



# DETERMINING THE EFFECT OF EMOTIONAL INTELLIGENCE IN INVESTMENT DECISIONS IN SUSTAINABLE FINANCE

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## ABSTRACT

Looking at the world in general, the growing population has put new policies on the agenda. It is especially seen that steps have been taken to eliminate the destruction of the environment due to the negativities experienced. Emerging issues such as natural disasters, the Chernobyl incident, the damage caused by oil tankers in the sea, and the impact of environmental factors on the economy have been put on the agenda. To create a more sustainable life cycle that eliminates climatic changes, environmental, social, and governance issues should be considered within the concept of sustainable finance. Investors have started to look at the characteristics of sustainable finance companies from a multidimensional perspective. In this regard, the study investigates how this situation, combined with the emotional impact dimension, affects investors' decisions from this perspective. In line with the purpose of the study, related concepts were explained, and a literature review on the related concept was included. The research data were collected using questionnaires. The survey data were analyzed using SPSS 23 package program. Correlation and regression analysis were used to analyze the data. Based on the findings, it was concluded that emotional intelligence significantly influences investors' investment decisions in sustainable finance.

**Keywords:** Sustainable Finance, Emotional Intelligence, Investment Decisions

## 1. INTRODUCTION

Sustainable finance refers to any financial service that integrates environmentally-based social and governance measures into business and investment decisions for the long-term benefit of society, especially for money and capital market parties. Sustainable finance is a financial market that contributes to sustainable development and value creation in economic, environmental, and social terms. In other words, it is a set of models that achieve and enhance economic profitability, prosperity, and economic competitiveness, both today and in the long term, and help preserve and restore ecological systems and increase cultural diversity and social welfare (Ulusoy, 2019:51).

Investors must learn to manage themselves, in addition to their investment knowledge. When making investment decisions, the heuristics used by investors are critical, in addition to emotional and cognitive factors. Many psychological reasons and investor tendencies (tendency to self-deception, emotional preferences, cognitive biases, and social trends) prevent investors from making rational decisions (Küden, 2014: 55).

As social beings, human beings are in constant communication with other human beings. However, to live a good life and have a high quality of life, this communication must be as good as possible. Thus, emotional skills such as understanding the other side, responding to people according to their feelings, providing empathy, self-awareness, self-management, controlling stress, and similar obligations arise from this obligation. The concept of emotional intelligence comes into play at this stage (Ağgöl & Güngör, 2019:1842). From the few financial studies that deal with emotional intelligence, it appears that this concept impacts investment decisions (Salovey & Mayer (1990) as quoted by Doğan, 2016: 545).

In examining the literature, the dimension of emotional intelligence on investment decisions has been investigated. This study has a unique value in terms of incorporating its relationship with the concept of sustainable finance. The study aims to combine the multidimensionality in sustainable finance with emotional impact and determine how it affects investors' decisions from this perspective. The literature review, conceptual framework, and analysis results related to the relevant concepts are included in the study.

### 1.1. Conceptual Framework and Literature Review

In this part of the study, the concepts of sustainable finance and emotional intelligence were evaluated using a conceptual framework, and a literature review on sustainable finance was included.

## 1.2. Sustainable Financing

The origins of sustainability and sustainable finance can be traced back to the 17th and 18th centuries. The 1950s and 1980s are remembered as when environmental remediation and business impact on pollution was first discussed. The economic impact of destruction was more effective due to the environmental problems caused mainly by natural events after the 1970s, occupational accidents after the 1980s, the Chernobyl incident, the damage to the oceans by oil tankers, the inevitable rise of the Chinese state, the pollution that appeared in East Asia and spread to the entire mainland, and the rapid increase of production in the automotive sector in Europe. Minimizing the impact of environmental factors on people and nature before the concept of sustainable finance, in line with creating a more sustainable life that eliminates the effects of climatic changes, paved the way for the emergence of a new financing requirement (Ulusoy, 2019:52).

