short term	3,77	1,01
7	The future will take care of itself	3,24	1,10
8	I live more for the day of today than tomorrow	3,37	0,99
9	My convenience plays an important role in the decision I make	2,40	0,94
	SC Average	3,40	1,12
	Optimism (Scheier and Carver, 1985)		
1	In uncertain times, I usually expect the best	3,14	1,02
2	If something can go wrong for me, it will	3,48	1,01
3	I'm always optimistic about my future	2,40	0,88
4	I hardly ever expect things to go my way	3,36	1,06
5	I rarely count on good things happening to me	4,01	0,92
	OPT Average	3,28	1,03
	Deliberative Thinking (Pachur and Spaar, 2015)		
1	Developing a clear plan is very important to me	3,81	1,03
2	I like to analyze problems	4,33	0,77
	DT Average	4,07	0,95

3.5.1. Do people act in line with behavioral life cycle hypothesis?

In order to determine whether the financial behaviors included in the questionnaire support BLC, firstly, the effect of self-control on money-saving behaviors was analyzed. In order to do so the questions between 8-12 of the FMBS was used to determine the saving habits.

It is modelled to find relationship between self-control and saving behaviors with standard errors with control variables such as income, sex, education and financial literacy.

As in the BLC and the study made by Stromback et al (2017), self-control has explanatory effect of the savings behavior. It can be stated that high self-control people more capable to save money.

When we look the independent variables, it can be seen that deliberative thinking is important characteristic when money saving behavior is the matter.

On contrast with the life cycle models, according to this research, relationships between Money saving behaviors and age or sex is small.

Table 13: OLS REGRESSIONS ON THE ASSOCIATION BETWEEN SELF CONTROL AND SAVINGS BEHAVIOR

Variables	Saved (1)	Saved (2)	Saved (3)	Saved (4)
Self-control	0,435***			0,315**
	0,165			0,173
Optimism		-0,333		-0,292
		0,256		0,253
Deliberative Thinking			0,451***	0,354***
			0,127	0,135
Low Income	0,778	0,312***	0,656	0,954
	0,749	0,996	0,687	1,115
High Income	0,918	0,331***	0,836	1,148
	0,870	1,108	0,808	1,208
Age	0,006	0,012	0,009	0,007
	0,012	0,012	0,012	0,012
Female	0,168	0,157	0,130	0,116
	0,184	0,187	0,182	0,181
Education	0,294	0,228	0,183	0,162
	0,229	0,236	0,227	0,229
Financial Literacy	0,024	0,056	0,005	-0,008
	0,109	0,110	0,108	0,108
Observations	206	206	206	206
R-squared	0,076	0,052	0,101	0,120

*p<0,1

**p<0,05

***p<0,01

3.5.2. Self-Control and Financial Behavior

One of the aims of this study is to measure the behavior of people not only according to BLC but also on a wider scale of good financial behavior. In order to do this, the average of people's responses to the FMBS section of the questionnaire was used.

The sample was divided into two for this study. People below the median value are classified as people with low self-control, and people above them are classified as people with high self-control. Median value was determined as 3,44. 3,44 is in middle of the survey. Above 3,44 there are 103 respondents and below 3,44 there are 103 respondents.

The median FMBS score of people with high self-control is calculated as 3,72. The median FMBS score of people with low self-control is calculated as 3,53. These results support the idea that people with higher self-control have better financial behavior.

A t-test was done in order to find out whether differences between means of the groups are significant and results Show that the differences are significant in statistical fashion. [$t(206) = -2,086$, $P < 0.02$]

It is modelled to find relationship between self-control and financial behaviors with again standard errors with control variables such as income, sex, education and financial literacy.

In this part, a direct and good relationship of self-control with FMBS is observed. When we see the control variables, as in the saving behaviors, deliberative thinking have high relationship between financial behavior. Other than deliberative thinking, it is seen that both income levels can be explanatory when it comes to financial behaviors.

