

Investigating the effect of Individual and psychological factors affecting investors' decision making except for investing in the stock exchange using DEMATEL method

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Abstract

This study examines the individual and psychological factors influencing investor decision-making except in the stock market. For this purpose, first, by using the meta-combined method, the factors affecting investment decisions are extracted from previous research and then, using two Delphi techniques, the identified factors were evaluated and approved by experts. Then, using the Dematel method, the relationships between the factors analyzed and the effect of each factor on each other were determined. Based on the results obtained from this method, among individual factors, the type of job has the greatest effect and having education and financial literacy has the least effect on other factors. Income level and savings level are the most affected. Among psychological factors, mass behavior has the most influential factor and representative intuition has the least effect on other factors. And risk-taking, empowerment and optimism are the most affected by other factors, respectively.

Keywords: Individual factors, Psychological factors, Meta-combination method, Dematel method
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1 Introduction

Economic growth and development is one of the most important goals that all countries and human societies strive to achieve. Providing a decent life for the people of the society is always at the top of the various goals and plans of the governments and economic pillars of the countries and the main factor in the development of societies is their economic growth. Achieving economic growth requires the optimal allocation of financial resources at the level of the national economy, and the existence of capital markets can make this possible. Investing in the stock market is very important in economic systems. The role of the stock market in the economy of a country is a role that cannot be ignored. Creating a strong and efficient capital market forms the basic infrastructure of any country's long-term financing. The boom in the stock market is a sign of a developing economy that in the long run, it creates a positive and two-way relationship between economic growth and stock market development indicators. Due to the implementation of Article 44 of the Constitution and the transfer of shares of many state-owned companies to the private sector and the initial public offering of shares of many companies on the one hand and the distribution of justice shares and the possibility

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of trading on the stock exchange on the other hand, it has caused more and more people and investors to pay attention to the stock exchange.

One of the basic tasks of a stock exchange is to allocate financial resources optimally. In order to fulfill this important task, recognizing the factors influencing the decision of investors in this market is very important. Investors today consider many factors for investing. Based on current approaches in this field, investor decisions are not based only on quantitative and rational approaches and analyzes, but also include many other factors. These behavioral factors include individual and psychological factors. Identifying these factors in different market conditions will help analysts to predict market trends and indicators and move the market towards efficiency. Also, if the behaviors of investors in different market conditions are identified, policymakers can make more correct decisions and reach their goal faster [18]. In recent decades, financial researchers have tried to explain and find the causes of cases with the help of other sciences such as psychology, social sciences and physics, the use of psychological achievements in economic theorizing led to the formation of the "behavioral finance" trend [31]. A school or financial view of behavior that arises from a combination of psychology and finance, states that psychology plays a role in financial decision making. Since cognitive errors affect investment theories, so will financial options [12].

2 Research background

A review of past research reveals that there are many individual and psychological factors that influence investment decisions. Sarbabidya and Saha [32] consider the financial needs of individuals, investment offers of others and having financial literacy as factors influencing investment decisions. Ahmad [2] has examined the investment proposals of those around him, including the proposals of stockbrokers, family members and friends, as an influential factor in investment decisions. The suggestions of financial advisors, family members, co-workers and friends, meeting the immediate and future needs of individuals, and the degree of financial capability of individuals as individual effective factors of investment have been studied by Sundar and Deo [9].

