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Investment security determinants

Abbas Esfandiari Zahedani[a], Rezvan Hejazi[b,*], Davood Khodadadi[a], Bijan Abedini[c]

[a]Department of Accounting, Bandar Abbas Branch, Islamic Azad University, Bandar Abbas, Iran

[b]Department of Accounting, Khatam University, Tehran, Iran

[c]Faculty of Accounting and Management, Hormozgan University, Bandar Abbas, Iran

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Abstract

This study's objective was to identify the factors impacting investment security. In light of the numerous changes in today's world, especially in developing countries encountering multiple threats, these nations require appropriate solutions to address their economic problems toward make optimal use of their natural capabilities, resources and wealth. In this regard, among the significant strategies is enhanced investment. Due to limited resources, improved investment security is one of the most important debates. This is an applied type of research. It is worth noting that investment security determinants have been undertaken based on the grounded-theory method and via interviewing 25 experts. Ultimately, 18 categories were obtained. Data collection was conducted utilizing a questionnaire. The statistical population of this study included university professors, managers/executives and investors of investment companies in 2020. Since official statistics on the statistical population were not available and are unlimited, Cochran's formula was utilized to calculate a sample size from an uncertain total population and the final number of 384 was arrived at. The findings revealed that causal factors have a positive and significant effect on the axial phenomenon of investment security and that the axial phenomenon as well as the contextual and intervening factors have a positive and significant impact on investment security strategic factors. In addition, it was discovered that strategic factors have a positive and significant effect on investment security outcomes. Moreover, the findings showed that strategic factors have a positive and significant effect on the consequences of investment security. According to the results obtained based on the data theory of the foundation (grounded theory), factors determining the investment security model have six main categories (causal conditions, pivotal phenomena, interventionist conditions, contextual conditions, strategies, and consequences). In general, the paradigm model of investment security was undertaken via interviews with 25 experts. The findings disclosed that the investment security model has 18 main categories and 129 sub-categories.

Keywords: financial security, investors, investment security, nonlinear structural equation
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1 Introduction

As a consequence of the growth/development of financial markets and instruments, their complexity and the specialization of investment, investors and financial market employees requires tools, methods and models that assist

*Corresponding author
Email addresses: abbas.esfandiari86@yahoo.com (Abbas Esfandiari Zahedani), hejazi33@gmail.com (Rezvan Hejazi), Khodadady47@gmail.com (Davood Khodadadi), Abdini56@gmail.com (Bijan Abedini)

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them select the safest and most optimal investment. In recent years, investment and its position in the capital market has been strongly strengthened. As a driving force for economic development, it plays a significant role in the economic growth/development of nations. Due to the prevailing global circumstances, various nations, especially developing countries, are facing multiple threats. Addressing the economic issues these nations are grappling wit requires suitable solutions to make enhanced use of "God-given" resources, capabilities and wealth. In this regard, expanding investment is among the key strategies. In light of limited resources, in addition to the issue of investment development, among the factors affecting sustainable economic growth/development is "effective investment". To this end, an economic enterprise, in order to invest in various projects, should take into account the extent/amount of investment (due to limited resources), hence, enhanced investment security is one of the essential issues. Moreover, the formation of a "resistance economy" is high on the agenda of priorities for the country under its current situation. Furthermore, investment is among the most effective components of a "resistance economy", playing an important role in the stability and sustainability of the economy; Therefore, focusing on growth/development of investment by removing obstacles and challenges facing investors as well as creating safe conditions for them is of great significance. On the other hand, issues such as weaknesses in laws and regulations induces the imposition and application of personal tastes and preferences and creates losses for investors and their rights. Therefore, by identifying investment security determinants, a big step can be undertaken in identifying investment bottlenecks and implementing economic development, on the one hand, and also provide the requisite path and ground for establishing financial discipline and transparency in investment activities and creating a safe environment between executive bodies and investors, on the other hand.

2 Theoretical foundations & research background

Identifying investment security determinants is a relatively new topic and has not been focused on to large extent. Hence, in this section, pertinent investment-related topics such as risk, efficiency, etc., shall be discussed. Investment security and laying the groundwork for rapid economic growth in the form of drawing up and formulating and implementing legal components for investment is a serious priority for the coming years; Among the general policies advocated in the Fourth Economic Development Plan is how to create and stabilize a reliable environment for economic enterprises and investors. This can be accomplished by relying on the comparative advantages of the Iranian economy as well as guaranteeing the investment sum and protecting the rights arising from it. This policy is based on a cross-sectoral approach that encompasses all areas of the economy to justify and make investment feasible in various areas. However, the challenge the government and parliament face is in institutionalizing investments as well as the profound differences that exist in legally creating security for investors and legitimizing investment behaviors and practices. Religious jurisprudential interpretations lie at the heart of the dilemma. There is also the lack of a clear and consistent economic model and consensus among the government's various components on how to move forward on this issue. The challenge from the past trial and error experiences is that despite popular support and the general consensus on the need to create and maintain investment security, a system, its components as well as do's and don'ts can not easily be designed and implemented. This is due to the lack of stability among the macro decision makers as well as deficiency in foresight and being constantly affected by daily and ongoing challenges [21]. In a study, Shahabadi et al. [20] investigated the impact of investment security on financial resources provision in the Iranian capital market between 1994-2014. The findings pointed out that investment security has a positive and significant effect on financial resources in the capital market. Additionally, variables such as stock market growth, the difference between stock market returns compared to competing markets and savings rates all have a positive and significant impact on capital market financial resources, while banking sector growth has a negative and significant effect on capital market financial resources. Moreover, Shahabadi et al. in [20] analyzed the impact of investment security on financial resources in the Iranian capital market utilizing quarterly 1994-2014 data. This research's findings indicated that investment security has a positive and significant effect on enhanced financial resources in the capital market. Moreover, stock market variables, differences in stock market returns (compared to competing markets and savings rates) have a positive and significant effect on financial resources in the capital market as well. Meanwhile, banking sector growth has a significant negative effect on financial resources in the capital market. In a study, Zomorodian et al. [26], endeavored to examine and compare investment security in various markets. They analyzed the investment risk in several Iranian markets (stock, currency & real estate) with the help of VAR risk criterion. Also, in this research, the TOPSIS method was utilized to provide a more accurate judgment of investment security based on investor attitude. All the requisite information/data to conduct the study was collected on a monthly basis for the period between 2003-2014. The findings uncovered that compliant to the VAR criterion, the investment security in the stock market is much lower than other markets, and therefore, stock market investors are exposed to higher investment risks than other markets. What's more, the TOPSIS method (two criteria of risk & return) findings

indicated that risk-averse and indifferent investors exhibit similar behavior. For instance, the just-mentioned two groups prefer investing in the housing/real estate market (1^{st} priority) and then the gold market (2^{nd} priority) to and investing in parallel markets such as currency and stocks. In a study by Moradi et al. [13], called "Study of the Relationship Between Dividend Policy & Investment: Emphasizing the Role of Uncertainty in Cash Flow", the relationship between dividend policy and investment during conditions of uncertainty in regard to the cash flow of companies listed on the Tehran Stock Exchange between 2010-2015 was analyzed and assessed. The results revealed that there is not a positive and significant relationship between dividends and capital expenditures. However, in the event of significant cash flow fluctuations, capital expenditures are materially sensitive to dividends. In a study titled "Study of Issues Related to Measuring Corporate Investment Behavior Method", Tabatabai [22], looked into 95 companies listed on the Tehran Stock Exchange between the period 2006-2018. The correlation analysis findings demonstrated that certain investment metrics are negatively correlated with each other and the type of metric used is important on data-based research findings. Elsewhere, trend analysis test revealed that compared to net investment metrics, gross investment metrics experience less trend turbulence. An information content analysis test showed that cash-based investment metrics are more useful than accrual metrics. In summary, the study findings pointed out that among various metrics, cash-based gross investment metrics have the optimal investment behavior performance; Because these metrics are less ???? and provide more relevant value information. Dehghani [7] conducted a study called "Economic Evaluation & Investment Risk Analysis in Renewable Projects: A Case Study of Iran". In this study, a hybrid model grounded on real authority evaluation and fuzzy inference system for economic review and investment risk assessment in renewable projects in developing countries was presented. In addition, a solar power plant project was analyzed to validate the proposed model. The proposed model is expected to assist the investor as well as the host country as far as the economic valuation and risk assessment of investment in renewable projects. Nofaresti [16] conducted a study titled "Providing an Suitable Model to Identify Investment Priorities (Case Study: Khorasan-Razavi Province)." In this study, a total of 28 indicators were identified and classified into 5 categories. The Delphi questionnaire was utilized to identify the factors and the Dematel approach was used to rank the factors and present the model. Based on the research findings and according to the obtained model, legal-protective factors were identified as being most effective. Other economic-study factors such as natural-geographical, technical-technological as well as cultural-social were also included in this category. Nnaoma & Omotosho [15] examined the impact of reporting corporate social responsibility costs on policy and performance of investments in Nigerian companies. For this purpose, Nigerian businesses were surveyed between 2005-2014. The study's findings indicated that there is a positive relationship between social responsibility costs and company performance. The findings also revealed that there is no significant relationship between social responsibility and investment policy. Chen et al. [4] conducted a study called "Investigating the Relationship Between Corporate Benevolence/Charity & Corporate Investment Efficiency". Toward this objective, 10087 observations between 2004-2012 were examined. The findings disclosed that there is a positive relationship between company benevolence/charity and investment efficiency. In fact, their findings indicated the more charitable a company is, the more investment efficiency they will experience. The findings also showed that the positive relationship between firm benevolence/charitability and investment efficiency is superior in stronger regulatory environments. Wu et al. [23] examined 2,627 year-to-year observations from 2002-2017 in a study entitled "Corporate Economic Policy & Investment Uncertainty in Australia". The results stipulated that there is a significant positive relationship between economic policy uncertainty and corporate investment. Further analysis demonstrated that this relationship is more pronounced for companies headquartered in small states, companies with more intangible assets, higher operating cash flow and cash holdings, higher profits and leverage, but lower dividend companies. In a study called "The Impact of Investment Privacy & Security on the Value of Corporate Information" Zhang et al. [25], assessed the data of 228 listed companies in the US stock market during the period 2004-2018. The findings revealed that investment privacy and security significantly reduces systematic risk for companies. Moreover, they also showed that the risk reduction effects for "non-small" companies are greater than for large corporations. In addition, their findings stated show that privacy and investment security reduces a firm's risk, and the business value of certain IT investments (such as privacy and investment security) is affected by other corporate IT assets.

