The Role of Utility in Investment Patterns: Identifying Dimensions and Its Impact on Financial Decisions

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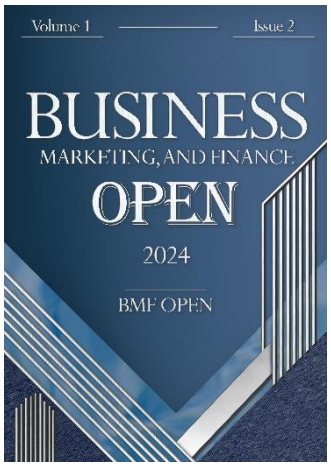

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Abstract: This study analyzes the motivations and factors influencing investors' decision-making in the Iranian capital market, aiming to identify psychological and behavioral patterns affecting financial decisions. Key concepts such as subjective utility, reflecting investors' beliefs and motivations, have been considered in the analysis of financial behaviors. This research demonstrates that psychological, social, and economic factors simultaneously influence investors' attitudes and choices. The ultimate goal of this study is to develop a comprehensive framework to explain the relationship between personality traits, intrinsic motivations, subjective utility perceptions, and investment decision-making processes. Understanding investor behavior is highly important for financial institutions and advisors, as this knowledge can help optimize financial recommendations and provide personalized services. This study adopts a mixed-method approach, including both qualitative and quantitative methods. In the qualitative section, thematic analysis was employed to extract key concepts and gain an in-depth understanding of investors' experiences. Data were collected through in-depth interviews with 20 active investors in the Iranian capital market, selected from various economic and social groups. Theoretical sampling was used as the basis for selecting participants to ensure that individuals with sufficient knowledge and experience participated in the research process. These interviews helped identify investors' subjective values and preferences. In the quantitative section, the Best-Worst Method (BWM) was used to prioritize these values and preferences, enabling precise comparisons between key indicators. Data obtained from pairwise comparisons were processed using statistical analyses to provide reliable scientific results. The study indicates that in addition to financial returns, psychological, social, and economic factors play a central role in shaping investors' preferences. Key motivations include achieving sustainable returns, psychological and financial security, protecting capital against inflation, and the desire to enhance social status. These motivations become even more significant in the context of economic instability and high inflation faced by the Iranian capital market. Additionally, the desire for short-term profits, risk reduction, and diversified portfolio management are other influential factors. Findings show that cognitive biases such as overconfidence and herd behavior can lead to decision-making errors. Moreover, environmental factors such as media influence and social groups also play an important role in financial decisions. The BWM analysis revealed that sustainable returns and psychological security are the top priorities for Iranian investors. The results emphasize that investment decisions are not solely based on economic analyses but are simultaneously influenced by psychological, social, and economic factors. Continuous profitability, capital growth, and maintaining asset value against inflation are the main objectives of investors. Cognitive biases also play a significant role in financial choices. According to BWM analyses, sustainable

returns, psychological security, and protection of capital against inflation are the top priorities for Iranian investors, respectively. This study provides a comprehensive insight into investors' behavioral and cognitive preferences, laying the groundwork for designing effective financial policies and tools. Its findings can serve as a basis for developing innovative asset management strategies that not only enhance financial returns but also ensure investors' psychological security. Financial institutions are encouraged to design personalized services based on this study's findings to meet the specific needs of each investor group. Policymakers should also introduce tools for risk management, reducing cognitive biases, and enhancing information transparency. Further investigation into the role of emerging technologies such as fintech and blockchain can also facilitate fundamental transformations in financial decision-making processes.

Keywords: Investment decision-making, cognitive biases, personal asset management, subjective utility.

1. Introduction

Financial matters are among the most fundamental and influential aspects of human life, directly affecting individuals' well-being, economic security, and quality of life. Proper financial resource management not only ensures an individual's financial future but also improves living conditions, increases personal satisfaction, and enhances social status. In this context, investors require knowledge, skills, and a deep understanding of the factors influencing their financial behaviors for successful financial decision-making and investment [1, 2].