The origin of the term sustainability goes back to the Latin word "subtenir." The word means "to protect" or "to support from below." The concept dates back to the Industrial Revolution (Tuna, 2014:1).

Sustainability is a model that balances ecological equilibrium and economic growth, ensures the efficient use of natural resources, attaches importance to environmental quality, and meets future generations' present needs without compromising their own needs (Hayta, 2009: 144).

On the other hand, sustainable finance is the type in which environmental, social, and governance issues are considered necessary in providing finance to investors (URL 1, 2018).

The following section examines some studies in the literature on sustainable finance and the results obtained.

In the study conducted by Usul, Bekçi, and Eroğlu (2002), the behavioural patterns of individual investors trading in the Turkish capital market were investigated when valuing their savings in shares. A personal survey of a total of 919 individual investors in 27 provinces was conducted.

In Kahyaoglu's (2010) study, the differences between male and female investors in the extent of exposure to various psychological and emotional factors affecting risk perception were investigated. In Alaysis, real data on trading activities of 31 individual investors on ISE between January 1, 2007, and December 31, 2009, were used.

In the study by Kaya (2010), the role of banks in sustainable development and the applicability of the sustainable banking concept, especially in developing countries, were evaluated.

In the study by Kaya (2015), the relationship between the emotional intelligence of individual securities investors and their investment decisions was investigated. For this purpose, a questionnaire was sent to 187 individual investors.

In the study conducted by Doğan (2016), the investment preferences of individual investors and the relationship between emotional intelligence and investment preferences were investigated. A survey was conducted on 749 individual investors.

In the study conducted by Poyraz and Kaya (2018), environmentally friendly activities and sustainability investments in tourism companies in Muğla province, which won the Green Key Award in 2017, were investigated. The method of an in-depth interview with nine people was preferred.

In the study of Ağgöl and Güngör (2019), it was investigated whether the investment decisions of individual investors in investing in specific financial instruments are related to their stress management and general mood, which are sub-dimensions of emotional intelligence. A questionnaire was sent to 400 individuals, and 244 questionnaires were analyzed.

Payasoğlu's (2019) study examined the impact of emotional intelligence on organizational performance in the banking sector. A questionnaire was distributed to 342 participants working in banks.

In the study conducted by Turguttopbaş (2020), Turkey's first green bond issue was evaluated in the context of sustainability studies of the issuer.

In the study conducted by Çürük (2019), the strategies for sustainable development of the Turkish floriculture industry and these strategies and sustainable financing mechanisms were evaluated along with their economic, environmental, and socio-political dimensions within the framework of the multi-criteria decision-making model.

### 1.3. Emotional Intelligence

The phenomenon of intelligence, constantly expressed in our daily lives and generally defined as IQ and numerical abilities, finds different meanings, especially in various disciplines. In most researches on the concept of intelligence, several theories have been developed. The leading among these theories is the multiple intelligence theorem developed by Gardner in 1983. The concept of intelligence, which does not attract much attention in the source of consumer behaviour in terms of its traditional meaning, appears as a topic that needs to be studied concerning consumer experiences, mainly because of the different characteristics created by the theorem of multiple intelligence. Intelligence is the ability to create a product that finds value in one or more cultures and find effective and efficient solutions to the problems encountered in real life. There is a notion that different areas of intelligence such as social, auditory, numerical, and visual intelligence that people are capable of can also influence consumer behaviour and individuals' perceptions and attitudes towards marketing activities (Baş, Dursun & Okutan, 2016: 1391).

In the past and even today, there are various definitions of intelligence. However, there is no single definition of the concept of intelligence. Intelligence is an intangible concept, and although a general explanation is given, the common point among the definitions is that intelligence is a type of ability or skill. The abilities highlighted in the definitions of intelligence include learning, thinking, integration and rational action. Intelligence has been explained as an internal concept involving a person's mental processes and a concept with social status. Some definitions of intelligence emphasize its cognitive and perceptual status, while others stress its social context, such as integration or interaction with the environment (Uslu, Kartal & Durukan, 2018:3).