3 Research methodology

3.1 Statistical population & sampling method

The statistical population of this study includes university professors, managers/executives and investors of investment companies (2021). Since official stats on the number of statistical populations are not available and are limitless, the Cochran's formula was utilized to calculate the sample size in an uncertain population (final number: 384 people).

3.2 Research variables

1- Causal Factors: For measuring the causal factors, 22 propositions/statements were utilized.
2- Axial Phenomenon Factors:In order to measure the axial factors, 22 propositions/statements were utilized.
3- Interfering Factors: For measuring the interfering factors, 32 propositions/statements were used.
4- Underlying Factors: In order to measure the underlying factors, 17 propositions/statements were used.
5- Strategic Factors: For measuring strategic factors, 19 propositions/statements were utilized.
6- Consequences: 17 propositions/statements were used to measure this variable.

To test and evaluate the above propositions, the 5-point Likert scale was utilized (1=strongly agree to 5=strongly disagree).

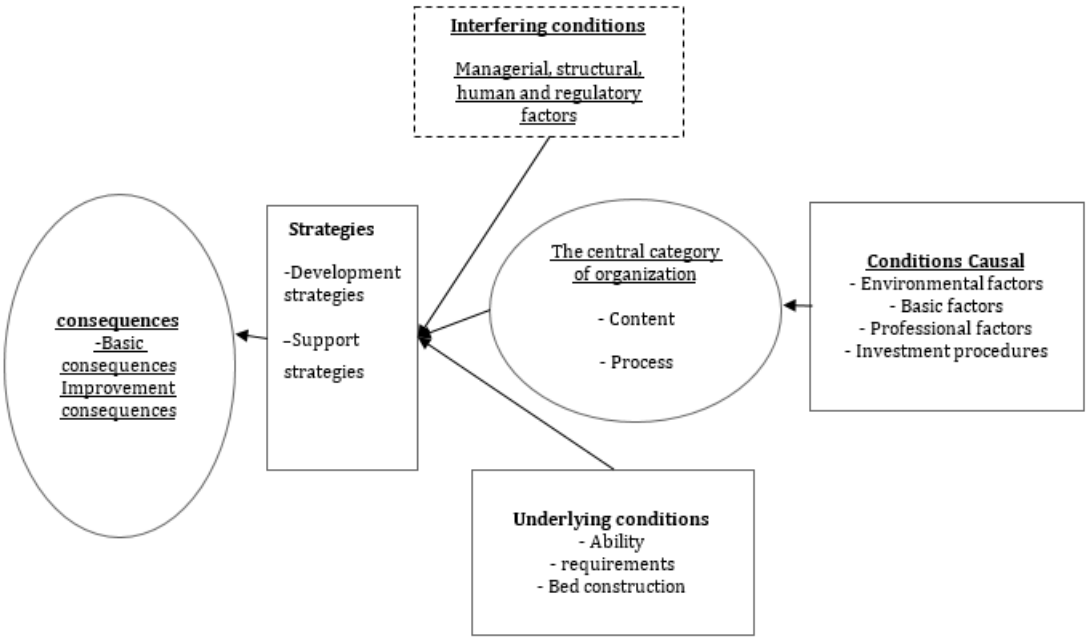

Figure 1: Conceptual model of research

Nonlinear structural equation mode

The traditional linear structural equation model is typically made up of two parts: the measurement model describing the relationships between the observed and latent variables and the structural model describing the relationships between the latent variables. Given a vector of p observed variables $\boldsymbol{Z}_i$ for the ith individual in a sample of size n and a vector of q latent variables $\boldsymbol{f}_i$, the linear structural equation model system can be written:

$$\boldsymbol{Z}_i = \mu + \Lambda f_i + \varepsilon_i, \tag{3.1}$$
$$\boldsymbol{b}_0 + \boldsymbol{B}_0 f_i = \delta_{0i}, \tag{3.2}$$

where in the measurement model, the matrices $\boldsymbol{\mu}(p \times 1)$ and $\boldsymbol{\Lambda}(p \times q)$ contain fixed or unknown scalars describing the linear relation between the observations $\boldsymbol{Z}_i$ and the common latent factors $\boldsymbol{f}_i$ and $\boldsymbol{\varepsilon}_i$ represents the $(p \times 1)$ vector of random measurement error independent of $\boldsymbol{f}_i$ such that $E(\boldsymbol{\varepsilon}_i) = \boldsymbol{0}$ and $\mathrm{Var}(\boldsymbol{\varepsilon}_i) = \boldsymbol{\Psi}$ with fixed and unknown scalars in $\boldsymbol{\Psi}$; and in the structural model, the matrices $\boldsymbol{b}_0(d \times 1)$ and $\boldsymbol{B}_0(d \times q)$ contain fixed or unknown scalars defining defining d different additive linear simultaneous structural equations relating the factors to one another plus the $(d \times 1)$ vector for random equation error $\boldsymbol{\delta}_{0i}$, where $E(\boldsymbol{\delta}_{0i}) = \boldsymbol{0}$ and $\mathrm{Var}(\boldsymbol{\delta}_{0i}) = \boldsymbol{\Delta}_0$ with fixed and unknown scalars in $\boldsymbol{\Delta}_0$.
The simultaneous linear structural model as written in (3.2) is very general. For many practical research equations which be addressed by simultaneous structural models, it is useful to model specific variables in terms of the rest of the variables, i.e., it is useful to consider some of the latent variables as endogenous and others as exogenous, where endogenous variables are those that are functions of other endogenous and exogenous variables. Let $\boldsymbol{f}_i = (\boldsymbol{\eta'}_i, \boldsymbol{\xi'}_i)$

where $\boldsymbol{\eta}_i$ are the d endogenous latent variables and $\boldsymbol{\xi}_i$ are the $q-d$ exogenous latent variables. Then a commonly used from for the structural model (3.2) becomes:

$$\eta_i = \boldsymbol{b} + \boldsymbol{B}\eta_i + \Gamma\xi_i + \delta_i, \tag{3.3}$$

where it is assumed the equation errors $\boldsymbol{\delta}_i$ have $E(\boldsymbol{\delta}_i) = \mathbf{0}$, $\mathrm{Var}(\boldsymbol{\delta}_i) = \boldsymbol{\Delta}$ and are independent of the $\boldsymbol{\xi}_i$ as well as independent of $\boldsymbol{\varepsilon}_i$ in (3.1), and the matrices $\boldsymbol{b}(d \times 1)$, $\boldsymbol{B}(d \times d)$, $\boldsymbol{\gamma}\big(d \times (q-d)\big)$, and $\boldsymbol{\Delta}(d \times d)$ are fixed or unknown scalars. The structural model (3.3) is said to be in **implicit from**, implicit because it has endogenous variables on both sides of the equations, i.e., it is not "solved" for the endogenous variables. It is assumed that the diagonal of $\boldsymbol{B}$ is zero so that no element of η_i is a function of itself. A sufficient condition for solving (3.3) is that $(\boldsymbol{l} - \boldsymbol{B})$ is invertible, then (3.3) can be solved for the endogenous variables and written as

$$\eta_i = \boldsymbol{b}^* + \Gamma^*\xi_i + \delta_i^*, \tag{3.4}$$

where $\boldsymbol{b^*} = (\boldsymbol{l} - \boldsymbol{B})^{-1}\boldsymbol{b}$, $\boldsymbol{\gamma^*} = (\boldsymbol{l} - \boldsymbol{B})^{-1}\boldsymbol{\gamma}$ and $\mathrm{Var}(\boldsymbol{\delta}_i^*) = (\boldsymbol{l} - \boldsymbol{B})^{-1}\boldsymbol{\delta}(\boldsymbol{l} - \boldsymbol{B})^{-1'}$. The structural model (3.4) is said to be in **reduced from** as the $\boldsymbol{\eta}_i$ now appears only on the left-hand side of the equation. It is important to note the assumption that the equation errors $\boldsymbol{\delta}_i$ were additive and independent of the $\boldsymbol{\xi}_i$ in the implicit from (3.3) results in the equation errors $\boldsymbol{\delta}_i^*$ in the reduced from (3.4) also being additive and independent of the $\boldsymbol{\eta}_i$.