While classical economic theories assume that financial decisions should be based on rational principles and precise calculations, empirical evidence suggests that human financial behaviors are significantly influenced by psychological, cultural, social, and even political factors. Contrary to the perfect rationality hypothesis in economics, investors often use intuitive methods and mental shortcuts to manage their resources, particularly in uncertain and turbulent economic conditions. For instance, during periods of extreme financial market volatility or economic crises, investors tend to choose lower-risk options such as bank deposits or bonds. These behaviors reflect the profound impact of emotions, subjective perceptions, and environmental conditions on financial decisions [2, 3].

In the recessionary and inflationary conditions of Iran's economy, the importance of studying investors' financial behaviors becomes even more critical. Economic recession is accompanied by reduced production and increased unemployment, while inflation diminishes people's purchasing power. In such circumstances, investors' financial decisions become more complex and sensitive. On one hand, investors seek to preserve the value of their assets against inflation, and on the other hand, profitable investment opportunities become limited due to economic recession. Understanding the psychological and social factors influencing investors' decisions can help them make better decisions and avoid financial losses [4, 5].

Recognizing investors' preferences and utilities is of particular importance because these preferences are shaped by a complex set of factors, including social, cultural, psychological, and even religious beliefs. Unlike the classical view that perceives investors solely as profit-maximizers, modern studies have shown that individual attitudes, ethical values, and social concerns also play key roles in their decisions. For example, some investors may avoid investing in certain industries such as tobacco production or projects with negative environmental impacts due to

religious beliefs or ethical commitments. Another group may prefer to participate in projects with positive social or environmental effects instead of focusing solely on financial profitability [6-8].

Expected utility, as a key concept in decision-making theory, plays a significant role in guiding investors under conditions of uncertainty. This concept, first introduced by prominent theorists such as von Neumann and Morgenstern (1944), posits that individuals shape their preferences based on an evaluation of possible outcomes and their probabilities. In financial markets, this theory helps investors make more informed decisions by accurately analyzing risks and potential returns [9, 10].

Behavioral finance, as an emerging field, deeply examines psychological phenomena at individual and social levels and strives to understand decision-making processes with a more realistic perspective. Contrary to classical financial assumptions that emphasize maximizing expected utility, recent empirical studies have shown that individuals' financial behaviors often do not align with the rational patterns assumed in classical theories. Particularly in unstable economic conditions, investors tend to use intuitive methods and mental shortcuts, which can lead to irrational decisions [11, 12].

In this regard, important concepts such as loss aversion, framing, familiarity bias [13], anchoring and adjustment, and prospect theory clearly demonstrate how cognitive and psychological limitations affect financial decision-making. These concepts help explain why investors may make irrational decisions despite having sufficient information [4]. On the other hand, personal financial management emphasizes topics such as zero-based budgeting theory and the life-cycle consumption hypothesis (Modigliani & Brumberg, 1950). These theories teach how individuals optimize the management of their resources to achieve financial security and reduce economic stress. These approaches not only contribute to transparency in financial processes but also provide tools for effective financial planning [14].

These realities demonstrate that investor behavior extends far beyond mathematical calculations or logical analyses. Their decisions reflect a combination of economic and non-financial motivations rooted in beliefs, values, and environmental conditions. Therefore, to achieve a comprehensive understanding of investors' financial behaviors, it is essential to precisely identify and analyze these multidimensional factors. The aim of this study is to provide a comprehensive model for analyzing investor behavior with a focus on a deeper understanding of their preferences and utilities. This model not only examines economic factors but also analyzes psychological, social, and cultural influences to present a more complete picture of financial decision-making processes. The findings of this study can help financial institutions offer personalized services that align with the diverse needs and values of investors. Additionally, such a comprehensive approach can guide policymakers in designing tools and policies that align with investors' behavioral preferences, thereby enhancing the efficiency of financial markets.