The term intelligence, in simple terms, describes a person's mental capacity that reveals his or her abilities (Dolunay & Savaş, 2018:1434). Gardner described the theory of intelligence in seven dimensions. These were divided into verbal intelligence, logical-mathematical intelligence, spatial intelligence, musical intelligence, physical-kinesthetic intelligence, social intelligence, and intrapersonal intelligence (Sternberg, 1996: 209). Sternberg, in turn, explained the theory of intelligence with a threefold classification as analytical, creative, and practical (Sternberg, 1997:1035).

Although EI is used as an abbreviation of emotional intelligence, the abbreviation of emotional quotient (EQ) is widely used in the literature and widely accepted as the equivalent of intelligence quotient (IQ) in emotional intelligence (Sudak, 2011:12).

Mayer and Salovey first coined the term emotional intelligence in their 1991 study, in which they proposed a model related to emotional intelligence. They expressed the emotional intelligence they proposed as understanding and explaining, connecting emotions to thoughts, using and analyzing emotions, and controlling emotions (Alan, 2016:262). Salovey and Mayer defined the concept of emotional intelligence as a subtype of Gardner's intelligence. The form of emotional intelligence they developed does not include emotions but focuses on recognizing one's own emotions and those of others and using them to solve problems and regulate attitudes. An essential feature of this theory of emotional intelligence that distinguishes it from other popular theories is being talent-based (Uslu & diğ.,2018:3). The concept of emotional intelligence became a popular term in 1995 with the best-selling book "Emotional Intelligence" by psychologist and author Daniel Goleman (Staff, 2001:1). According to Goleman, emotional intelligence is defined not only as an ability but also options that make up attitudes (Goleman, 2016).

## 2. RESEARCH METHOD

Because investors approach the decision-making stages from different angles, the idea that there is an effect of emotional intelligence in these approaches and the attempt to determine the level of emotional intelligence on the investment decision for sustainable finance in this research shows the importance of the research. Based on the fact that investors now view the characteristics of sustainable finance companies from a multidimensional perspective, this research aims to investigate how this situation affects investors' decisions by combining it with the dimension of emotional impact.

The study used a systematic method to determine the sample. The main mass of the study consisted of male and female investors with a portfolio of 100 thousand TL or more. Four intermediary institutions operating in Ankara-Istanbul-Bursa and Izmir, whose names shall not be disclosed, were included in the study.

The questionnaire method was used for data collection. 84 female and 89 male investors participated in the survey. The questionnaire used for data collection in the study consists of three parts and 36 questions. The

first part of the questionnaire consists of 4 statements to collect the demographic information of the participants. The second part used the "Emotional Intelligence Measurements" of the WLEIS scale developed by Wong&Law and translated into Turkish by Uslu (2019). The third part contains 16 statements recorded on a 5-point Likert scale from "strongly disagree" to "strongly agree" to determine the psychological dimension of investors' perspectives on sustainable investment. To determine the representativeness of the survey data for the population, the degree of reliability was assessed using Cronbach's alpha coefficient. According to this coefficient, the scale's reliability is interpreted in the following ranges: unreliable between 0.00 and 0.40, low reliability between 0.40 and 0.6, very reliable between 0.60 and 0.80, and finally very reliable between 0.80. and 1.00 (Kalaycı, 2010, p. 405). A value of 77.1% was obtained for the scale used in the study. This shows that the scale is very reliable.

## 2.1. Research Hypotheses

This study developed two main hypotheses to investigate how this situation combined with emotional impact affects investors' decisions. This is based on the fact that investors now view the characteristics of sustainable finance companies from a multidimensional perspective.