Demographic factor is one of the behavioral factors that plays an important role in determining the behavior and decisions of investors. For example, Carba et al. found that age and gender are important factors influencing investor behavior and investor decisions [28]. According to [27], age and gender influence investment decisions. According to [11], age is one of the most widely used factors in classifying and dividing investors in terms of financial risk. Older investors are considered low-risk investors and younger investors are considered high-risk investors. High-income investors can be more risk-averse than lower-income investors. In other words, with increasing age and income level, their self-confidence and investment level increase. Another factor that has come to the attention of researchers in recent years is psychological factors. Abul [1] has examined the psychological factors affecting the behavior of individual investors in the Kuwait stock exchange. Identified factors such as pessimism and over-optimism, mass behavior and level of risk-taking as effective factors and saw no evidence of an over-reliance factor on investment decisions. Factors influencing investment decisions in the Indian stock market have been investigated based on the error of agency intuition by Koti [27]. The results of his research show that two factors, gender and age, have the greatest impact on people's investment criteria. And has not observed a positive relationship between factors of work experience, job and expected profit level and investment factor. Barari et al. [6] investigated the modeling of investor behavior using psychological variables with an interpretive structural modeling approach in order to identify decision-making errors in investing. The results showed that the psychological variables affecting investors' decisions were modeled at six levels. And the variability of empowerment is at the highest level and has more effect than other psychological variables and the variable of delay is also at the lowest level [6]. Dadras and his colleagues [8] conducted a study entitled behavioral financial role in understanding the behavior of individual investors in the Tehran stock exchange. The results of this study showed that although many academics and professionals in favor of the classical financial school still do not believe in the study of human behavior and its effect on financial decisions as an independent branch of study, but the quantitative and qualitative development of empirical research in this field indicates the importance of behavioral research in financial markets [8].

3 Research methodology

This research seeks to determine the relationships and priorities related to each of the factors affecting investment decisions through the Dematel method. Research in terms of purpose is part of applied research. Data collection and identification of required indicators and features in both qualitative and quantitative sections are performed as follows.

In the qualitative part of the research, the meta-combined method has been used in order to collect data, identify the required indicators and components. The goal is to integrate the findings of different studies. The reason for

choosing this method for conducting the present study was to collect and combine studies related to the causes of investing in the Tehran stock exchange. The steps for determining components and indicators based on the meta-combination method are: Organizing research questions, systematic search of texts, selecting appropriate articles, extracting textual information, analyzing qualitative findings, quality control and presentations [24]. In this study, various databases, magazines and search engines between 2010 to 2019 AD and 1391 to 1399 SH were studied. Then, based on the steps taken in the meta-combination method.

The main and sub-factors and indicators are identified. Then, using this researcher-made score checklist, the opinions of experts, including professors of accounting and financial management, are obtained in two Delphi processes to confirm or eliminate the above indicators. The average index has been used to analyze, confirm and reject each of the sub-characteristics based on the opinions of the panel members. For this purpose, the average Likert 7-choice spectrum must be calculated first:

$$\text{Average spectrum} = (1+2+3+4+5+6+7)/7$$

The average of expert opinions for each sub-feature is then calculated and attributes whose mean is higher than the mean of the spectrum (number 4) are confirmed and attributes that are less than that are removed.

In the quantitative part, the research of the indicators and factors approved in the qualitative part first turned into acronyms. Then, through the Dematel questionnaire, the opinions of 385 investors were obtained. Then, according to the results of the questionnaire, the effect of each of the factors affecting the decision of investors in investing in the stock exchange on each other in two groups of individual factors and psychological factors was calculated based on the DEMATEL method.

4 Research questions

1. What individual and psychological factors influence the decision of investors in the stock market?
2. What is the effectiveness or influence of each of the individual and psychological factors according to the Dematel method?

5 Research findings

In the meta-combination method section, at the end of the literature review, 15 Persian articles and 26 Latin articles were selected to extract the main and sub-components. Table 1 shows the process of searching and selecting the appropriate resources. Based on the content of the reviewed sources, the first Delphi trend checklist containing 2 main features and 36 sub-features was prepared as described in Table 2. And this checklist was provided to panel members based on a Likert scale of 7 options. In order to confirm the validity of the questionnaire, the first trend score checklist was provided to the panel experts and professors. Accordingly, all 16 panel members approved the questionnaire.

Table 1: Search and resource selection process

Number of resources found	78
Number of references rejected in terms of title	-11
Number of resources to review the abstract	67
Number of sources rejected in terms of abstract	-10
Number of resources to review content	57
Number of sources rejected in terms of content	-6
Number of resources to review the research method	51
Number of rejected sources in terms of research method	-10
Number of final articles	41