Given p, q and d, additional restrictions must be placed on $\boldsymbol{\mu}, \boldsymbol{\Lambda}, \boldsymbol{\Psi}, \boldsymbol{b}_0, \boldsymbol{B}_0$ and $\boldsymbol{\Delta}_0$ in (3.1)-(3.2) in order to make all the unknown parameters identifiable. The assumption that (3.2) can be written in reduced from (3.4) is the typical restriction placed on the structural model.

Additionally, a common restriction placed on the measurement model (3.1) is the errors-in-variables parametrization where q of the observed variables are each fixed to be equal to one of the q different latent variables plus measurement error. For a thorough discussion of identifiability in linear structural equation models see, e.g. Finally, it should be noted that there is no inherent distributional assumptions needed for $\boldsymbol{\varepsilon}_i$, $\boldsymbol{\delta}_{0i}$, nor $\boldsymbol{f}_i$ at this point of model specification although distributional assumption may be added eventually to perform estimation.

A mixture SEMs for a $p \times 1$ random vector $\boldsymbol{y}_i$ is defined as follows:

$$f(y_i) = \sum_{k=1}^{K} \pi_k f_k(y_i|\mu_k, \sigma_k), \quad i = 1, \cdots, n, \tag{3.5}$$

where $\boldsymbol{K}$ is the number of components which can be unknown, $\pi_k' s$ are component probabilities which are nonnegative and sum to 1.0, $f_k(\boldsymbol{y}|\boldsymbol{\mu_k}, \boldsymbol{\Sigma_k})$ is a multivariate normal density function with an unknown mean vector $\boldsymbol{\mu}_k$ and a covariance matrix $\boldsymbol{\Sigma}_k$. Conditional on the kth component, suppose that $\boldsymbol{y}$ satisfies the following measurement model:

$$y = \mu_k + \Lambda_k\omega_k + \varepsilon_k, \tag{3.6}$$

where $\boldsymbol{\mu}_k$ is an $\boldsymbol{p \times 1}$ intercept vector, $\boldsymbol{\gamma}_k$ is a $p \times q$ factor loading matrix, $\boldsymbol{\omega_k}$ is a $q \times \mathbf{1}$ random vector of latent variables, and $\boldsymbol{\varepsilon_k}$ is a $p \times \mathbf{1}$ random vector of error measurements with distribution $\boldsymbol{N(0, \Psi_k)}$, which is independent of $\boldsymbol{\omega_k}$ and $\boldsymbol{\Psi_k}$ is a diagonal matrix. Let $\boldsymbol{\omega_k}$ be partitioned into $(\eta_n^T, \xi_k^T)^T$, where $\boldsymbol{\eta_k}$ is a $q1 \times 1$ vector, $\boldsymbol{\xi_k}$ is a $q2 \times 1$ vector, and $q1 + q2 = q$. The structural equation is defined as

$$\eta_k = B_k\eta_k + \Gamma_k\xi_k + \delta_k, \tag{3.7}$$

where $\boldsymbol{B_k}$ and $\boldsymbol{\gamma_k}$ are $q1 \times q1$ and $q1 \times q2$ matrices of unknown parameters; and random vectors $\boldsymbol{\xi_k \lambda_k}$ are independently distributed as $N(\mathbf{0}, \boldsymbol{\Phi_k})$ and $N(0, \boldsymbol{\Phi_{\lambda k}})$, respectively; and $\boldsymbol{\Phi_k}$ is a diagonal matrix.

We assume that $\boldsymbol{B}_{0k} = (\boldsymbol{l}_{q1} - \boldsymbol{B_k})$ is nonsingular and ($\boldsymbol{l}_{q1}$ is independent of any elements in $\boldsymbol{B_k}$. One specific from of $\boldsymbol{B_k}$ that satisfies this assumption is the lower or upper triangular matrix.

As the mixture model defined in (3.1) is invariant with respect to permutation of labels $k = 1, \ldots, K$, adoption of an unique labeling for identifiability is important. Roeder and Wasserman and Zhu and Lee proposed to impose the ordering $\mu_{1,1} < \ldots < \mu_{k,1}$ for eliminating the label switching (jumping between the various labeling subspace), where $\mu_{k,1}$ is the first element of the mean vector $\boldsymbol{\mu}_k$. This method works fine if $\mu_{1,1}, \ldots, \mu_{K,1}$ are well separated.

However, if $\mu_{1,1}, \ldots, \mu_{K,1}$ are close to each other, it may not be able to eliminate the label switching and may introduce incorrect results. Hence, it is necessary to find a sensible identifiability constraint. In this chapter, the random permutation sampler developed by Frühwirth-Schnatter will be applied for finding the suitable identifiability constraints. See the following sections for more details.

Moreover, for each $k = 1, \ldots, K$, structural parameters in the covariance matrix $\boldsymbol{\Sigma_k}$ corresponding to the model defined by (3.6) and (3.7) are not identified. A common method in structural equation modeling for identifying the model

is to fix appropriate elements in $\boldsymbol{A}_k, \boldsymbol{B}_k$ and/or $\boldsymbol{\gamma}_k$ at preassigned values. The positions of the preassigned values of the fixed elements in these matrices of regression coefficients can be chosen on a problem-by-problem basis, as long as each $\boldsymbol{\Sigma}_k$ is identified. In practice, most manifest variables are usually clear indicators of their corresponding latent variables. This give rather clear prior information to specify the zero values to appropriate elements in these parameter matrices. See the illustrative example for a more concrete example. For clear discussion of the proposed method, we let $\boldsymbol{\Pi} = (\Pi_1, \ldots, \Pi_K)$ and $\boldsymbol{\theta}$ be the vector which contains all unknown parameters in the covariance matrices that defines an identified model.

4 Findings

The frequency distribution of respondents according to demographic variables of gender, level of education and age is stipulated in Table 1.

Table 1: Frequency distribution of Respondents consistent with demographic variables

Gender	Male	Female	Total	-	
Abundance	280	104	384	-	
Frequency	73	27	100	-	-
Education	Finance/Economics	Management	Other Majors/Fields	Total	-
Abundance	238	100	46	384	-
Frequency	62	26	13	100	
Age	Post High School Diploma	University Graduate	Postgraduate	PhD	Total
Abundance	65	50	211	58	384
Frequency	17	13	55	15	100

As observable in Table 1, 73% of the respondents were male and 27% were female. The majority of respondents had a master's degree (55%) and most had studied economics/finance (62%). In Table 2, the descriptive indicators of research variables including mean, standard deviation, minimum and maximum are delineated.

Table 2: Mean, standard deviation, minimum & maximum of research variables

Variable	Mean	Standard deviation	Minimum	Maximum
Causal Conditions	3.64	0.42	2.10	4.68
Axial Phenomenon	3.36	0.41	2.08	4.55
Interfering Factors	3.38	0.39	2.22	4.44
Background Conditions	3.53	0.40	2.29	4.47
Strategies	3.26	0.42	2.05	4.42
Consequences	3.21	0.42	1.76	4.47

As seen in Table 2, the mean of all variables is greater than the average (3).

4.1 Confirmatory factor analysis of questionnaire instruments

Prior to testing the structural model and measurement to analyze the path of the conceptual model, the questions utilized in the questionnaire should be measured and evaluated separately for the research variables in terms of the fit of the model. In this section, using the measurement models of structural equation models, the accuracy of measuring structures by the relevant indicators is assessed. Utilizing confirmatory factor analysis, it is determined whether the questions designed in each structure can really assess the desired structure. In other words, whether the questions and indicators considered have the requisite validity or not. Several methods are used to determine the validity of the test, specifically logical validity, convergent validity and divergent validity. Cronbach's alpha coefficient and combined reliability were utilized to determine the reliability of the questionnaire.

4.2 Confirmatory factor analysis of the structure of causal conditions

The structure of causal conditions consists of four components and 22 indicators (questions). The results of factor analysis of the first stage of the structure of causal conditions are presented in Table 3.

Table 3: Findings of confirmatory factor analysis of the first stage of the structure of causal conditions

Variable	Factor Load	Significance Number	AVE	Combined Reliability	Cronbach's Alpha
Environmental Category					
Question 1	0.83	19.64	0.727	0.914	0.910
Question 2	0.85	20.52	0.727	0.914	0.910
Question 3	0.84	20.08	0.727	0.914	0.910
Question 4	0.89	22.28	0.727	0.914	0.910
Structural Category					
Question 5	0.71	15.73	0.552	0.860	0.864
Question 6	0.80	18.60	0.552	0.860	0.864
Question 7	0.79	18.15	0.552	0.860	0.864
Question 8	0.70	15.44	0.552	0.860	0.864
Question 9	0.71	15.63	0.552	0.860	0.864
Professional Category					
Question 10	0.84	20.41	0.693	0.947	0.936
Question 11	0.88	21.63	0.693	0.947	0.936
Question 12	0.85	20.66	0.693	0.947	0.936
Question 13	0.76	17.50	0.693	0.947	0.936
Question 14	0.88	21.90	0.693	0.947	0.936
Question 15	0.78	18.06	0.693	0.947	0.936
Question 16	0.79	18.42	0.693	0.947	0.936
Question 17	0.87	21.32	0.693	0.947	0.936
Investment Procedures Category					
Question 18	0.91	23.36	0.858	0.968	0.964
Question 19	0.95	24.92	0.858	0.968	0.964
Question 20	0.92	23.52	0.858	0.968	0.964
Question 21	0.95	23.45	0.858	0.968	0.964
Question 22	0.90	22.91	0.858	0.968	0.964

The first stage confirmatory factor analysis findings for the structure of causal conditions in Table 3 point out that the factor load of all items is greater than 0.5. Therefore, the first precondition of convergent validity is deemed observed. Moreover, the Average Variance Extracted (AVE) for all four components of the causal condition is greater than 0.5. Hence, the second precondition of convergent validity is also deemed observed. In the following, utilizing the second stage confirmatory factor analysis, the relationship between the components and the structure of the causal conditions is analyzed. The subsequent findings is proffered in Figure 2.