Table 14: GOOD FINANCIAL BEHAVIOR IN RELATIONSHIP WITH SELF CONTROL

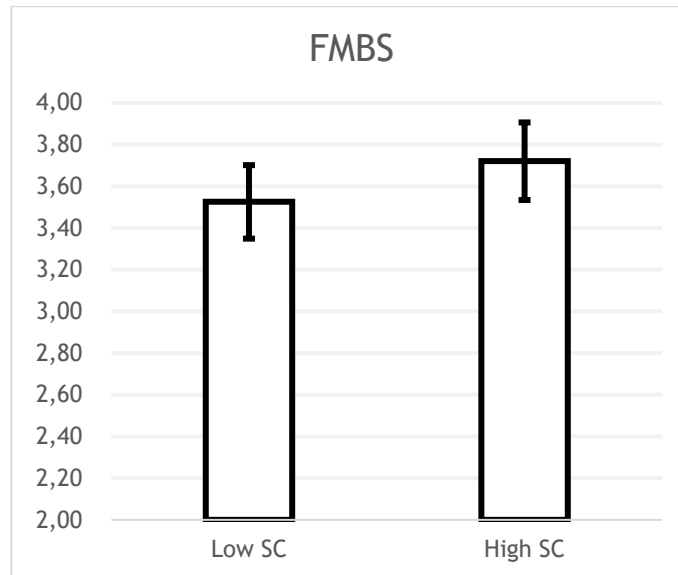


Table 15: OLS REGRESSIONS ON THE ASSOCIATION BETWEEN SELF CONTROL AND GOOD FINANCIAL BEHAVIOR

Variables	FMBS (1)	FMBS (2)	FMBS (3)	FMBS (4)
Self-control	0,236*** 0,083			0,137* 0,084
Optimism		-0,221* 0,129		-0,169 0,124
Deliberative Thinking			0,326*** 0,062	0,282*** 0,066
Low Income	2,061*** 0,377	3,459*** 0,501	1,739*** 0,335	0,201*** 0,544
High Income	2,261*** 0,438	3,686*** 0,558	1,966*** 0,394	1,148*** 0,589
Age	0,008 0,006	0,011* 0,006	0,009* 0,006	0,007 0,006
Female	0,148 0,093	0,139 0,094	0,118 0,089	0,116 0,089
Education	0,145 0,115	0,103 0,119	0,066 0,111	0,162 0,112
Financial Literacy	0,009 0,055	0,026 0,055	-0,011 0,053	-0,008 0,053
Observations	206	206	206	206
R-squared	0,134	0,112	0,210	0,226

*p<0,1, **p<0,05, ***p<0,01

3.5.3. Self-Control and Financial Well Being

In addition to the financial behavior and self-control relationship, the relationship between financial well-being and self-control has been tried to be measured. In order to do questions about financial security and financial anxiety was asked and relationship between self-control and financial security and financial anxiety was measured separately.

Once again, sample was divided into groups as low self-control and high control with respect to median score of the self-control questions which was 3,44. As explained below; 3,44 is in middle of the survey. Above 3,44 there are 103 respondents and below 3,44 there are 103 respondents.

The median FA (financial anxiety) score of people with high self-control is calculated as 2,47. The median FA score of people with low self-control is calculated as 2,80. It is important to keep the idea that, high financial anxiety score means negative characteristics. The result shows that high self-control people have less financial anxiety and vice versa.

A t-test was done in order to find out whether differences between means of the groups are significant and results show that the differences are significant in statistical fashion. [$t(206) = 3,079$, $P < 0.001$]

The median FS (financial security) score of people with high self-control is calculated as 3,28. The median FA score of people with low self-control is calculated as 2,96. The result shows that high self-control people have more perceived financial security and vice versa.

A t-test was done in order to find out whether differences between means of the groups are significant and results show that the differences are significant in statistical fashion. [$t(206) = -2,223$, $P < 0.01$]

It is modelled to find relationship between self-control and financial anxiety and financial security once again with standard errors with control variables such as income, sex, education and financial literacy.