Table 2: Delphi First Method Checklist

Main Factors	Related Research	Sub-Factors
Individual factors	[23, 36, 25, 12, 18, 34, 13, 27] [22, 10, 9, 19, 28, 37, 33, 30] [21, 32, 2, 5, 11, 14, 16]	Gender
		Age
		Job
		Marital status
		Level of Education
		The amount of experience in the stock market
		Income level
		Savings level
		Education and Financial literacy
		Financial needs
		Financial capability
		Suggestions from colleagues and friends
		Suggestions from family members
		Offers from brokers and financial advisors
		Expected profit level and return
		How to buy and sell stocks
psychological factors	[4, 23, 3, 20, 12, 18, 17, 26, 13, 8] [27, 35, 29, 22, 19, 37, 33] [5, 7, 14, 16, 1, 15]	Excessive trust
		Herding behavior
		Conservatism
		Mental accounting
		Short-sightedness
		Optimism
		Risk-taking
		Emotional Intelligence
		Delayed belief
		Representative intuition
		Loss avoidance
		Remorse
		Halo effect
		Reliance bias
		Focus on available information
		Gambler's Fallacy
		Self-documentary
		Power thinking
Justification		
Avoid regret		

For reliability of the questionnaire, Cronbach's alpha coefficient was used, the results of which are described in Table 3.

Table 3: Cronbach's alpha coefficient of research variables

main factors	Individual	psychological	Total
Number of sub-factors	16	20	36
Cronbach's alpha coefficients	0.82	0.72	0.78

Out of a total of 31 sub-factors, 17 factors were removed because the mean of comments is below the average of the spectrum. Experts on the subject did not make any new proposals.

Now, according to the deleted features, the second Delphi method was again placed among the members of the experts in order to finally confirm the features of the research that the results as well as the abbreviations are as described in Table 4. According to Table 4 of the second round of Delphi, all sub-factors are based on the average of the upper spectrum of the number 4. As a result, all 19 factors were approved by experts.

Table 4: Results of the second round of Delphi

main factor	Sub-factor	Symbol	Average	Approval/disapproval
Individual factors	Job	D1	4.19	Approval
	Level of Education	D2	5.00	Approval
	The amount of experience in the stock market	D3	5.69	Approval
	Income level	D4	5.69	Approval
	Savings level	D5	5.19	Approval
	Education and financial literacy	D6	5.69	Approval
	Financial needs	D7	4.81	Approval
	Financial capability	D8	4.75	Approval
	Offers from brokers and financial advisors	D9	6.00	Approval
	Expected profit level and returns	D10	6.50	Approval
psychological factors	Excessive trust	P1	4.44	Approval
	Herding behavior	P2	6.25	Approval
	Conservatism	P3	4.94	Approval
	Mental accounting	P4	5.13	Approval
	Optimism	P5	4.38	Approval
	Risk-taking	P6	5.75	Approval
	Representative intuition	P7	5.19	Approval
	Loss avoidance	P8	5.81	Approval
	Power thinking	P9	4.63	Approval

Due to the identification of the main and sub-factors of the research, in order to design the research model, the analysis of the relationships between the factors as well as the ranking of the factors identified by the Dematel method was used as follows:

5.1 Dematel method

An important feature of Dematel method is its application in the field of multi-criteria decision making that structures the interrelationships between variables. Once the relationship between the variables has been identified, Dematel results can be used in the network analysis process to measure dependencies and feedback between specific criteria. When the Dematel approach is used as part of hybrid decision-making models, its results can affect the final decision [4]. Dematel is a mathematical method developed by the Geneva Research Center by the Battelle Institute and designed to address important issues in the global community. This method converts cause-and-effect relationships of elements into observable structural models. Dematel's approach is as follows in five main steps:

Step 1: Build a survey matrix of respondents

In the first step, each respondent is asked to identify the direct effect that he or she thinks element i has on element j . This effect can be specified with a p_{ij} score. For example, we can use integers between 0 and 4 to determine the effect of element i on element j (Table 5). Thus, for each decision maker we have:

$$p_k = [p_{ij}]_{n \times n}$$

Table 5: The effect of element i on element j

The effect of element i on element j	Score
Affectless	0
Low Effect	1
Medium Effect	2
high Effect	3
Too much Effect	4

Step 2: Build the initial decision matrix

This matrix is actually extracted from the simple average of the respondents' opinions in the previous step. We call the initial decision matrix A and denote it by $A = [a_{ij}]_{n \times n}$.