As displayed in Figure 2, the t-stat value for the relationship between all four components and the causal condition construct is greater than 1.96. Therefore, all relationships are deemed significant and using the second stage factor analysis, the relationship between the components with the causal conditions structure is confirmed.

4.3 Confirmatory factor analysis of the axial phenomenon structure

The axial phenomenon structure consists of three components and 22 indicators (questions). The first stage factor analysis findings of the axial phenomenon structure are presented in Table 4 below.

The results of first order confirmatory factor analysis for the axial phenomenon structure in Table 4 showed that the factor load of all items is greater than 0.5. Hence, the first precondition of convergent validity is deemed observed. Additionally, the Average Variance Extracted (AVE) for all three components of the axial phenomenon is greater than 0.5. Therefore, the second precondition of convergent validity is also deemed observed. In the following, using the second order confirmatory factor analysis, the relationship between the components and the structure of the axial phenomenon is assessed, the findings of which is presented in Figure 3.

As can be seen in Figure 3, the t-stat value for the relationship between all three components with the axial phenomenon structure is greater than 1.96. Therefore, all relationships are significant and utilizing the second stage factor analysis, the relationship between the components with the axial phenomenon structure is considered confirmed.

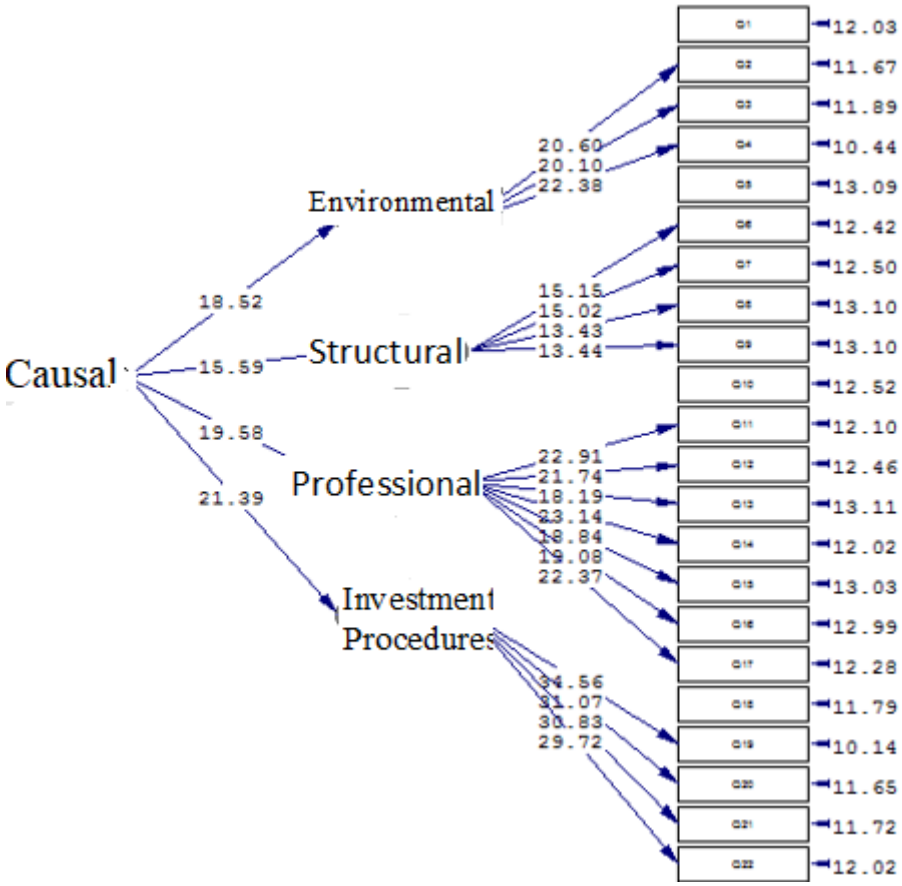

Figure 2: Numbers of significance model for causal structure

4.4 Confirmatory factor analysis of the intervention factors structure

The structure of intervention factors consists of four components and 32 indicators (questions). The results of the first-order factor analysis of the structure of interfering factors are presented in Table 5.

The outcome of the first stage of confirmatory factor analysis for the interfering factors structure in Table 5 reveals that the factor load of all items is greater than 0.5. Therefore, the first precondition of convergent validity is deemed as observed. What's more, the Average Variance Extracted (AVE) for all four components of the interfering factors is greater than 0.5. Consequently, the second precondition of convergent validity was also observed. Next, utilizing the second order of confirmatory factor analysis, the relationship between the components of the intervening factors structure was assessed, the findings of which is displayed in Figure 4.

As evidenced in Figure 4, the t-stat value for the relationship between all four components with the interfering factors structure is greater than 1.96. Therefore, all relationships are significant and using the second-order factor analysis, the relationship between the components with the interfering factors structure is confirmed.

4.5 Confirmatory factor analysis of the contextual conditions structure

The contextual structure consists of three components and 17 indicators (questions). The Findings of the first-order factor analysis of the underlying condition structure are presented in Table 6.

The findings of the first stage of confirmatory factor analysis for the contextual structure in Table 6 demonstrated that the factor load of all items is greater than 0.5. Therefore, the first precondition of convergent validity was considered as observed. Additionally, the Average Variance Extracted (AVE) for all three components of the background condition is greater than 0.5. Hence, the second precondition of convergent validity was also observed. Hereinafter, utilizing the second-order confirmatory factor analysis, the relationship between the structural components themselves are examined for underlying conditions, the result of which are offered in Figure 5.

Table 4: Confirmatory factor analysis findings of the first stage of axial phenomenon structure

Variable	Factor Load	Significance Number	AVE	Combined Reliability	Cronbach's Alpha
Organizational Category					
Question 23	0.89	22.03	0.715	0.964	0.915
Question 24	0.83	20.01	0.715	0.964	0.915
Question 25	0.83	19.66	0.715	0.964	0.915
Question 26	0.86	20.89	0.715	0.964	0.915
Question 27	0.91	23.10	0.715	0.964	0.915
Question 28	0.92	23.39	0.715	0.964	0.915
Question 29	0.65	6.95	0.715	0.964	0.915
Content Category					
Question 30	0.59	5.60	0.618	0.940	0.904
Question 31	0.52	5.23	0.618	0.940	0.904
Question 32	0.79	18.45	0.618	0.940	0.904
Question 33	0.83	20.01	0.618	0.940	0.904
Question 34	0.87	21.42	0.618	0.940	0.904
Question 35	0.92	23.68	0.618	0.940	0.904
Question 36	0.87	21.40	0.618	0.940	0.904
Question 37	0.78	18.52	0.618	0.940	0.904
Question 38	0.87	21.35	0.618	0.940	0.904
Question 39	0.72	16.11	0.618	0.940	0.904
Process Category					
Question 40	0.84	21.55	0.707	0.923	0.912
Question 41	0.88	25.44	0.707	0.923	0.912
Question 42	0.85	25.50	0.707	0.923	0.912
Question 43	0.76	13.09	0.707	0.923	0.912
Question 44	0.87	14.29	0.707	0.923	0.912

As presented in Figure 5, the t-stat value for the relationship between all three components and the underlying conditions structure is greater than 1.96. Therefore, all relationships are significant and using the second-order factor analysis, the relationship between the components and the contextual conditions structure is confirmed.

4.6 Confirmatory factor analysis of the strategic factors structure

The strategic factors structure consists of two components and 19 indicators (questions). The findings of the first order factor analysis of strategic factors are delineated in Table 7.

The results of the first-order confirmatory factor analysis for the of strategic factors structure in Table 7 show that the factor load of all items is greater than 0.5. Therefore, the first precondition of convergent validity was observed. Also, the Average Variance Extracted (AVE) for both components of strategic factors is greater than 0.5. Consequently, the second precondition of convergent validity was also observed. In the following, using the second-order confirmatory factor analysis, the relationship between the components and the strategic factors structure was analyzed, the findings of which can be seen in Figure 6.

As revealed in Figure 6 the t-statistic value for the relationship between the two components with the strategic factors structure is greater than 1.96. Therefore, both relationships are significant and utilizing the second-order factor analysis, the relationship between the components and the structure of strategic factors was confirmed.

4.7 Confirmatory factor analysis of the consequences structure

The consequences structure consists of two components and 17 indicators (questions). The first stage factor analysis of the consequences structure are demonstrated in Table 8.

The first stage confirmatory factor analysis findings for the consequences structure in Table 8 indicate that the factor load of all items is greater than 0.5. Therefore, the first precondition of convergent validity is observed. Also, the Average Variance Extracted (AVE) for both components of the outcomes is greater than 0.5.