In this part, a direct and good relationship of self-control with both financial anxiety and financial security was found out.

Self-control and financial anxiety have negative relationship, means that people with high self-control have less financial anxiety. Self-control and financial security have positive relationship that complies with the earlier studies.

When we look at the other control variables there are interesting results in relation with financial anxiety.

First of all both income levels have positive relationship with financial anxiety. Second of all, being female have strong negative relationship with financial anxiety. It can be stated that female people are coldblooded when it comes to financial decisions.

Additionally, reasonably, there are negative relationship between financial anxiety and financial literacy. That suggests that people with high financial literacy experience less financial anxiety than others.

When we look at the financial security results, other than self-control, only being female and financial security have a relationship which is positive one. According to study, female people feel more secure when it comes to financial aspects.

There is a common saying that suggests that people from Turkey are tend to be emotional. This situation is supported in this study. In all regressions, the most direct and intensive explanatory results are presented in the field of financial anxiety. Financial anxiety has the highest r-square value which is 0,244.

**Table 16: OLS REGRESSIONS ON THE ASSOCIATION BETWEEN
SELF CONTROL AND FINANCIAL WELL BEING**

Variables	FA (1)	FA (2)	FA (3)	FA (4)	FS (5)	FS (6)	FS (7)	FS (8)
Self-control	-0,249***			-0,269***	0,323***			0,285**
	0,092			0,099	0,127			0,135
Optimism		-0,089		-0,029		-0,051		-0,071
		0,144		0,145		0,197		0,198
Deliberative Thinking			-0,008	0,055			0,182*	0,108
			0,073	0,077			0,099	0,105
Low Income	4,666***	4,214***	3,957***	4,646***	0,852	1,968***	1,237**	0,851
	0,419	0,559	0,396	0,637	0,575	0,766	0,538	0,873
High Income	4,864***	4,415***	4,149***	4,851***	0,903	2,032***	1,308**	0,916
	0,486	0,622	0,466	0,691	0,667	0,852	0,633	0,946
Age	0,002	0,000	0,000	0,003	0,012	0,016*	0,015*	0,012
	0,007	0,007	0,007	0,007	0,009	0,009	0,009	0,009
Female	-0,304***	-0,315***	-0,309***	-0,311***	0,369***	0,373***	0,357**	0,354***
	0,103	0,105	0,105	0,104	0,141	0,144	0,143	0,142
Education	-0,134	-0,144	-0,127	-0,152	0,163	0,147	0,115	0,126
	0,128	0,132	0,131	0,131	0,175	0,181	0,178	0,180
Financial Literacy	-0,378***	-0,395***	-0,394***	-0,382***	0,083	0,107	0,086	0,073
	0,061	0,062	0,062	0,062	0,084	0,085	0,085	0,084
Observations	206	206	206	206	206	206	206	206
R-squared	0,241	0,215	0,213	0,244	0,113	0,084	0,099	0,119