Where $a_{ij} = \frac{1}{k} \sum_{k=1}^k p_{ij}$. Table 6 shows the initial decision matrix of individual factors and Table 7 shows the initial decision matrix of psychological factors.

Table 6: Initial decision matrix of individual factors (matrix A)

factor	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
D1	0.00	1.46	0.94	3.01	3.01	1.58	2.95	3.20	1.80	1.83
D2	3.24	0.00	1.52	2.96	2.91	1.48	0.95	2.09	0.32	0.36
D3	0.06	0.04	0.00	2.91	2.90	0.95	0.87	2.82	0.90	1.84
D4	1.15	2.99	3.04	0.00	3.28	0.55	2.11	3.28	3.23	3.07
D5	1.14	2.92	3.00	1.94	0.00	0.54	2.08	3.21	3.20	3.04
D6	3.22	0.29	2.19	2.01	1.94	0.00	0.10	1.18	0.93	2.76
D7	3.00	2.12	1.52	2.19	2.12	1.15	0.00	1.88	0.06	0.87
D8	2.99	0.70	1.86	3.28	3.26	0.06	1.99	0.00	3.15	1.78
D9	0.85	0.03	2.09	3.15	3.15	0.04	0.33	3.20	0.00	2.00
D10	1.28	1.01	1.15	1.65	0.91	0.09	0.26	0.73	0.07	0.00

Table 7: Initial decision matrix of psychological factors (matrix A)

factor	P1	P2	P3	P4	P5	P6	P7	P8	P9
P1	0.00	0.53	0.22	0.84	0.53	0.74	0.30	0.83	1.03
P2	0.49	0.00	1.35	1.00	0.88	0.98	0.29	0.90	1.09
P3	0.27	0.86	0.00	0.41	0.92	1.19	0.29	1.02	0.93
P4	0.71	1.02	0.44	0.00	0.79	0.90	0.30	0.82	0.75
P5	0.75	0.93	0.19	0.23	0.00	0.92	0.15	0.20	0.70
P6	0.51	1.06	1.15	0.42	0.74	0.00	0.12	0.27	0.56
P7	0.14	0.19	0.15	0.71	0.30	0.30	0.00	0.28	0.17
P8	0.33	0.98	0.81	0.57	0.31	0.78	0.33	0.00	0.55
P9	0.93	0.84	0.18	0.19	0.57	0.79	0.19	0.52	0.00

Step 3: Calculate the initial effect matrix

The initial effect matrix D is obtained by normalizing the initial decision matrix A. In this matrix, the elements on the original diameter are all equal to zero. The D matrix shows the primary effects of an element, both effect and effectiveness. The following equations should be used for normalization.

$$D = S.A, \quad S > 0 \tag{5.1}$$

$$[d_{ij}]_{n \times n} = S [a_{ij}]_{n \times n}, \quad S > 0, \quad i, j \in \{1, 2, \dots, n\} \tag{5.2}$$

$$s = \text{Min} \left[\frac{1}{\max_{1 \leq i \leq n} \sum_{j=1}^n |a_{ij}|}, \frac{1}{\max_{1 \leq j \leq n} \sum_{i=1}^n |a_{ij}|} \right] \tag{5.3}$$

Step 4: Extract the complete direct and indirect effect matrix

At this stage, the total effect matrix, called T, is calculated based on the following equations [4]. In this step, we must first subtract the unit matrix (I) minus the normal matrix, then invert the resulting matrix. Finally, the inverse matrix is obtained by multiplying the normal matrix by the total effect matrix (T) (Tables 8 and 9).

$$T = D + D_2 + D_3 + \dots + D_m = D(I - D)^{-1}, \quad m \rightarrow \infty \tag{5.4}$$

If in the matrix T, the sum of the rows is represented by the vector r and the sum of the columns by the vector d, we have:

$$T = [t_{ij}]_{n \times n} \quad R = [r_i]_{n \times 1} = \left(\sum_{j=1}^n t_{ij} \right)_{n \times 1} \quad D = [d_j]_{1 \times n} = \left(\sum_{i=1}^n t_{ij} \right)_{1 \times n} \tag{5.5}$$

If r_i represents the sum of the rows of row i of the T matrix, then r_i represents the sum of the direct and indirect effects of factor i on other factors (criteria). If d_j is the sum of the columns of the j -th column of the matrix T, then d_j represents the sum of the direct and indirect effects that the j -th factors accept from other factors. Therefore, if $r_i - d_j$ is positive, it indicates that element i affects other elements and if it is negative, it indicates that element i is affected by other elements [4]. In other words, if $r_i - d_j$ is negative, it means that element i is affected or disabled, and if it is positive, element i is effective or cause.