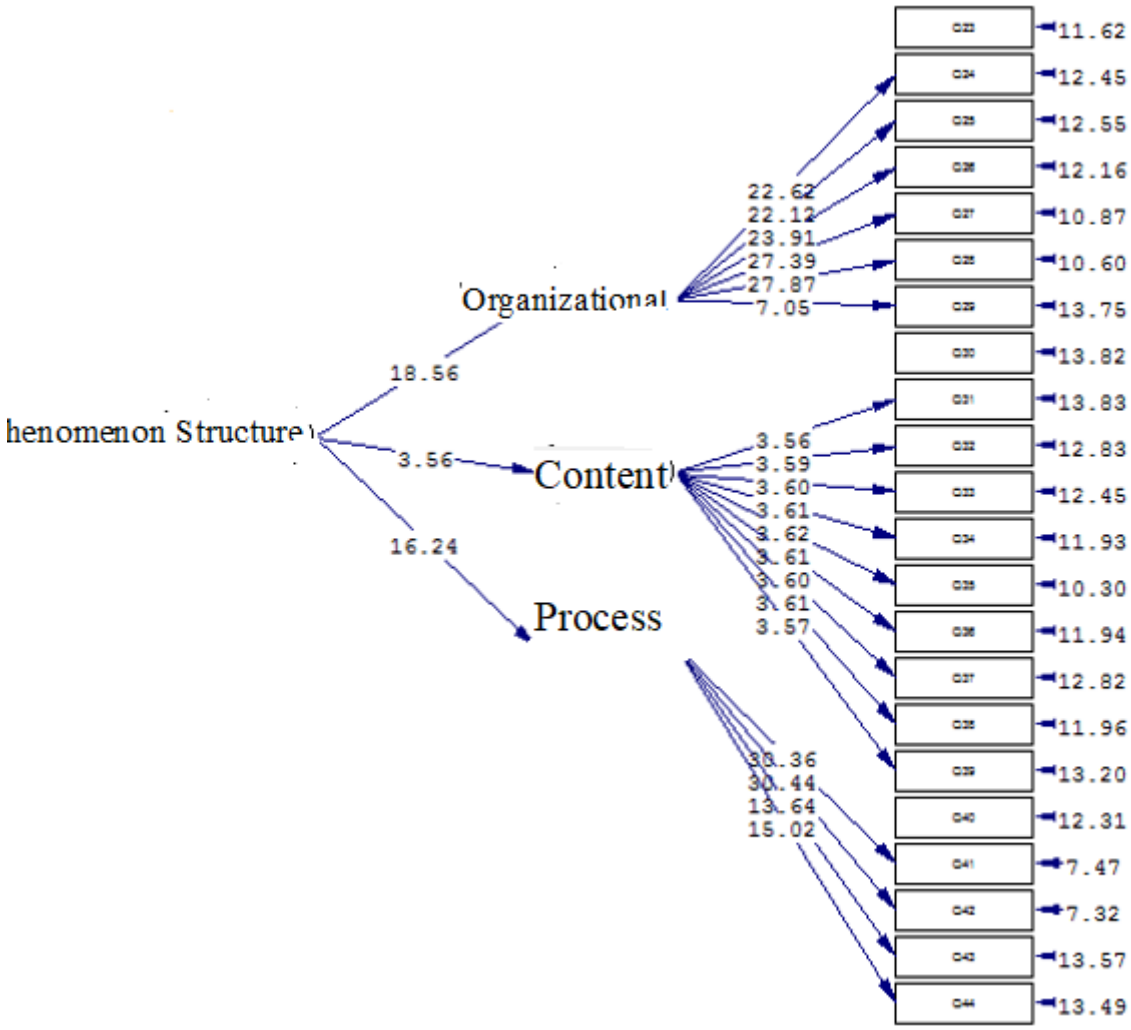

Figure 3: Numbers of significance model for axial phenomenon structure

In the following, utilizing the second-order confirmatory factor analysis, the relationship between the components and the consequences structure is examined, the result of which is presented in Figure 7.

As displayed in Figure 7, the t-statistic value for the relationship between the two components and the outcomes/consequences structure is greater than 1.96. Therefore, both relationships are significant and utilizing the second stage factor analysis, the relationship between the components and the structure of the outcomes is confirmed.

4.8 Testing the research Hypotheses

Figure 8 demonstrates the test results of research hypotheses and the structural relationships between the variables of the research model. The criterion for confirming or rejecting the research hypotheses is the level of significance and the t-stat. If the significance level of the hypotheses is less than 0.05, or the relevant t-stat is out of range $(-1.96, 1.96)$, that hypothesis is confirmed at the five percent error level.

Interpretation of the first research Hypothesis

The first hypothesis deals with the relationship between causal factors and axial phenomena. As evidenced in Figure 8 and Table 9, the path coefficient of this relationship is equal to 0.66 and the corresponding t-statistic is equal to 14.20, which is out of range $(-1.96, 1.96)$. Moreover, the significance level is equal to 0.001 and is less than 0.05. Therefore, it can be stated that there is a significant relationship between causal factors and axial phenomena. The determination coefficient for the axial phenomenon variable is 0.44, indicating that 44% of the changes in the axial phenomenon variable are related to causal factors.

Table 5: First stage confirmatory factor analysis findings for the interfering factors structure

Variable	Factor Load	Significance Number	AVE	Combined Reliability	Cronbach's Alpha
Management Category					
Question 45	0.84	20.36	0.744	0.964	0.943
Question 46	0.80	18.79	0.744	0.964	0.943
Question 47	0.89	22.13	0.744	0.964	0.943
Question 48	0.88	21.92	0.744	0.964	0.943
Question 49	0.89	22.43	0.744	0.964	0.943
Question 50	0.87	21.33	0.744	0.964	0.943
Structural Category					
Question 51	0.85	20.75	0.660	0.951	0.955
Question 52	0.84	20.25	0.660	0.951	0.955
Question 53	0.83	20.07	0.660	0.951	0.955
Question 54	0.85	20.73	0.660	0.951	0.955
Question 55	0.89	22.49	0.660	0.951	0.955
Question 56	0.84	20.39	0.660	0.951	0.955
Question 57	0.77	17.85	0.660	0.951	0.955
Question 58	0.74	16.68	0.660	0.951	0.955
Question 59	0.83	19.80	0.660	0.951	0.955
Question 60	0.66	14.45	0.660	0.951	0.955
Question 61	0.74	16.99	0.660	0.951	0.955
Question 62	0.72	16.18	0.660	0.951	0.955
Human Resources Category					
Question 63	0.79	18.59	0.741	0.945	0.945
Question 64	0.83	19.90	0.741	0.945	0.945
Question 65	0.87	21.22	0.741	0.945	0.945
Question 66	0.88	22.35	0.741	0.945	0.945
Question 67	0.88	21.83	0.741	0.945	0.945
Question 68	0.91	23.26	0.741	0.945	0.945
Regulatory Category					
Question 69	0.84	20.28	0.773	0.965	0.964
Question 70	0.89	22.21	0.773	0.965	0.964
Question 71	0.92	23.79	0.773	0.965	0.964
Question 72	0.89	22.40	0.773	0.965	0.964
Question 73	0.88	22.02	0.773	0.965	0.964
Question 74	0.91	23.08	0.773	0.965	0.964
Question 75	0.84	20.46	0.773	0.965	0.964
Question 76	0.86	21.14	0.773	0.965	0.964

Interpretation of the second research Hypothesis

The second hypothesis deals with the relationship between phenomenon-centered factors and strategic factors. As demonstrated in Figure 8 and Table 10, the path coefficient of this relationship is 0.66 and the corresponding t-stat is 14.20, which is out of range $(-1.96, 1.96)$. Furthermore, the significance level is 0.001 and is less than 0.05. Therefore, it can be stated that there is a significant relationship between the central phenomena and strategic factors.

Interpretation of the third research Hypothesis

The third hypothesis deals with the relationship between contextual and strategic factors. As shewn in Figure 8 and Table 11, the path coefficient of this relationship is 0.27 and the corresponding t-stat is 5.39, which is out of range $(-1.96, 1.96)$. In addition, the significance level is 0.001 (less than 0.05). Therefore, it can be stated that there is a significant relationship between contextual and strategic factors.