*p<0,1

**p<0,05

***p<0,01

Table 17: FINANCIAL ANXIETY BY SELF CONTROL LEVEL

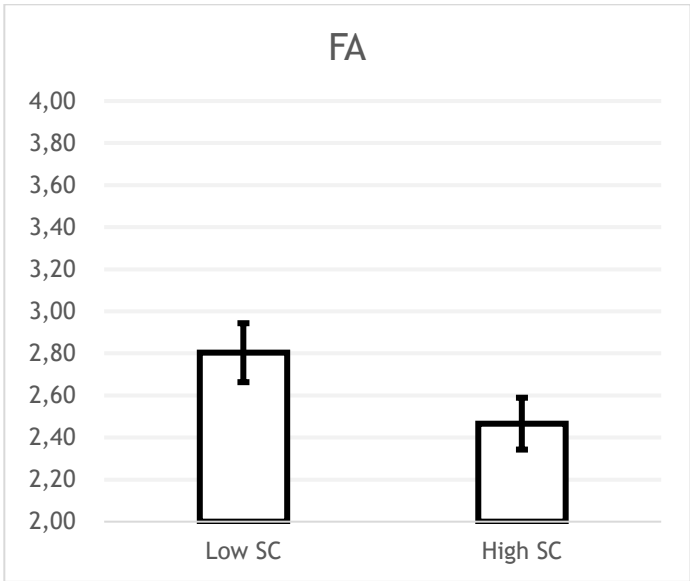
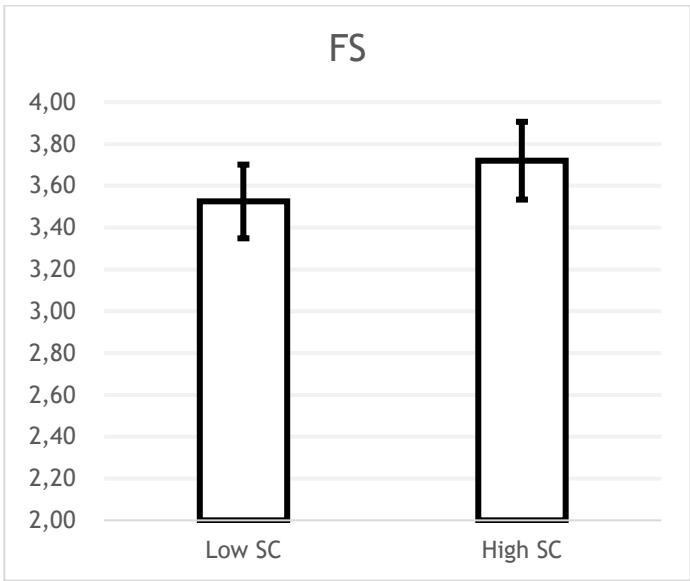


Table 18: FINANCIAL SECURITY BY SELF CONTROL LEVEL



3.6.DISCUSSIONS OF THE RESEARCH

Researchers are exposed to a lot of behavioral differences when studying economic theories. The main motivation of behavioral economics and finance studies is to try to better understand human behavior and their effects on finance. One way to approach these differences is to observe the effect of certain personality traits on certain financial decision mechanisms by accepting that decision makers are different from each other. The purpose of this study is to contribute to the literature on the impact of different non-cognitive processes on financial behavior and financial well-being. Especially, Realizing such a study on Turkey, which is described as emotional, makes the study more interesting.

3.6.1. Main Findings

Self-control has impact on people's financial behavior and self-perceived financial well-being. We observe that participants with high self-control, regularly tend to save money from their income sources regularly. This situation can enable the mentioned people to be prepared against unexpected expenses and to enter their retirement periods more easily. This observations are parallel with the BLC hypothesis and previous researches. (Ameriks et al., 2007; Biljanovska and Palligkinis, 2015; Stromback et al, 2017)

When we expand our study from money saving behaviors to general financial behaviors, self-control has an impact on these, too. This is still valid when other control variables, such as financial literacy or sex, are added to the model.

In addition to financial behavior, analysis of self-control's effects on financial well-being is also part of this study. In parallel, self-control's effects on both aspects of financial well-being (financial anxiety and financial security) are observed. Interestingly, Self-control positively affects the feeling of financial security and has a negative relationship with financial anxiety. To highlight, the

ability of this study to explain the negative relationship between financial anxiety and self-control is quite high. In this context, we can say that self-control is effective not only on financial behavior, but also on financial welfare.

This study has been able to indicate that self-control can explain good financial behavior and financial well-being. But in addition to self-control, other non-cognitive features were also the subject of this study such as optimism and deliberative thinking. Within the scope of the study, it is observed that deliberative thinking has impact on money saving and general financial behavior. But deliberative thinking's relationship with financial wellbeing cannot be seen which is in line with the study made by Stromback et al (2007).