*H<sub>1</sub>: There is a significant relationship between the psychological dimension of sustainable investment perspective and the dimensions of emotional intelligence.*

*H<sub>2</sub>: Emotional intelligence influences the psychological dimension of investors' perspective on sustainable investment.*

## 2.2. Findings of the Research

SPSS 23 program was used to analyze the research findings as a whole. The study findings are presented using socio-demographic characteristics, correlation analysis, and regression analysis.

### 2.2.1. Results of the Socio-Demographic Analysis

The table below provides information on the demographic characteristics of the investors participating in the survey, along with percentages and frequencies.

Table 1. Demographic Characteristics of Investors

<b>Gender</b>	<b>N</b>	<b>%</b>	<b>City where you live</b>	<b>N</b>	<b>%</b>
Woman	84	48,6	Ankara	30	17,3
Man	89	51,4	İstanbul	109	63,0
<i>Total</i>	<b>173</b>	<b>100,0</b>	İzmir	23	13,3
<b>Age</b>	<b>N</b>	<b>%</b>	Bursa	11	6,4
20-30 Ages	31	17,9	<i>Total</i>	173	100,0
30-40 Ages	64	37,0			
40-50 Ages	52	30,1			
50 Age and over	26	15,0			
<i>Total</i>	173	100,0			
<b>Marital Status</b>	<b>N</b>	<b>%</b>			
Married	123	71,1			
Single	50	28,9			
<i>Total</i>	173	100,0			

From Table 1, 48.6% of the investors participating in the survey are female, and 51.4% are male. Looking at the province of residence, most of the participants are from Istanbul, with 63.0%. When looking at the age range, the table reflects that the largest participation is in the age range between 30 and 40. In terms of marital status, it was found that the married group predominates.

### 2.2.2. The Relationship between Investment Decisions for Sustainable Finance (Psychological Dimension) and Emotional Intelligence

In this section, the relationship between these two concepts is explored and presented in the table below.

Table 2. Mean and Standard Deviation Values for Variables

Variables	Average	Std. Deviation	N
<b>Psychological Dimension of Sustainable Investment Perspective</b>	4,98	1,240	173
<b>Emotional intelligence</b>	4,99	,707	173
<b>Evaluating Your Own Emotions</b>	4,99	,380	173

<i>Evaluating Others' Emotions</i>	4,99	,463	173
<i>Using Emotions</i>	4,98	1,102	173
<i>Regulating Emotions</i>	4,98	1,520	173

Note: Mean scores are calculated based on the 1: Strongly Disagree.....5: "Strongly Agree" scales.

Table 2 shows the mean, standard deviation, and N-numbers of the variables.

The results of the correlation analysis regarding the relationships between investment decisions in sustainable finance (psychological dimension) and the emotional intelligence variables are shown below.

Table 3. Correlation Analysis Results for Determining the Effect of Emotional Intelligence on the Psychological Dimension of Sustainable Investment Perspective

Variables	1	2	3	4	5
Psychological Dimension of Sustainable Investment Perspective	1				
<i>Evaluating Your Own Emotions</i>	,452**	1			
<i>Evaluating Others' Emotions</i>	,885**	,816**	1		
<i>Using Emotions</i>	,960**	,684**	,980**	1	
<i>Regulating Emotions</i>	,645**	-,006	,403**	,510**	1

(\*\*. The correlation is significant at the 0.01 level).

Given the responses of investors participating in the survey, positive relationships were found at the 1% significance level between evaluating one's own emotions, evaluating the emotions of others, using emotions, and regulating emotions which are the sub-dimensions of emotional intelligence and the psychological dimension of sustainable investment perspective. Examining the table, it was found that there are positive and significant relationships with low strength (evaluating own emotions and regulating emotions) and high strength (evaluating others' emotions and using emotions) between the sub-dimensions of emotional intelligence and the psychological dimension of sustainable investment perspective.