2. Methodology

This study employs a qualitative-interpretive approach with inductive reasoning to examine how investors construct reality, the meanings attributed to their experiences, and their understanding of these experiences. Grounded in an idealistic worldview, reality is considered a dynamic concept dependent on social interactions. Thematic analysis was used to analyze the data, aiding in the identification and interpretation of conceptual patterns. This method, through open, axial, and selective coding, enables precise categorization of themes. Additionally, the Best-Worst Method (BWM) was utilized to prioritize identified themes by determining the relative weight and importance of each theme through pairwise comparisons. The combination of these two methodological approaches enhances the accuracy, coherence, and validity of the research, offering a deeper

understanding of investors' experiences. The findings contribute not only to enriching the existing literature on investor behavior but also provide an operational framework for analyzing subjective and social meanings associated with financial decisions. Ultimately, this study can assist in developing financial decision-making models that consider not only economic aspects but also psychological and social factors.

Given the mixed-method nature of data collection in this study, the qualitative section aimed to identify investors' preferences and utilities by initially reviewing related and interdisciplinary academic articles to determine the evaluated studies. Consequently, 20 active investors from various sectors of the Iranian capital market were selected for interviews to analyze dimensions and identify subjective values and preferences. Participant selection was based on theoretical sampling to include individuals with sufficient cognitive awareness in this field. This sampling method facilitates data collection from similar cases within a target population to explore how theories apply in those contexts. In the quantitative section, data were collected through questionnaires administered to 20 financial management experts. This mixed approach contributes to a more comprehensive analysis of investors' behaviors and preferences.

3. Findings and Results

This study was conducted using a qualitative approach and thematic analysis. Data were gathered from 20 semi-structured interviews with investors in the Iranian capital market and analyzed through three stages of open, axial, and selective coding. The results include four main categories, ten subcategories, and thirty open codes. This analysis enhances the understanding of the relationship between intrinsic motivations and investment decisions and can serve as a guide for investors and policymakers in investment and risk management.

The results of the thematic analysis are presented in Table 1, which highlights the main dimensions influencing investors' decisions. The financial dimension (individual) includes subcategories such as performance and effectiveness, with themes like profitability and capital growth (14 occurrences) and outperforming the market index (5 occurrences). The subcategory of protection and sustainability includes themes like protecting capital against inflation (12 occurrences) and ensuring sustainable and long-term returns (6 occurrences). The welfare dimension (individual) encompasses access to resources and opportunities, including themes like access to more resources (7 occurrences), no spatial or temporal limitations (5 occurrences), gaining power and influence (4 occurrences), achieving social status (5 occurrences), and active market participation (4 occurrences). The subcategory of security and peace of mind includes creating well-being and peace (6 occurrences) and financial security (5 occurrences).

The psychological dimension (individual) involves psychological actions such as compensating for a sense of being left behind (7 occurrences), psychological security (4 occurrences), superiority and competition (10 occurrences), and challenge-seeking (5 occurrences). Behavioral patterns include habits of investing (4 occurrences), achieving well-being with less effort (4 occurrences), and obtaining rapid and significant profits (5 occurrences).

The structural dimension (macro) comprises social interactions, with subcategories such as community development and effectiveness (3 occurrences), environmental responsibility (6 occurrences), and social responsibility (22 occurrences). Economic achievements include entrepreneurship and business development (3 occurrences), infrastructure development and national projects (3 occurrences), sustainable economic development (3 occurrences), and market influence (4 occurrences). Cultural heritage includes moral responsibility (15 occurrences), supporting innovation and creativity (5 occurrences), and making a positive societal impact (4

occurrences). Political processes include influencing policies and regulations (3 occurrences) and networking (4 occurrences).

Table 1. Thematic Analysis Approach

Overarching Themes	Organizing Themes	Basic Themes	Frequency in Interviews
Financial Dimension (Individual)	Performance and Effectiveness	Profitability and Capital Growth	14
		Outperforming the Market Index	5
	Protection and Sustainability	Protecting Capital Against Inflation	12
		Sustainable and Long-term Returns	6
Welfare Dimension (Individual)	Access to Resources and Opportunities	Access to More Resources	7
		No Spatial or Temporal Limitations	5
		Gaining Power and Influence	4
		Achieving Social Status	5
		Active Market Participation	4
	Security and Peace of Mind	Creating Well-being and Peace	6
		Financial Security	5
Psychological Dimension (Individual)	Psychological Actions	Compensating for Sense of Being Left Behind	7
		Psychological Security	4
		Superiority and Competition	10
		Challenge-seeking	5
	Behavioral Patterns	Habits of Investing	4
		Achieving Well-being with Less Effort	4
		Obtaining Rapid and Significant Profits	5
Structural Dimension (Macro)	Social Interactions	Community Development and Effectiveness	3
		Environmental Responsibility	6
		Social Responsibility	22
	Economic Achievements	Entrepreneurship and Business Development	3
		Infrastructure Development and National Projects	3
		Sustainable Economic Development	3
		Market Influence	4
	Cultural Heritage	Moral Responsibility	15
		Supporting Innovation and Creativity	5
		Positive Societal Impact	4
	Political Processes	Influencing Policies and Regulations	3
		Networking	4

The following is a continuation of an interview and the extracted codes.

Table 2. Interview

Extracted Codes	Interview Text
Gaining Power and Influence	The whole world is based on economics and money. Even family disputes are about money. Provincial, city, and national wars are all about having more power. It seems that everyone is after more power, and the one with more money and property holds more power.
Access to Resources and Opportunities	It is human nature to always seek progress and improve one's situation. In investment, it's the same; the goal is not just to preserve capital but to turn it into a larger productive source. With more money, not only do we gain access to more resources, but also to opportunities that were previously unattainable. Investment is a tool for moving from a limiting situation to one where we have more choices, financial security, and freedom. Human nature is insatiable.

Entrepreneurship and Business Development	I always wanted to start a business, but I knew I first needed substantial capital. That's why I decided to work in the capital market to both accumulate money and have a long-term investment strategy.
Achieving Well-being with Less Effort	Iranians are highly driven to earn easy and effortless money. Many seek quick ways to become wealthy, regardless of the method or risks involved. I believe this is rooted in the culture, where people focus more on immediate results than on processes.

Investments are made with the goal of profitability, capital growth, outperforming the index, and preserving value against inflation. Research indicates that investors primarily seek profit and financial security [15]. Diversification and investment in sustainable assets such as real estate and renewable energy are also considered risk-reduction strategies.

In addition to financial profits, investment offers time and location flexibility, increased access to resources, and social status stabilization. Investors seek economic security and survival in unstable conditions, with some aiming to enhance influence and decision-making power within society.

Investment reflects emotions, competitiveness, and challenge-seeking. The phenomenon of "fear of missing out" drives emotional and high-risk decisions [16]. Additionally, greed for quick profits leads investors toward irrational choices, while competitiveness serves as a means to demonstrate abilities and outperform others.

Investors influence economic growth and social development through their decisions. Socially responsible investing (SRI) involves choices based on ethical, environmental, and social values (Sandberg et al., 2009). Investments in infrastructure, startups, and national projects not only generate financial returns but also yield positive societal impacts. Major investors also shape market trends through significant shareholdings.

To assess the reliability and validity of this study, Lincoln and Guba's (1985) four criteria were employed: credibility, transferability, dependability, and confirmability:

1. **Credibility:** Ensured through data triangulation, participant reviews, and in-depth data analysis to accurately reflect participants' experiences.
2. **Transferability:** Achieved by providing comprehensive descriptions of the research context and participant characteristics, enabling result application in similar contexts.
3. **Dependability:** Enhanced through detailed documentation of research steps and expert reviews, reducing errors and increasing accuracy.
4. **Confirmability:** Maintained through neutrality, research record-keeping, and data documentation, allowing other researchers to verify the findings.

This study develops an investor utility map and presents a conceptual model based on research data. Using the Best-Worst Method, key and less significant indicators were determined through expert opinions from 20 specialists. Pairwise comparisons were performed on a scale from 1 to 9, with data aggregated using arithmetic means. This analysis enables a more precise prioritization of factors influencing investment decisions.

The model was solved using GAMS software to calculate criterion weights, as presented in Table 3. The consistency ratio of 0.076 indicates an acceptable level, being close to zero.

Table 3. Criterion Weight Calculation

Financial Dimensions	Welfare Dimensions	Psychological Dimensions	Structural Dimensions
0.467	0.272	0.1911	0.0696

Similarly, linear optimization models were formed for sub-criteria, solved via software, and final weights are presented in the tables below.

Table 4. Financial Sub-Criteria

Protection and Sustainability	Performance and Effectiveness

0.6473	0.3528

Table 5. Welfare Sub-Criteria

Security and Peace of Mind	Access to Resources and Opportunities
0.6559	0.3441

Table 6. Psychological Sub-Criteria

Psychological Actions	Behavioral Patterns
0.7263	0.2738

Table 7. Structural Sub-Criteria

Economic Achievements	Political Processes	Social Interactions	Cultural Heritage
0.3598	0.2576	0.3124	0.0704

The consistency ratio here is 0.0619, indicating a desirable level due to its proximity to zero.

According to Table 8, among financial indicators, sustainable and long-term returns rank first, followed by capital protection against inflation, profitability and capital growth, and outperforming the index. The consistency ratio of 0.0840 is acceptable due to its closeness to zero.

Table 8. Financial Indicators Weight

Financial Indicator	Weight	Rank
Capital Protection Against Inflation	0.0579	2
Profitability and Capital Growth	0.0508	3
Sustainable and Long-term Returns	0.1301	1
Outperforming the Index	0.0116	4

Table 9 shows that financial security ranks first, while no spatial or temporal limitations rank seventh among welfare indicators. The consistency ratio of 0.1002 is deemed acceptable due to its proximity to zero.

Table 9. Welfare Indicators Weight

Welfare Indicator	Weight	Rank
Creating Well-being and Peace	0.0395	2
Active Market Participation	0.0152	3
Financial Security	0.0570	1
Access to More Resources	0.0140	4
No Spatial or Temporal Limitations	0.0075	7
Gaining Power and Influence	0.0081	5
Achieving Social Status	0.0080	6

Among psychological sub-criteria, psychological security ranks first, while the habit of investing ranks last. The consistency ratio is 0.1072, which is acceptable due to its proximity to zero.

Table 10. Psychological Indicators Weight

Psychological Indicator	Weight	Rank
Superiority and Competition	0.0099	3
Challenge-seeking	0.0093	4
Compensating for Sense of Being Left Behind	0.0141	2
Psychological Security	0.0597	1
Habit of Investing	0.0033	7
Achieving Well-being with Less Effort	0.0079	5
Obtaining Rapid and Significant Profits	0.0060	6

As shown in Table 11, sustainable economic development ranks first among structural sub-criteria, while supporting innovation and creativity ranks last. The consistency ratio is 0.0982, indicating acceptability due to its proximity to zero.

Table 11. Structural Indicators Weight

Structural Indicator	Weight	Rank
Entrepreneurship and Business Development	0.0025	3
Infrastructure Development and National Projects	0.0013	7
Sustainable Economic Development	0.0053	1
Market Influence	0.0012	8
Influencing Policies and Regulations	0.0006	9
Networking	0.0022	4
Social Responsibility	0.0035	2
Environmental Responsibility	0.0021	5
Community Development and Effectiveness	0.0020	6
Moral Responsibility	0.0005	10
Supporting Innovation and Creativity	0.0002	12
Positive Societal Impact	0.0003	11

The final weights of the sub-criteria are obtained by multiplying the weights of the main criteria by the relative weights of the sub-criteria, as shown in Table 12. Based on these results, sustainable and long-term returns ranked first among all sub-criteria, followed by psychological security in second place and capital protection against inflation in third place.

Table 12. Final Weights of Sub-Criteria

Criteria	Criteria Weight	Sub-Criteria	Sub-Criteria Weight	Indicators	Indicator Weights	Final Indicator Weights	Final Rank
Financial	0.4675	Protection and Sustainability	0.6473	Capital Protection Against Inflation	0.1913	0.0579	3
				Sustainable and Long-term Returns	0.4301	0.1301	1
		Performance and Effectiveness	0.3528	Profitability and Capital Growth	0.3082	0.0508	5
				Outperforming the Index	0.0704	0.0116	10
Welfare	0.272	Security and Peace of Mind	0.6559	Creating Well-being and Peace	0.2213	0.0395	6
				Financial Security	0.3197	0.0570	4
		Access to Resources and Opportunities	0.3441	Active Market Participation	0.0558	0.0152	7
				Access to More Resources	0.1497	0.0140	9
				No Spatial or Temporal Limitations	0.0807	0.0075	16
				Gaining Power and Influence	0.087	0.0081	13
				Achieving Social Status	0.0858	0.0080	14
Psychological	0.1911	Psychological Actions	0.7263	Superiority and Competition	0.0717	0.0099	11
				Challenge-seeking	0.067	0.0093	12
				Compensating for Sense of Being Left Behind	0.1016	0.0141	8
				Psychological Security	0.4299	0.0597	2