Stromback et al (2007) stated that respondents who are more optimistic shown better financial behavior and feel more secure when it comes to financial matters. When it comes to optimism, on the contrary with the study made by Stromback et al (2017), this study could not find any relationship in relation with optimism. Whether this is due to the differences of the countries of the participants or for other reasons may be the subject of another thesis study.

In this study, the effects of non-cognitive characteristics such as self-control, deliberative thinking and optimism, on financial behavior and financial wellbeing were analyzed and contribution to the literature was made by doing the study in Turkey. To further enrich the behavioral finance literature, it may be useful to include other individual characteristics in such studies.

3.6.2. Constraints

It will be useful to state a number of constraints that have been the subject of the study. First; demographic characteristics of the participants included in the scope of the survey, in context with reflecting the population in Turkey could have been better. Secondly, the answers to the questionnaire consist entirely of data provided by individuals. Participants may have responded as people they wanted to be, but

not when they were responding. This situation should be taken into account while analyzing. Lastly, the sample size is relatively narrow, and with a larger sample size, it may be useful to repeat this study.

CONCLUSION

The BLC hypothesis reveals that self-control has a positive effect on money-saving habits. The results obtained within the scope of this study are also compatible with the hypothesis, but it was also demonstrated by this study that the effect of self-control is not limited to only saving habits. This study shows that self-control has a greater impact on financial behavior than the BLC hypothesis suggests.

In addition, it has been demonstrated by people who have higher self-control feel less financially anxious and more secure. Apart from self-control, deliberative thinking has also been shown to have an impact on financial behavior and financial wellbeing. Optimism, on the other hand, seems to have no effect on financial behavior and financial wellbeing, on the contrary with Stromback et al (2007). This study is one of the earliest studies conducted in Turkey on the effects of emotional differences on financial behavior. There are more ways to go in this area.

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ANNEX: SURVEY QUESTIONS AND ANSWERS

Table 19: FMBS ANSWERS BREAKDOWN

Financial Management Behavioral Scale (Dew and Xiao, 2011)		1	2	3	4	5	Total
Comparison shopped when purchasing a product or services	Quantity	0	3	27	75	101	206
	Percentage	0%	1%	13%	36%	49%	1
Paid all your bills on time	Quantity	0	0	7	39	160	206
	Percentage	0%	0%	3%	19%	78%	1
Kept a written or electronic record of your monthly expenses	Quantity	30	44	54	42	37	206
	Percentage	15%	21%	26%	20%	18%	1
Stayed within your budget or spending plan	Quantity	4	27	49	75	52	206
	Percentage	2%	13%	24%	36%	25%	1
Paid off credit card balance in full each month	Quantity	16	10	16	37	127	206
	Percentage	8%	5%	8%	18%	62%	1
Maxed out the limit on one or more credit cards	Quantity	97	53	26	22	8	206
	Percentage	47%	26%	13%	11%	4%	1
Made only minimum payments a credit card debts	Quantity	140	28	18	10	10	206
	Percentage	68%	14%	9%	5%	5%	1
Began or maintained an emergency savings fund	Quantity	21	16	34	51	84	206
	Percentage	10%	8%	17%	25%	41%	1
Saved money from every paycheck	Quantity	25	28	49	57	48	206
	Percentage	12%	14%	24%	28%	23%	1
Saved for long term goal	Quantity	43	28	40	52	44	206
	Percentage	21%	14%	19%	25%	21%	1
Contributed money to a retirement funds	Quantity	102	15	4	16	69	206
	Percentage	50%	7%	2%	8%	34%	1
Bought bonds, stock or mutual funds	Quantity	112	14	20	26	33	206
	Percentage	55%	7%	10%	13%	16%	1
Total	Quantity	590	266	343	501	773	2472
	Percentage	24%	11%	14%	20%	31%	1