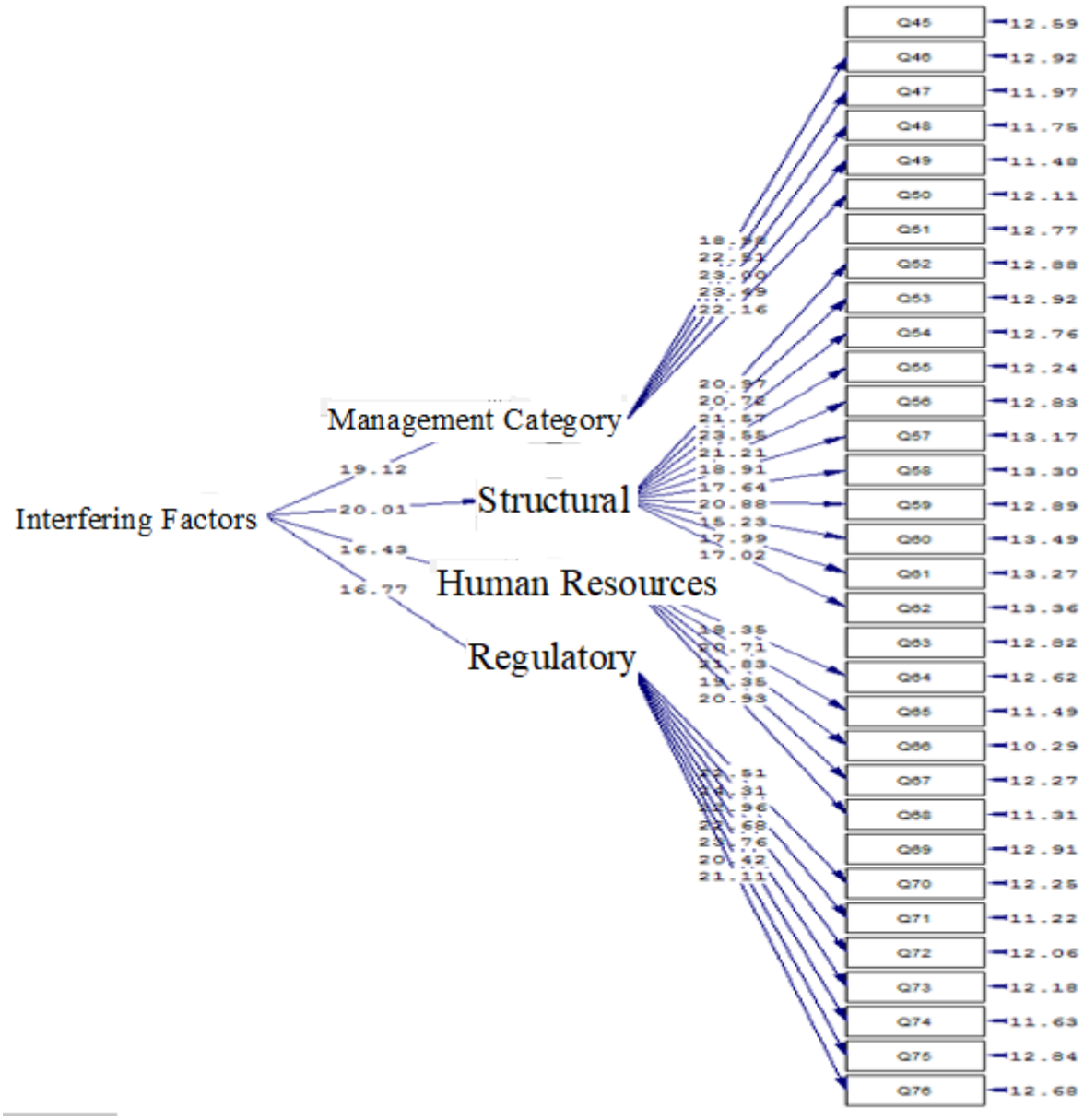

Figure 4: Numbers of significance model for the interfering factors structure

Interpretation of the fourth research Hypothesis

The fourth hypothesis addressees the relationship between intervening and strategic factors. As revealed in Figure 8 and Table 12, the path coefficient of this relationship is 0.18 and the corresponding t-stat is 3.72, which is out of range $(-1.96, 1.96)$. Also, the significance level is 0.001 (less than 0.05). Therefore, it can be said that there is a significant relationship between intervention and strategic factors. The determination coefficient for the strategic factors variable is 0.48, indicating that 48% of the changes in the strategic factors variable are related to contextual, intervening and axial phenomena.

Interpretation of the fifth research Hypothesis

The fifth hypothesis deals with the relationship between strategic factors and consequences. As delineated in Figure 8 and Table 13, the path coefficient of this relationship is 0.63 and the corresponding t-stat is 13.55, which is out of range $(-1.96, 1.96)$. Furthermore, the significance level is 0.001 (less than 0.05). Therefore, it can be noted that there is a significant relationship between strategic factors and consequences. The coefficient of determination

Table 6: Confirmatory factor analysis findings; contextual structure first stage

Variable	Factor Load	Significance Number	AVE	Combined Reliability	Cronbach's Alpha
Ability/Capability Category					
Question 77	0.87	21.56	0.746	0.946	0.934
Question 78	0.92	23.68	0.746	0.946	0.934
Question 79	0.96	25.48	0.746	0.946	0.934
Question 80	0.94	24.70	0.746	0.946	0.934
Question 81	0.72	16.26	0.746	0.946	0.934
Question 82	0.74	16.87	0.746	0.946	0.934
Requirements Category					
Question 83	0.93	24.17	0.784	0.965	0.965
Question 84	0.94	24.54	0.784	0.965	0.965
Question 85	0.93	24.08	0.784	0.965	0.965
Question 86	0.94	24.50	0.784	0.965	0.965
Laying The Groundwork Category					
Question 87	0.94	24.65	0.821	0.970	0.970
Question 88	0.95	24.80	0.821	0.970	0.970
Question 89	0.94	24.70	0.821	0.970	0.970
Question 90	0.93	24.21	0.821	0.970	0.970
Question 91	0.87	21.46	0.821	0.970	0.970
Question 92	0.92	23.61	0.821	0.970	0.970
Question 93	0.78	18.28	0.821	0.970	0.970

Table 7: Confirmatory factor analysis findings; first stage of strategic factors

Variable	Factor Load	Significance Number	AVE	Combined Reliability	Cronbach's Alpha
Development Category					
Question 94	0.89	22.29	0.676	0.936	0.933
Question 95	0.85	20.73	0.676	0.936	0.933
Question 96	0.90	22.54	0.676	0.936	0.933
Question 97	0.80	18.79	0.676	0.936	0.933
Question 98	0.83	19.92	0.676	0.936	0.933
Question 99	0.72	16.13	0.676	0.936	0.933
Question 100	0.75	16.96	0.676	0.936	0.933
Support Category					
Question 101	0.79	18.59	0.626	0.943	0.956
Question 102	0.74	16.92	0.626	0.943	0.956
Question 103	0.80	18.78	0.626	0.943	0.956
Question 104	0.79	18.46	0.626	0.943	0.956
Question 105	0.80	18.95	0.626	0.943	0.956
Question 106	0.71	15.80	0.626	0.943	0.956
Question 107	0.78	18.22	0.626	0.943	0.956
Question 108	0.80	18.66	0.626	0.943	0.956
Question 109	0.84	20.19	0.626	0.943	0.956
Question 110	0.85	20.69	0.626	0.943	0.956
Question 111	0.89	22.39	0.626	0.943	0.956
Question 112	0.82	19.58	0.626	0.943	0.956

for the consequences variable is 0.40, indicating that 40% of the changes in the consequences variable are related to strategic factors.

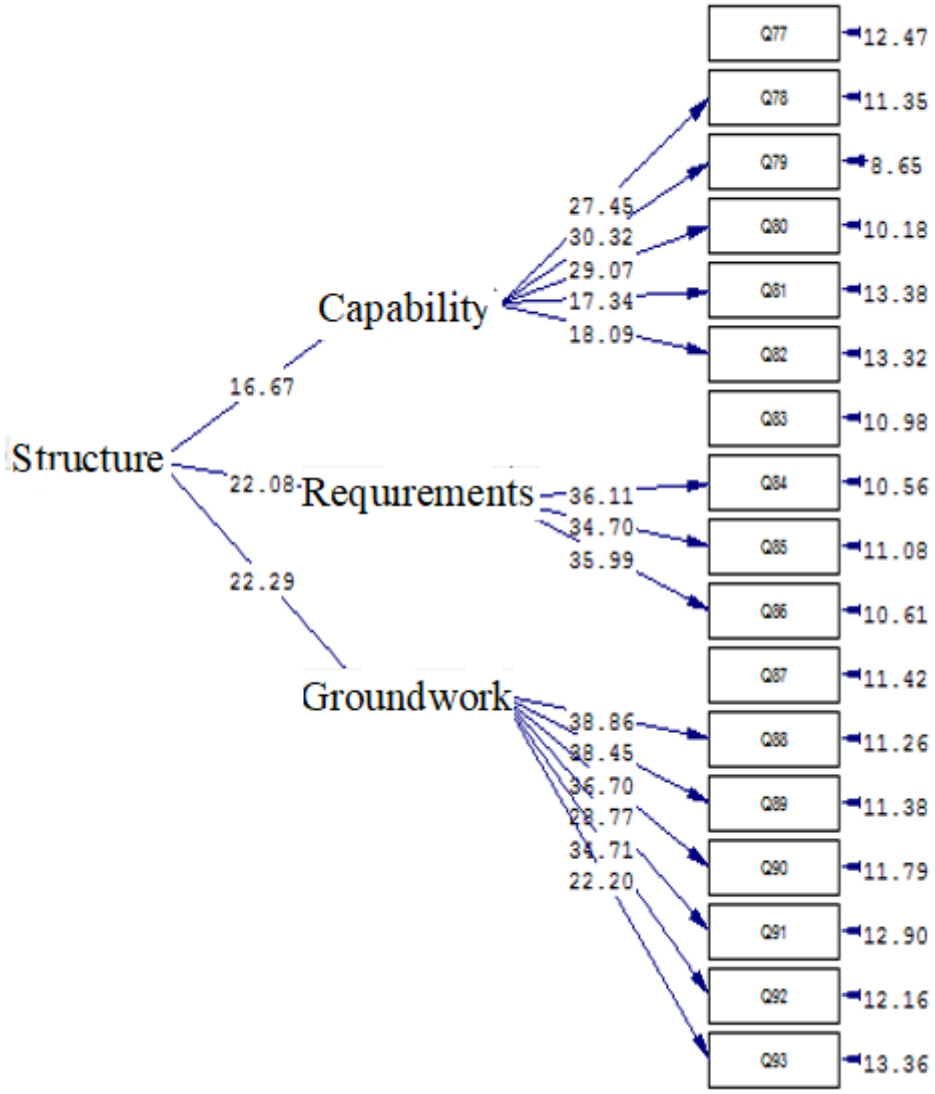

Figure 5: Numbers significance model for the contextual conditions structure

5 Summary & conclusion

Devising a model for investment security requires sufficient and valid data about the rules, regulations and the law, adequate knowledge, the right environment, company characteristics, etc. In this section, the requisite investment security information is analyzed. Consistent with the findings obtained based on the data theory of foundational/grounded theory), the factors that determine the investment security model have six main categories (causal conditions, central phenomena, intervening conditions, contextual conditions, strategies, consequences). In general, the paradigm model of investment security was undertaken via interviews with 25 experts. The findings pointed out that the investment security model has 18 main categories and 129 sub-categories. In the research's quantitative section, the hypotheses are based on six main categories (presented below).

The results also indicated that the causal category has a positive and significant effect on the central phenomenon of the investment security model. Among the factors in the causal conditions category are environmental and fundamental issues. Davoodi & Shah-Moradi [6] stipulate that among the factors that impact investment are the foundation/basis, access to intermediary markets as well as social and economic factors of laws, political environment, politics and rules and regulations. These factors strengthen the security of investment and create a legal, social and political environment wherein investment projects and economic activities can be carried out from the beginning to the stage of operation without external distractions and hurdles. In addition, Hai [10] states that Rostow's theory emphasizes that fundamental changes play a significant role in investment levels.

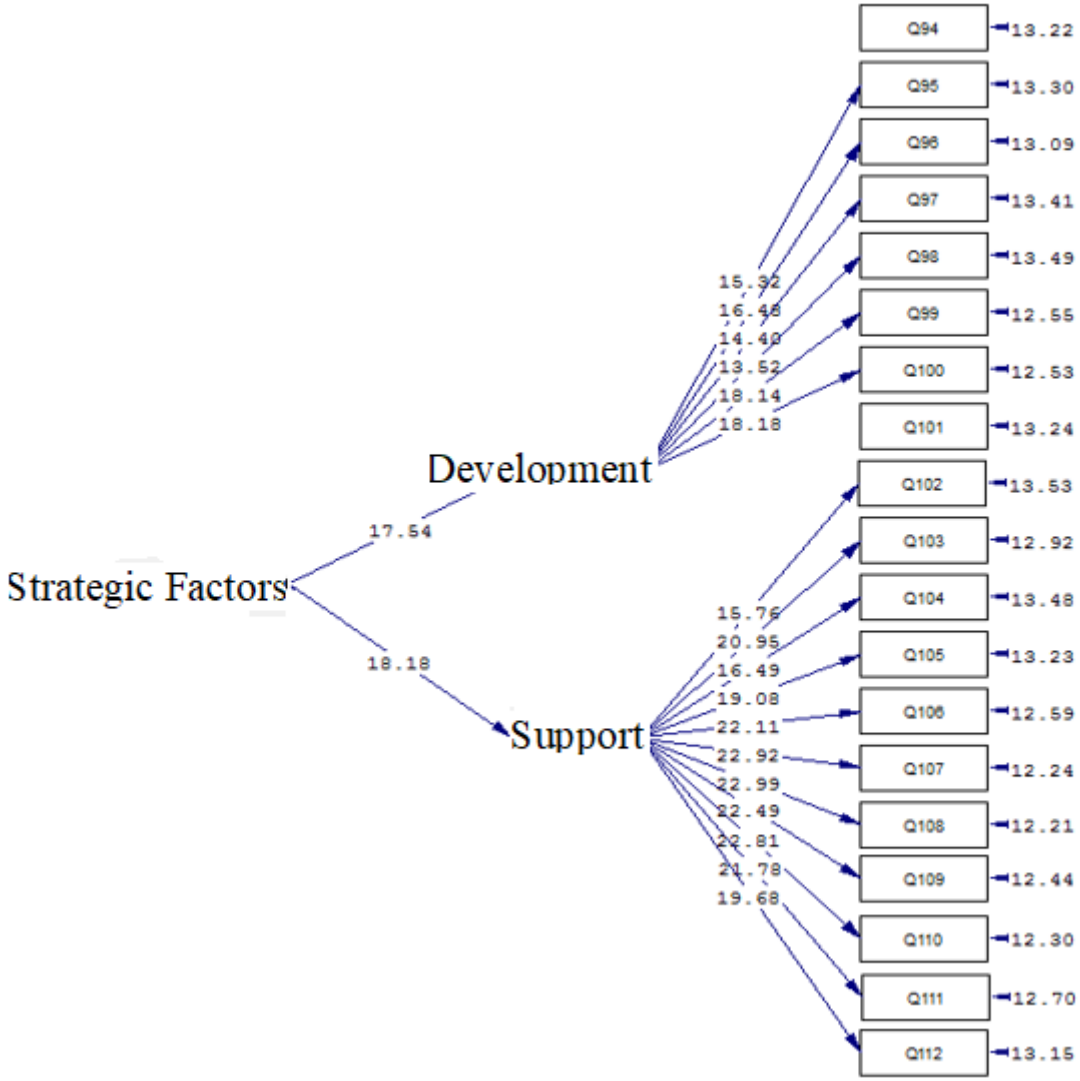

Figure 6: Numbers significance model for the strategic factors structure

The fundamental category discusses the creation of infrastructure, reform of economic structure and economic stability, etc. These are the most important investment security factors that also affect the central phenomenon. Muda et al. [14] argued that Rostow's theory emphasizes that infrastructure should be built by the government in the first place. Gordon & Pestre [9] however stressed that efficient laws guarantee the principle of private property rights, plus minimize transaction costs, and provide a favorable environment for economic growth. Moreover, they stated that empirical studies stipulate a strong and positive relationship between strong laws and the realization of investment and growth. Among these laws, investment law and private property rights are of particular importance. In addition, Asghari et al. [2] stated that non-compliance with investment laws prevents the growth of investments. This is also emphasized by the economic theory of endogenous growth advocated by Roemer [18], Lucas [12] and Barro & Sala-I-Martin [3]. According to this theory, the role of laws and regulations and government policies in economic growth is quite substantial.

Compliant to the presented model, the second, third and fourth hypotheses of the quantitative section were formulated and examined in such a way where the central phenomenon, contextual and interventionist conditions were influential on strategies. Findings revealed that the central phenomenon, contextual & interventionist conditions as three categories of the investment security model have a positive and significant impact on strategic factors.

Among the determining factors of the investment security model is focusing on the central phenomena inclusive of organization, content and process. The most significant factor in investing is the organizing and planning process. In order to achieve investment security, one must first have a proper and constructive attitude to organizing and planning investment. It is additionally imperative to concentrate on its content.

Table 8: First stage confirmatory factor analysis of the consequences structure

Variable	Factor Load	Significance Number	AVE	Combined Reliability	Cronbach's Alpha
Foundation/Basis Category					
Question 113	0.82	19.38	0.689	0.957	0.941
Question 114	0.82	19.44	0.689	0.957	0.941
Question 115	0.87	21.51	0.689	0.957	0.941
Question 116	0.84	20.13	0.689	0.957	0.941
Question 117	0.84	20.16	0.689	0.957	0.941
Question 118	0.86	20.94	0.689	0.957	0.941
Question 119	0.90	22.78	0.689	0.957	0.941
Question 120	0.88	21.88	0.689	0.957	0.941
Question 121	0.63	13.630	0.689	0.957	0.941
Question 122	0.81	19.20	0.689	0.957	0.941
Question 123	0.73	16.51	0.689	0.957	0.941
Improvement/Enhancement Category					
Question 124	0.80	18.58	0.725	0.940	0.932
Question 125	0.85	20.35	0.725	0.940	0.932
Question 126	0.87	21.13	0.725	0.940	0.932
Question 127	0.93	23.94	0.725	0.940	0.932
Question 128	0.87	21.46	0.725	0.940	0.932
Question 129	0.78	17.85	0.725	0.940	0.932

Table 9: Assessment findings-relationship between causal factors & axial phenomena

Direction/Path	Path Coefficient	T-Stat	Significance Level	Result
Causal Factors: Axial Phenomenon	0.66	14.20	0.001	Confirmed

Table 10: Assessment findings-relationship between axial phenomenon factors & strategic factors

Direction/Path	Path Coefficient	T-Stat	Significance Level	Result
Axial Phenomena Factors: Strategic Factors	0.16	3.41	0.001	Confirmed

Table 11: Assessment findings-relationship between contextual factors & strategic factors

Direction/Path	Path Coefficient	T-Stat	Significance Level	Result
Underlying Factor: Strategic Factors	0.27	5.39	0.001	Confirmed

Table 12: Analysis findings-relationship between intervention factors & strategic factors

Direction/Path	Path Coefficient	T-Stat	Significance Level	Result
Underlying Factors: Strategic Factors	0.18	3.72	0.001	Confirmed

Table 13: Analysis findings-relationship between strategic factors & consequences

Direction/Path	Path Coefficient	T-Stat	Significance Level	Result
Strategic Factors: Consequences	0.63	13.55	0.001	Confirmed

Among the investment security model determining factors, focusing on intervention factors including management and human resources, especially increasing awareness and concentrating on human resources expertise is notable. Regarding management, it should be pointed out that economic development in today's societies depend on investment security, requiring markets being able to attract and allocate financial resources plus other management decisions. Therefore, application of capable and efficient management is essential in selecting the right strategy for investment and the process of investment implementation in order to create the conditions for survival, growth, thriving, etc., in a complex and highly competitive business world. Hence, it can be stated that one of the intervening factors is the acceptability of managers/executives in making investment decisions. Hambric & Masoun (1984) challenged the theory of neoclassical economics wherein executives are interchangeable parts of an organization that have very little impact as a whole. They insisted that managers/executives and their unique individual characteristics are very influential

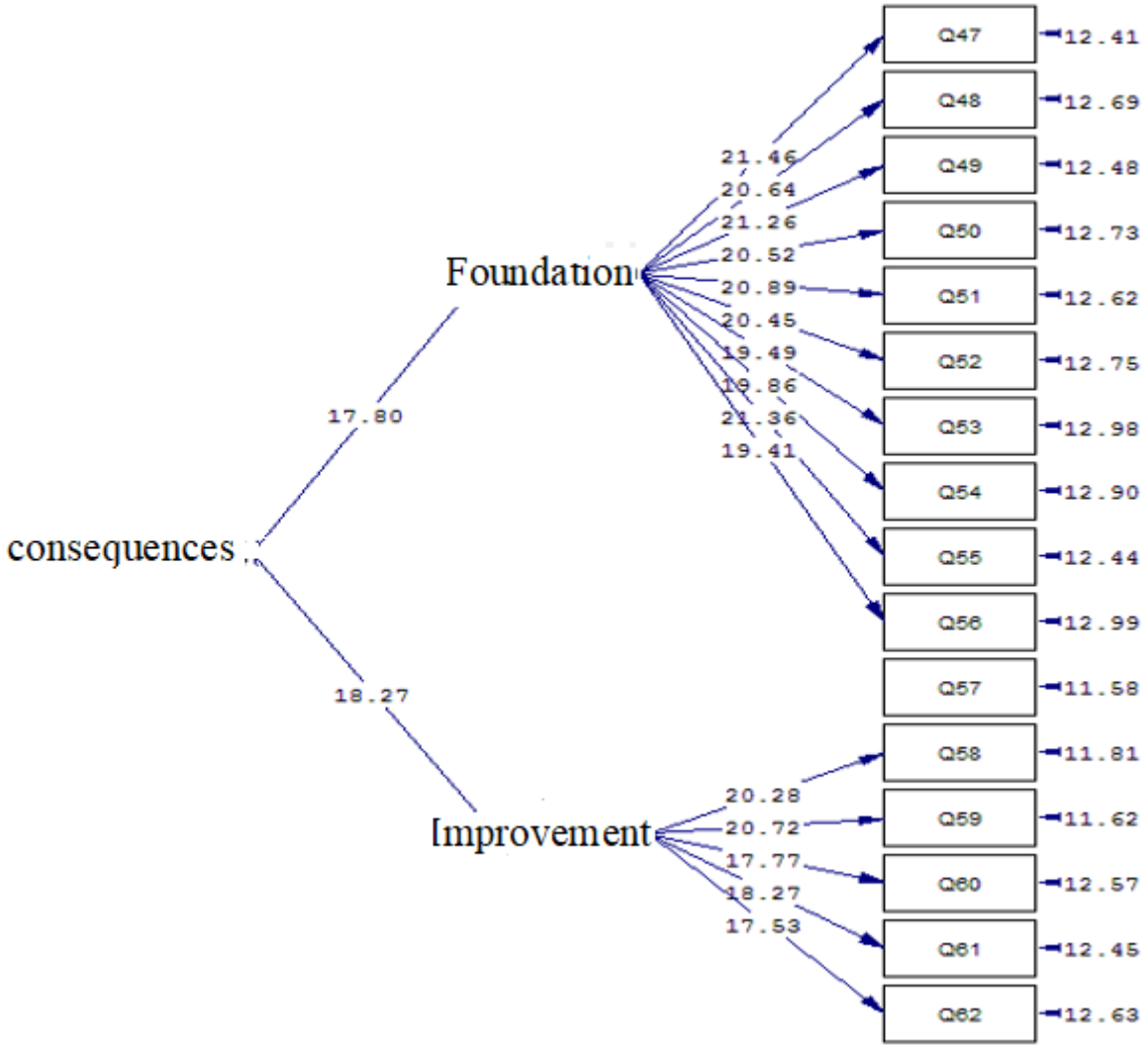

Figure 7: Numbers significance model for the outcomes structure

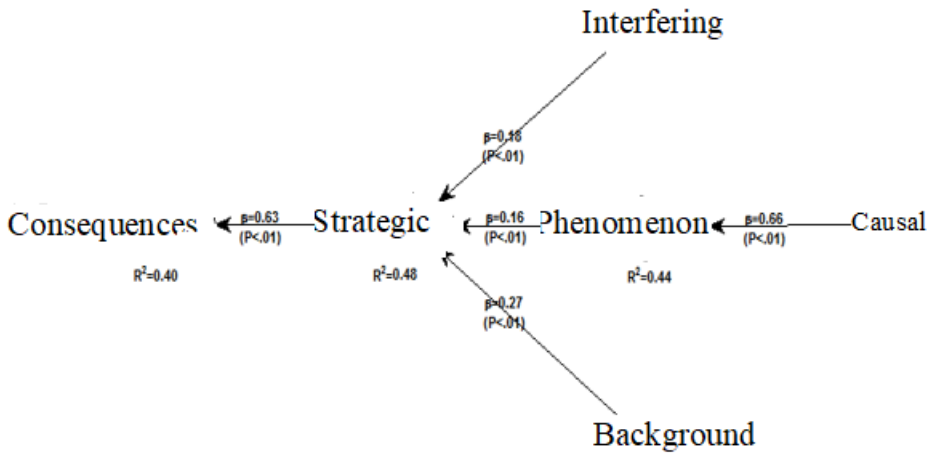

Figure 8: General results-estimation of research's structural equations pattern

and important in the company's performance. Moreover, their personal abilities has a unique role and position on the

company's operational and investment policies.
Furthermore, Demerjian et al. [8] believed that highly capable managers/executives have a better understanding of the internal and external conditions of a company and in addition to the quality assessments they are able to make, through their knowledge and understanding, they can be in a position to identify profitable projects and enhance investment. If ability is considered as among the variables impacting investment, which can lead to investment efficiency and higher economic growth, then it can be claimed that ability/competence can play a key role in a company's development. Ability and competence are such a valuable category they can create and achieve a sustainable competitive advantage as well as security in investment projects. In light of the dramatic changes that have taken place in the world today, especially in developing countries encountering multiple threats, these nations require the right solutions to address their economic problems toward making superior use of their "God-given" talents, capabilities and wealth. In this regard, priorities as far as important strategies include security and investment development through empowerment, mandatory anti conflict of interest steps, mutual trust building, etc. Further actions entail providing the basis for security and investment development by creating the conditions for accountability/commitment and increasing interaction between stakeholders.
Concerning the human category, it can moreover be alluded to that by promoting meritocracy and professionalism of human resources, investment growth and security can be realized. Ciccone & Papaionnou [5] believed that for the following reasons. the degree of economic development with respect to human capital is effective in attracting investment. First, entrepreneurs and investment specialists being active in an economy is generally a sign/symbol of the degree of development of a country. This is especially vital when investing, especially in high-tech joint ventures that require skilled labor. And the second reason is that entrepreneurs and investment pros provide superior infrastructure resources toward attract optimal investment. In other words, efficient manpower will create first-rate conditions for secure investment by identifying investment opportunities.
In addition, Amini & Ansari [1] believed the quality of human resources is the most key factor in enhancing productivity and investment. Until the early 1950s, it was widely thought that the primary cause of the backwardness of developing countries was the lack of material and physical capital; But nowadays, the reality has been realized. The importance of human capital and improving the quality of labor are one of the primary methods as well as the basis for increasing productivity and investment, as well as accelerating the economic growth of society. Nelson & Phillips (1996) considered levels of achievement in education as a factor in productivity, growth, investment and technological progress. The economic growth theories put forward by Romer [18], Lucas [12] as well as Barro & Sala-I-Martin [3] also emphasize this issue. In the fifth hypothesis, the impact of strategic factors on outcomes was investigated. The findings revealed that strategic factors have a positive and significant effect on outcomes/consequences. The findings of quantitative analysis demonstrated that the utilization of effective and pivotal strategies in investment security has a significant role and in order to create security in investment, more focus should be placed on strategies. It is vital to note here that the results of quantitative analysis pointed out that the use of strategy, especially in the development and support category, enhances investment security and doubles the effectiveness of security. Among the crucial and determining factors for th investment security model is providing supportive policies and motivating investors.

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