		Behavioral Patterns	0.2738	Habit of Investing	0.0638	0.0033	20
				Achieving Well-being with Less Effort	0.1517	0.0079	15
				Obtaining Rapid and Significant Profits	0.1144	0.0060	17
Structural	0.0696	Economic Achievements	0.3598	Entrepreneurship and Business Development	0.0983	0.0025	21
				Infrastructure Development and National Projects	0.0531	0.0013	25
				Sustainable Economic Development	0.0764	0.0053	18
				Market Influence	0.0468	0.0012	26
		Political Processes	0.2576	Influencing Policies and Regulations	0.0362	0.0006	27
				Networking	0.1229	0.0022	22
		Social Interactions	0.3124	Social Responsibility	0.1610	0.0035	19
				Environmental Responsibility	0.0957	0.0021	23
				Community Development and Effectiveness	0.09	0.0020	24
		Cultural Heritage	0.0704	Moral Responsibility	0.1052	0.0005	28
				Supporting Innovation and Creativity	0.0505	0.0002	30
				Positive Societal Impact	0.064	0.0003	29

4. Discussion and Conclusion

This study analyzed investment motivations and behavioral influences on financial decisions. The research utilized thematic analysis and the Best-Worst Method (BWM) to examine factors such as psychology, sociology, and economics. The findings indicate that, in addition to financial returns, behavioral and social motivations play essential roles in investment decisions.

One of the main investment motivations is achieving sustainable returns and capital growth. Investors seek continuous profitability and reduced financial risks. Psychological and financial security is also a significant motivation, as individuals view investment as a tool to reduce financial anxiety and create mental peace. Protecting capital against inflation is a common motivation for many investors to preserve the value of their assets against declining purchasing power.

Social influence and individual status are also critical motivations in investment decisions. Many investors aim not only for financial goals but also to enhance their social status and economic credibility. Some investors, driven by the desire for quick profits, lean toward high-risk, short-term investments.

This study also explored various types of strategic investments. Entrepreneurship and investment in startups provide financial resources for technological innovations and the development of new businesses. Infrastructure investments focus on long-term projects with sustainable returns. Socially responsible investing emphasizes ethical considerations and positive social impacts.

The results reveal that investment decisions are not solely based on economic analyses; personality traits, utility perceptions, and cultural contexts are also influential. According to BWM prioritization, investors primarily seek sustainable and long-term returns to shield themselves from extreme market fluctuations. Psychological and financial security is the next priority to reduce stress and ensure financial decision-making confidence. Capital

protection against inflation follows to maintain asset value. After fulfilling these needs, financial security and, finally, profitability and capital growth become priorities.

To enhance financial decisions and improve investment effectiveness, the following recommendations are provided:

Personalized advisory development is essential, with tailored advisory programs designed according to the specific needs and goals of each investor, including detailed individual financial analysis and customized solutions.

Enhancing asset management tools by developing advanced platforms and software that enable intelligent portfolio management and strengthen risk coverage is recommended.

Increasing financial literacy through workshops and training courses that improve investors' financial knowledge and analytical skills for informed decision-making is crucial.

Creating tax incentives by designing policies that offer exemptions or tax reductions for socially responsible investments can encourage participation in such projects.

Improving information transparency by developing systems that provide accurate and transparent market information can enhance investor trust and psychological security.

Leveraging modern technologies, such as fintech, blockchain, and artificial intelligence, to deliver advanced services, more accurate data analysis, and easier information access is necessary.

Supporting small investors by creating platforms that offer safer participation opportunities for small-scale investors, thereby increasing their access to investment opportunities, is vital.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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