Table 20: FINANCIAL ANXIETY ANSWERS BREAKDOWN

Financial Anxiety (Fünfgeld and Wang, 2009)		1	2	3	4	5	Total
I get unsure by the lingo of financial experts	Quantity	49	43	55	38	20	206
	Percentage	24%	21%	27%	19%	10%	1
I am anxious about financial and money affairs	Quantity	44	52	63	31	16	206
	Percentage	21%	25%	31%	15%	8%	1
I tend to postpone financial decisions	Quantity	36	51	77	32	9	206
	Percentage	18%	25%	38%	16%	4%	1
After making a decision, I am anxious whether I was right or wrong	Quantity	34	78	59	29	6	206
	Percentage	16%	38%	29%	14%	3%	1
Total	Quantity	163	225	255	130	51	824
	Percentage	20%	27%	31%	16%	6%	1

Table 21: FINANCIAL SECURITY ANSWERS BREAKDOWN

Financial Security (Fünfgeld and Wang, 2009)		1	2	3	4	5	Total
I feel secure in my current financial situation	Quantity	20	32	55	79	21	206
	Percentage	10%	16%	27%	38%	10%	1
I feel confident about my financial future	Quantity	19	38	72	59	18	206
	Percentage	9%	18%	35%	29%	9%	1
I feel confident about having enough money for retirement	Quantity	26	41	64	51	25	206
	Percentage	13%	20%	31%	25%	12%	1
Total	Quantity	65	111	191	188	64	618
	Percentage	11%	18%	31%	30%	10%	1

Table 22: SELF CONTROL ANSWERS BREAKDOWN

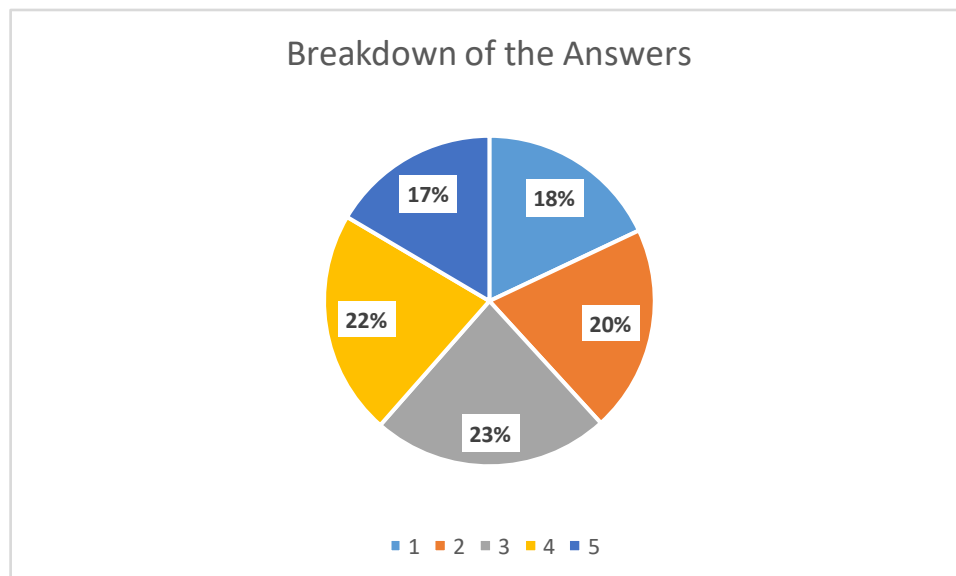
Self Control (Tangney et al., 2004)		1	2	3	4	5	Total
I have a hard time breaking bad habits	Quantity	60	59	54	25	8	206
	Percentage	29%	29%	26%	12%	4%	1
I get distracted easily	Quantity	33	50	63	44	15	206
	Percentage	16%	25%	31%	22%	7%	1
I'm good at resisting temptation	Quantity	8	35	78	76	9	206
	Percentage	4%	17%	38%	37%	4%	1
I do things that feel good in moment but regret later on	Quantity	24	91	67	21	3	206
	Percentage	12%	44%	33%	10%	1%	1
I often act without thinking through all the alternatives	Quantity	81	89	28	4	4	206
	Percentage	39%	43%	14%	2%	2%	1
I only focus on the short term	Quantity	52	87	42	22	4	206
	Percentage	25%	42%	20%	11%	2%	1
The future will take care of itself	Quantity	26	65	61	41	13	206
	Percentage	13%	32%	30%	20%	6%	1
I live more for the day of today than tomorrow	Quantity	28	63	77	32	6	206
	Percentage	14%	31%	38%	15%	3%	1
My convenience plays an important role in the decision I make	Quantity	3	27	52	93	32	206
	Percentage	1%	13%	25%	45%	15%	1
Total	Quantity	313	567	522	358	93	1854
	Percentage	17%	31%	28%	19%	5%	1