Table 8: Complete matrix of direct and indirect effects of individual factors (T matrix)

factor	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	r	d	r+d	r-d
D1	0.21	0.23	0.28	0.41	0.42	0.14	0.29	0.41	0.28	0.31	2.99	2.34	5.33	0.66
D2	0.30	0.15	0.26	0.37	0.38	0.13	0.19	0.33	0.20	0.22	2.54	1.90	4.44	0.65
D3	0.14	0.13	0.17	0.31	0.32	0.09	0.15	0.31	0.19	0.24	2.06	2.63	4.69	-0.58
D4	0.27	0.30	0.37	0.32	0.46	0.11	0.27	0.44	0.35	0.37	3.26	3.34	6.60	-0.09
D5	0.25	0.28	0.35	0.38	0.31	0.10	0.25	0.41	0.33	0.35	3.01	3.44	6.45	-0.43
D6	0.27	0.14	0.25	0.29	0.29	0.06	0.13	0.26	0.19	0.28	2.17	0.93	3.10	1.24
D7	0.28	0.22	0.24	0.32	0.32	0.12	0.14	0.30	0.17	0.22	2.34	1.91	4.26	0.43
D8	0.31	0.20	0.30	0.41	0.42	0.08	0.25	0.29	0.33	0.31	2.91	3.26	6.16	-0.35
D9	0.18	0.14	0.27	0.35	0.36	0.06	0.15	0.35	0.17	0.27	2.30	2.30	4.60	-0.004
D10	0.13	0.11	0.14	0.18	0.16	0.04	0.08	0.14	0.09	0.09	1.15	2.67	3.83	-1.52
d	2.34	1.90	2.63	3.34	3.44	0.93	1.91	3.26	2.30	2.67	24.73	24.73	49.45	0.00

Table 9: Complete matrix of direct and indirect effects of psychological factors (T matrix)

factor	P1	P2	P3	P4	P5	P6	P7	P8	P9	r	d	r+d	r-d
P1	0.19	0.35	0.24	0.29	0.29	0.37	0.13	0.31	0.38	2.54	2.20	4.74	0.35
P2	0.32	0.39	0.46	0.37	0.42	0.52	0.16	0.40	0.48	3.52	3.30	6.83	0.22
P3	0.25	0.44	0.25	0.26	0.37	0.48	0.14	0.37	0.41	2.98	2.49	5.47	0.48
P4	0.31	0.45	0.31	0.21	0.36	0.44	0.14	0.34	0.39	2.94	2.18	5.12	0.76
P5	0.26	0.35	0.21	0.19	0.19	0.35	0.09	0.20	0.31	2.16	2.62	4.78	-0.47
P6	0.26	0.42	0.37	0.24	0.33	0.29	0.10	0.26	0.33	2.59	3.35	5.94	-0.75
P7	0.11	0.16	0.12	0.18	0.14	0.17	0.04	0.13	0.14	1.19	1.02	2.21	0.17
P8	0.22	0.40	0.32	0.25	0.26	0.38	0.13	0.21	0.32	2.48	2.47	4.95	0.01
P9	0.28	0.35	0.21	0.19	0.27	0.34	0.10	0.25	0.22	2.21	2.97	5.18	-0.76
d	2.20	3.30	2.49	2.18	2.62	3.35	1.02	2.47	2.97	22.61	22.61	45.21	0.00

Step 5: Communication Map Chart - Final Effect and Analysis

To plot the relationship-effect map diagram, $r_i + d_j$ are placed on the X-axis and $r_i - d_j$ on the Y-axis. The values of $r_i + d_j$ indicate the importance of each factor (Figures 5.1 and 5.1).

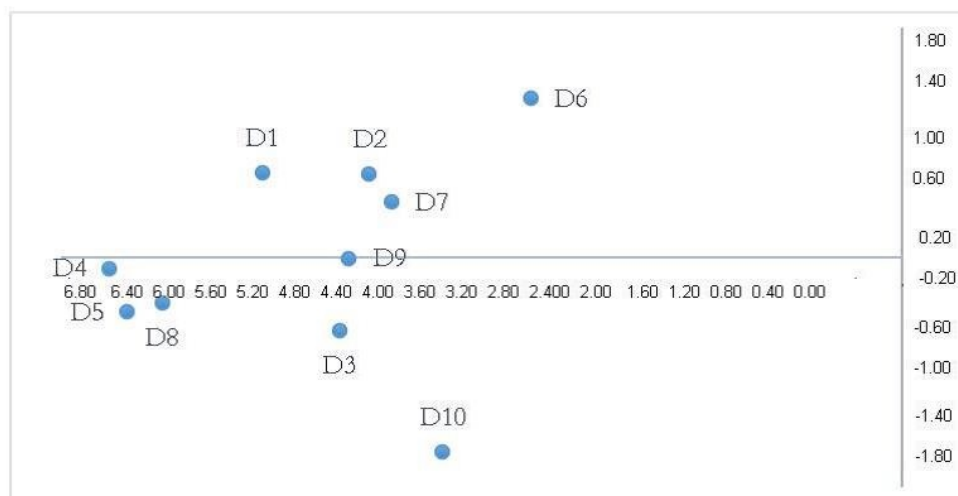


Figure 1: Relationship diagram - the effect of individual factors

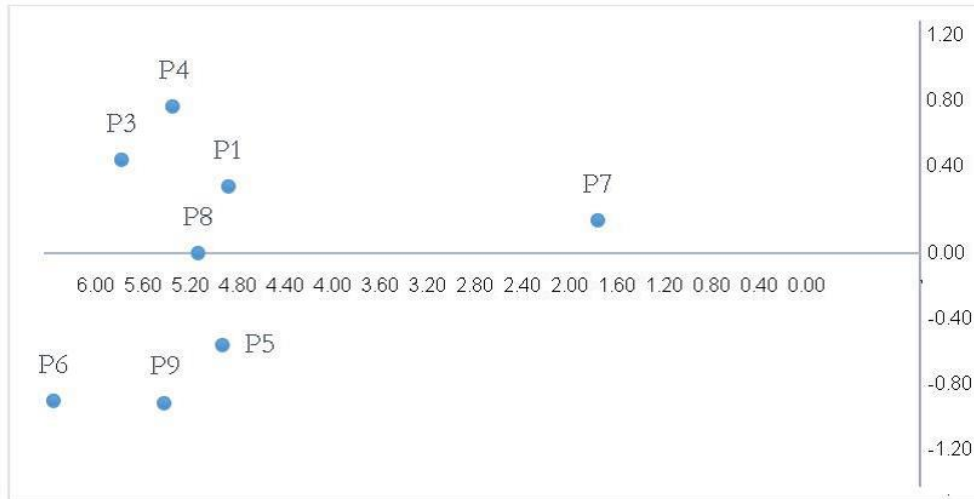


Figure 2: Relationship diagram - the effect of psychological factors

To reduce the complexity of decision making, it is necessary to set a threshold value for the levels of influence to eliminate the effect of less important factors. For this purpose, to calculate the threshold value from the T matrix, an arithmetic mean is taken and this value is considered as the threshold value. Accordingly, the value will be 0.25 for individual factors and 0.28 for psychological factors. To determine the relationship between the factors, according to the assumptions of this method, the following should be done:

1. If $r_i - d_i < 0$ is said, this factor is the main criterion and planning should be done based on it.
2. If $r_i - d_i > 0$ is said, this factor is the core criterion and should be given priority in planning (Tables 10 and 11).

Table 10: Table of analysis of cause and effect relationships of individual factors

Factor	Effective/ Impressionable	Affects the following features	Accepts the following features	Analysis
D1	Effective	D3, D4, D5, D7, D8, D9, D10	D2, D4, D5, D6, D7, D8	Core criteria and priority in planning
D2	Effective	D1, D3, D4, D5, D8	D4, D5	Core criteria and priority in planning
D3	Impressionable	D4, D5, D8	D1, D2, D4, D5, D6, D8, D9	The main criteria and planning based on it
D4	Impressionable	D1, D2, D3, D5, D7, D8, D9, D10	D1, D2, D3, D5, D6, D7, D8, D9	The main criteria and planning based on it
D5	Impressionable	D1, D2, D3, D4, D7, D8, D9, D10	D1, D2, D3, D4, D6, D7, D8, D9	The main criteria and planning based on it
D6	Effective	D1, D3, D4, D5, D8, D10	-	Core criteria and priority in planning
D7	Effective	D1, D4, D5, D8	D1, D4, D5, D8	Core criteria and priority in planning
D8	Impressionable	D1, D3, D4, D5, D7, D9, D10	D1, D2, D3, D4, D5, D6, D7, D9	The main criteria and planning based on it
D9	Impressionable	D3, D4, D5, D8, D10	D1, D4, D5, D8	The main criteria and planning based on it
D10	Impressionable	-	D1, D4, D5, D6, D8, D9	The main criteria and planning based on it

Table 11: Table of analysis of cause and effect relationships of psychological factors

Factor	Effective/ Impressionable	Affects the following features	Accepts the following features	Analysis
P1	Effective	P2, P4, P5, P6, P8, P9	P2, P4, P9	Core criteria and priority in planning
P2	Effective	P1, P3, P4, P5, P6, P8, P9	P1, P3, P4, P5, P6, P8, P9	Core criteria and priority in planning
P3	Effective	P2, P5, P6, P8, P9	P2, P4, P6, P8	Core criteria and priority in planning
P4	Effective	P1, P2, P3, P5, P6, P8, P9	P1, P2	Core criteria and priority in planning
P5	Impressionable	P2, P6, P9	P1, P2, P3, P4, P6	The main criteria and planning based on it
P6 I	mpressionable	P1, P2, P3, P4, P5, P8, P9	P2, P3, P5, P9	The main criteria and planning based on it
P7	Effective	-	-	Core criteria and priority in planning
P8	Effective	P2, P3, P6, P9	P1, P2, P3, P4	Core criteria and priority in planning
P9	Impressionable	P1, P2, P6	P1, P2, P3, P4, P5, P6, P8	The main criteria and planning based on it

6 Conclusions and suggestions

This study aims to identify and determine the impact of individual and psychological factors affecting investors' investment decisions in the stock market using the Dematel method. Therefore, its results can be divided into two parts. In the first part, which is related to the identification of the mentioned factors, it was studied using the combined method of previous studies and researches. As a result, 36 factors were identified. These factors were then made available to experts and professors in the fields of finance and accounting. Finally, experts confirmed 19 factors in two Delphi methods. The second part is related to analyzing and determining the effect of each factor on each other. For this purpose, Dematel method was used to determine the effectiveness and Impressive of the identified factors and characteristics. The results of Dematel method regarding individual factors show that the factors of job, level of education, financial needs and the factor of having education and financial literacy are as influential factors. The job factor has the greatest effect on other factors. This indicates that the type of job of individuals has an important role and effect on the factors affecting the investment of shareholders. Also, the factors of income level, level of savings, financial capability, level of experience in the stock market, suggestions of brokers and financial advisors, and the level and profit expected by individuals are also influential factors. Among these factors, people's income level is the most affected by other factors. This means that the level of personal income of individuals is affected by factors such as type of job, level and type of education, needs and financial ability and other factors. And play an important role in investing in the stock market. As a result, investment planning and decisions are made based on these factors. The application of the Dematel method to psychological factors indicates that mass behavior and conservatism are the most influential factors and agency intuition has the least effect on other factors. And risk-taking, empowerment and optimism are the most affected by other factors, respectively.

It is suggested that in future research, the effect of other factors affecting investment decisions such as economic, political, social, cultural, market and industry factors should be studied. Also, the statistical population of this research includes small investors. In future researches, it is suggested to take the opinions of managers of investment companies and experts working in the stock exchange industry.

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