Examining the correlation coefficients, the table shows that the sub-dimension of emotional intelligence that least increases the psychological dimension of sustainable investment perspective is self-appraisal (.452)\*\*. The most effective sub-dimension is the use of emotions (.960\*\*). Table 4 shows the results of the regression analysis.

Table 4. Determination of the Relationship Between Emotional Intelligence and the Psychological Dimension of Sustainable Investment Perspective by Simple Linear Regression Analysis

Dependent Variable	Independent Variable	Standardized Coefficients	T	P
		Beta		
Psychological Dimension of Sustainable Investment Perspective	Emotional Intelligence	,925	31,929	,000
	R	,925		
	R <sup>2</sup>	,856		
	F	1019,450		
	P	,000		

The regression analysis data in Table 4 shows that 85.6% of the change in the dependent variable is explained by the independent variable that we included in the model. In other words, emotional intelligence influences the psychological dimension of sustainable investment perspective. The table contains the estimated values of the coefficients and the corresponding t-value. An increase of 1 unit in emotional intelligence, the independent variable, increases the whole by 0.925. The t-value of this coefficient was also found to be significant at all levels. In other words, there is a significant relationship between emotional intelligence and the psychological dimension of sustainable investment perspective (p=0.000).

Table 5. Hypothesis Rejection/Acceptance Table

Hypotheses of the Study	Rejection/Acceptance
H1: There is a significant relationship between the psychological dimension of the sustainable investment perspective and the emotional intelligence dimensions.	Acceptance
H2: Emotional intelligence has an effect on the psychological dimension of investors' perspective on sustainable investment..	Acceptance

### 3. CONCLUSION AND RECOMMENDATIONS

In parallel with the increase in the world population, innovations have taken hold. Especially in light of the destruction of nature, changes are being implemented to prevent this destruction. In response to the past and

present negative economic situations, there is an attempt to keep the economy on the agenda. To provide for a more sustainable life cycle, environmental, social, and governance issues should be given importance within the concept of sustainable finance, which is one of the themes of the study. Based on the fact that investors have started to consider the characteristics of companies in sustainable finance in a multidimensional way, the research has shown how this situation affects investors' decisions by combining it with the dimension of emotional impact. The study was conducted on 173 investors with a 100 TL or more portfolio living in Ankara, Istanbul, Izmir, and Bursa. Correlation and regression methods were used for the study.

When examining the literature, it is found that investment decisions and emotional intelligence have been studied. However, it is believed that this study will contribute to the national literature by relating the difference to the psychological dimension of sustainable finance.

In this study, analysis and statistical tests were applied to measure the relationship and effect between these two concepts, and the following results were obtained:

Two hypotheses tested in the research were accepted. The first accepted hypothesis was “*H<sub>1</sub>: There is a significant relationship between the psychological dimension of sustainable investment perspective and the dimensions of emotional intelligence.*” Another hypothesis was “*H<sub>2</sub>: Emotional intelligence influences the psychological dimension of investors' perspective on sustainable investment.*”

In the context of the general assessment that emerges from the study results, the growth of the population and the increase in production due to the increase in consumption needs makes the concept of sustainability important, especially in the environmental sense. Along with these new opportunities, investors were also affected by different situations, and they started to give importance to everything environmentally friendly and not based on destruction. At this point, sustainable investing has become more critical, and it is now possible for investors to look at their investments from a multidimensional point of view. From this point of view, this is where the study comes in. The situation that investors are affected by in their investments has become more critical. Furthermore, in the context of the research hypotheses, it was asked whether emotional intelligence also has an impact. As a result of the data obtained, it was concluded that investors' emotional intelligence plays a significant role in their decision-making processes.

This research has some limitations that determine the relationship and effect between the psychological dimension of sustainable investment perspective and emotional intelligence. First and foremost, the results of the study are limited to the sample of the study. Also, time, calculations and errors, etc., which may occur in any survey, may exist in this study. The study can be extended in future studies by determining the other factors influencing the psychological dimension of investor decisions.

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