Table 23: OPTIMISM ANSWERS BREAKDOWN

Optimism (Scheier and Carver, 1985)		1	2	3	4	5	Total
In uncertain times, I usually expect the best	Quantity	12	41	76	61	17	206
	Percentage	6%	20%	37%	30%	8%	1
If something can go wrong for me, it will	Quantity	35	66	74	25	6	206
	Percentage	17%	32%	36%	12%	3%	1
I'm always optimistic about my future	Quantity	5	14	64	97	26	206
	Percentage	2%	7%	31%	47%	13%	1
I hardly ever expect things to go my way	Quantity	33	64	65	36	8	206
	Percentage	16%	31%	31%	18%	4%	1
I rarely count on good things happening to me	Quantity	72	84	36	12	2	206
	Percentage	35%	41%	18%	6%	1%	1
Total	Quantity	157	269	315	231	59	1030
	Percentage	15%	26%	31%	22%	6%	1

Table 24: DELIBERATIVE THINKING ANSWERS BREAKDOWN

Deliberative Thinking (Pachur and Spaar, 2015)		1	2	3	4	5	Total
Developing a clear plan is very important to me	Quantity	7	19	32	96	53	206
	Percentage	3%	9%	15%	47%	26%	1
I like to analyse problems	Quantity	1	5	18	84	98	206
	Percentage	1%	2%	9%	41%	48%	1
Total	Quantity	8	24	50	180	151	412
	Percentage	2%	6%	12%	44%	37%	1
Grand Total	Quantity	1296	1460	1676	1588	1190	7210
	Percentage	18%	20%	23%	22%	17%	1



ETİK KURUL DEĞERLENDİRME SONUCU / RESULT OF EVALUATION BY THE ETHICS COMMITTEE

Covid-19 salgını nedeniyle İstanbul Bilgi Üniversitesi İnsan Araştırmaları Etik Kurulu, 2019-2020 Bahar döneminde teslim edilecek lisansüstü tezlerin onay yetkisini ilgili etik kurul alt komitelerine devretmiştir. / Due to the Covid-19 outbreak, İstanbul Bilgi University Human Research Ethics Committee has transferred its approval authority to the Ethics Board Sub-Committees organized within each graduate program. Thus, the graduate theses to be submitted in the spring semester of 2019-2020 should/must get the approval of the Ethics Board Sub-Committee within their own graduate program.

ETİK KURUL ALT KOMİTESİ DEĞERLENDİRME SONUCU / ETHICS BOARD SUB-COMMITTEE EVALUATION RESULT

Bu bölüm lisansüstü tez araştırmaları için ilgili Etik Kurul alt komitesince doldurulacaktır. / This part to be completed by the Ethics Board sub-committee responsible for graduate dissertation studies.

Başvuru Sahibi / Applicant: İlke Özgünler

Proje Başlığı / Project Title:

Değerlendirme Sonucu/ Result of Evaluation

1. Herhangi bir değişikliğe gerek yoktur. Veri toplama/uygulama başlatılabilir. / There is no need for revision. Data collection/application may commence: Uygundur

2. Ret / Application Rejected: _____

Reddin gerekçesi / Reason of Rejection: _____

Değerlendirme Tarihi / Date of Evaluation: 25/03/2020

Unvanı, Adı, Soyadı / Title, Name, Surname: Prof. Dr. Cahit Özalp

İmza / Signature:

