



## Modeling corporate reputation in companies admitted to the Tehran Stock Exchange

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### ABSTRACT

The purpose of this research is to model reputation in Tehran Stock Exchange companies using structural modeling. The present research has investigated the positive or negative impact of factors affecting the reputation of organizations. According to the modern operating trends of any organization, regardless of the organization's structure, the nature of operations is exposed to reputation and the resulting damages are mostly of high severity; because reputation is one of the biggest intangible assets for any business. The present research deals with the modeling of reputation in Tehran Stock Exchange companies in 2023 using structural modeling. The research method of the current study is based on the objective, applied, and based on the type of data, it is a quantitative research type. To implement the fuzzy Delphi method, the opinions of 15 experts were examined. The questionnaire obtained from the fuzzy Delphi section, which was approved by experts, has been given to 384 shareholders of the stock exchange in the structure analysis section to investigate the factors affecting reputation. The method of data collection is of a descriptive type and due to the use of a questionnaire, it is considered part of survey research. According to the coefficients of the tests, the financial reputation variable has the most influence and the social reputation of the company has the least influence on the reputation. In this regard, the results have shown that all the investigated factors (management reputation, financial reputation, and social reputation) have a significant effect on reputation.

**Keywords:** Social reputation, corporate reputation, financial reputation, management reputation



## 1. Introduction

The company's reputation is a stable competitive advantage for the company and its products because it is difficult to create and replace it, and it is an important factor in attracting customers. Reputation as an intangible resource leads to competitive advantage. Reputation has created many advantages and benefits for companies in the field of marketing, human resources and financial resources in the global competition market (Lange et al., 2011; 156). Reputation is the evaluation of the company by its stakeholders based on their feelings, credibility and knowledge. Reputation includes various dimensions that include the organization's perceived capacity to meet the expectations of its stakeholders (Fambaran, 2003). With social media, a lot of information is available all the time and it is spreading very fast. In addition, continuous globalization implies a large number of competing products, employers and business partners. Therefore, the reputation of a company becomes increasingly important. The positive reputation of the company can lead to a significant competitive advantage for the companies, for example, the positive reputation of the companies has a positive effect on the financial performance in general, it facilitates the increase of capital. In addition, companies can benefit from positive reputation, for example when negotiating with suppliers or when building relationships with customers, especially without having personal experience, stakeholders like customers tend to associate with companies that have a good reputation in the company (Fambaran and Van Riel, 2004). Organizational reputation is considered as one of the factors influencing the behavioral characteristics of employees in different organizations. Lack of reputation damages members' sense of belonging to the organization. Lack of recognition reduces people's commitment to work and their commitment to the organization's values and goals, as well as their sensitivity to the realization of these goals. In this way, it will cause the organization to lose its competitive advantages and endanger its existence in a dynamic and competitive environment; therefore, managers and administrators of different organizations should be aware of the factors that influence the formation of reputation. Also, the effect of having a positive reputation on the level of organizational commitment of employees and also the level of integration with the

work of the members of the organization is essential. It should be noted that considering that no research has been done in the field of reputation modeling, this research is new and innovative. The subject of "Company Reputation" has become very attractive among academic and market circles. In recent years, the increasing importance and value of achieving and maintaining a good reputation for the company among managers has led companies to try to create a reputation system for their company (Najm Roshan et al., 2010: 78). Marketers believe that the key element that has a great impact on customers' purchase decisions is their understanding of the company's role in society and how they treat their shareholders and stakeholders. The company's brand is a key element of the company's reputation (Haqiqi et al., 2007: 73). In contrast to the company's reputation, it shows the overall attractiveness of a company to all its components, including employees, customers, investors, reporters and the general public; Therefore, the reputation of the company integrates the mental images that people have of the company and shows the image and status of the company in front of its competitors (Taleghani et al., 2011: 46). Accordingly, in the continuation of this research, the theoretical foundations and previous researches have been examined first, and after the research method has been designed, the hypotheses have been stated, and the data has been analyzed using the fuzzy Delphi method and structure analysis, and finally, conclusions and suggestions have been presented.

## 2- Theoretical foundations and research background

### 2-1- Theoretical foundations of research

Positive reputation is very important for companies, and companies should take measures to create a positive company reputation in the long term, which can be called company reputation management. In addition, reputational risk events, such as operational losses, can damage a company's reputation and ultimately lead to many financial losses (for example, increased legal claims) (Fiore Delisi et al., 2014; 115). Due to the new media environment, companies cannot hope for unintentional mistakes (Larkin, 2003); Therefore, in addition to creating a positive reputation of the company, protecting the reputation of the

company is very important in managing the reputation risk of companies. Measuring the company's reputation is important to know the state of the company (Fambaran and Van Riel, 1997; 10). The company's reputation reflects the views of customers, shareholders and the society about the wholeness and nature of the organization. Good reputation is a strategic tool for the continued success of the organization. Reputation has increasingly become one of the most effective tools in a highly competitive environment. Usually, when consumers are faced with a choice between two products with similar features, 89% of them finally decide based on the popularity of the brand and its reputation (Pollack, 2015). The effective factors in creating reputation based on the studies conducted in this field are: expertise, reliability, reputation, organizational management, financial performance, social responsibility, work environment, products and services, vision and leadership.

Therefore, for strategic management, the reputation of the company is seen as an asset and an obstacle for relocation. Establishing the reputation of the company has the capacity to block the entry of new competitors due to the high cost and long time involved in establishing aspects of the reputation and their integration in the minds of consumers. From this point of view, creating a company is associated with creating a reputation that is very difficult for new competitors to imitate or copy. In addition, this point of view shows that the company should allocate resources in an almost long period of time to create a reputation fence to prevent competitors in the field of activity. Conversely, reputations can prevent new products and services from being accepted by consumers as outside of the firm's traditional domain because they attribute them to their reputation. Strategists point out the reputation of the company as an asset and an obstacle to relocation, which comes from the perception of foreign observers. Established reputation hinders portability and creates returns to the firm. Because it is very difficult to imitate them. By characterizing a firm's activities and competitors' reactions, reputations contribute to industry-level structure.

Expertise: It is considered the competence of the organization and is related to the credibility and correctness of the organization (Tutian Esfahani et al., 2017; 7). Reliability: includes clarity and clarity,

continuity, predictability, completeness, correctness and credibility in line with what promotes the organization (Tutian Esfahani et al., 2017; 7). Reputation: it means having acceptability and prestige. Good, which is considered as a social benefit (Najm Roshan et al., 2012). Organization management: It is one of the important factors to create organizational reputation; Therefore, the management of the organization by considering the vision and mission of the organization and also by adopting the leadership style appropriate to the type of activities and organizational culture can guide the organization in the path that leads to the good reputation of the organization (Tutian Esfahani et al., 2017 7). Financial performance shows that the organization must provide resources to create different dimensions of the organization and also take action to create commitments and security of different people in the organization, which can be effective in creating potential investment opportunities in this context (Tutian Esfahani et al., 2017; 7). The feeling that employees have about the performance of the organization to maintain the balance between economic development and social welfare and not destroying the environment is called social responsibility (Arab Salehi et al., 2012; 9). Factors such as the founder's reputation and reputation, compliance with ethical issues by the organization and employees, the quality of customer-oriented management and having a good environment for work make the organization's work environment an effective factor in creating the reputation of the organization. Another factor that affects the organization's reputation in relation to products and services in such a way that providing products with quality and reasonable prices, creativity and innovation in providing products and services, easy access to parts and spare parts, continuity of after-sales service, having a warranty and also matching the product with the customer's needs on creating The reputation of an organization is effective. They define the organization's vision as a highly inspiring, macro and long-term goal.

Leadership is a characteristic and a process. In the leadership process, everyone's activities are coordinated through non-coercive influence in order to achieve the organization's goals. Servant leadership can improve the performance of employees, this leadership style affects the mood of employees, and the mood of employees is also effective on their

performance, and the performance of employees is also effective on the reputation of the organization (Kiajuri et al., 2017; 32). From an organization's point of view, favorable reputation provides high pricing conditions, attracts better employees and investors, and because of the belief that an organization has a good reputation to achieve more reliable income in the future, the company is able to reduce costs. It will be capital (Fambaran and Van Riel, 2003). Fambaran and Van Riel (1997) stated that reputation leads to negative perceptions of the company's shareholders, which is likely to change their behavior, which can ultimately cause financial loss to the company. Organizational reputation is defined as the level of alertness or evaluation and understanding of a company based on the company's behavior. From a commercial point of view, organizational reputation is the beliefs of dealers, creditors, shareholders and customers about the company's strategic characteristics and also the characteristic that they attribute to the company and in it is defined as the utmost respect that the society has for the company (Fambaran and Van Riel, 2003). Since the reputation is an intangible asset, it can be said that the good reputation of the managers from the social and professional point of view (management reputation), the good functional reputation of the company from the financial point of view (financial reputation) and from the social point of view (social reputation) increases the brand value and public demand for In fact, the high financial performance of the company and high-quality managers and the company's diligence in maintaining social interests will be effective in creating and promoting and maintaining the company's reputation, and creating a favorable and ideal mental atmosphere of the company, increasing its value and reputation. is looking for From the time of the industrial revolution until a long time, the establishment of various economic enterprises was aimed at making profit. In fact, the management of the organizations, who were part of their owners in some cases, did not pay attention to non-financial and social issues. With the passage of time and the emergence of theories such as stakeholder theory and as a result the importance of the role of community satisfaction and ethical issues in companies, new concepts such as corporate social responsibility and corporate citizenship were added to the literature and management profession (Hjazi and Nasiri, 2013; 163). For this purpose, the purpose of

this research is to model reputation in Tehran Stock Exchange companies using structural modeling. In this regard, the research questions are as follows:

- 1) What are the factors affecting the company's reputation?
- 2) What is the model of reputation in stock companies?

## 2-2- Research background

Below are some internal and external researches done in this field. Namazi and Dastjardi (2020; 24), in their research entitled designing a fuzzy comprehensive model for evaluating the performance of hospitals using the combined methods of sustainable balanced evaluation, Swara and Multimora, using the Swara method of each of the indicators related to weighting and with Using the Multimora method, hospitals were ranked based on the importance of each of the indicators of performance, sustainable development and reputation, and concluded that the financial and customer landscape respectively for private hospitals and the growth and learning landscape and internal processes respectively for Public hospitals are the most important for performance evaluation. Karimzadeh et al. (2020; 242), in their research entitled the effect of corporate social responsibility on customer satisfaction with the components of brand awareness, reputation and trust, which was distributed and collected through 389 questionnaires that were distributed and collected in person among the customers of Iran Insurance Company. And the method of data analysis was with the help of PLS and SPSS software; the results showed that playing the social responsibility role of Iran Insurance Company has a positive and significant effect on its brand reputation. In addition, a good corporate reputation has significant potential to create value and is difficult to imitate, and is considered a key competitive advantage for organizations. Aghazadeh and Tahmasabi Aghbalaghi (2020; 215), in a research, investigated the reputation of the insurance company and the satisfaction and trust with loyalty and recommendation advertisements of the insured. The number of 400 people who referred to Iran insurance legal agencies in Tehran constituted the statistical sample of this research and the sampling method in this research was clustered. The results showed that the satisfaction of the insured through the reputation of the insurance company with the loyalty and recommended advertisements of the insured, as well as

the trust of the insured through the reputation of the insurance company with the loyalty of the insured and the recommended advertisements of the insured have a positive and significant relationship. Goli et al. (2019; 2018), in a study investigated the role of auditors' social and professional liability insurance on ethical reputation and audit quality using the Delphi approach and structural equations. This study was conducted through the Delphi approach and based on 95 questionnaires completed by auditors in 2017. Using the structural equation method, the results showed that there is a positive and significant relationship between social and professional liability insurance and the reduction of auditors' moral reputation. Abdullahi et al. (2018; 149) in a research entitled the experimental study of the effect of response strategies and the company's level of reputation on the purchase intention and negative recommendation advertising of consumers at the time of product failure found that the company's reputation in the condition of dairy product failure could not affect the purchase intention and advertising. A negative consumer recommendation makes a difference. In addition to showing the role of reputation, the research findings noted the importance and value of accepting responsibility and compensatory measures. Although the difference between extraordinary effort and voluntary recall is only in more actions that the company takes in extraordinary effort in order to compensate the damage, but the findings of the research showed that these actions play a decisive role in affecting the purchase intention and recommended advertisements of consumers. In a study, Esmailzadeh et al. (2017; 2018) investigated the effect of corporate governance and reputation risk on the relationship between tax cost minimization and stock price reaction. The statistical sample of this research includes 140 companies accepted in the Tehran Stock Exchange and 1260 company-year observations during the period of 2016-2018. Multiple linear regression was used to test the research hypotheses. The results of the research showed that with the establishment of a strong corporate governance system, the possibility of a negative reaction of the stock market price to tax evasion is reduced. Hajipour et al. (2014; 39) in a research entitled "The effect of reputation from the customer's point of view" on brand value, found that the effect of bank reputation from the customer's point of view is positive on the overall value of the bank's

brand. The effect of trust in the bank's brand on "the bank's reputation from the customer's point of view" is much stronger than the effect of others' verbal recommendations on "the bank's reputation from the customer's point of view". The interpretation of this finding is that in the field of banking services, verbal advice by others cannot be very effective in persuading customers to use the services of banks.

Hachit et al. (2013; 82), in an article entitled "The influence of organizational reputation on customer behavioral intentions in New Economy Bank" shows that there is a significant relationship between organizational reputation and customer behavioral intentions, although this relationship is not direct and is through customer trust. Customer recognition and commitment is established. In a study, Adabe et al. (2022) investigated reputation in banks using the systematic literature review and network analysis (SLRNA) approach on 35 research articles published between 2010 and 2020. It was found that only developed countries (i.e., the United States and Europe) actively contribute to the research on reputational risks in banks, and it shows that the management of bank reputational risks has received the global attention it deserves. It is not attracted. Manabe and Nakagawa (2022) in an article in the *Journal of Financial Research Letters* entitled "The Value of Reputational Capital during the COVID-19 Crisis" present evidence from Japan that this study shows the value of reputational capital in light of the stock market crash in the early stages of the COVID pandemic. - 19 examines. At that time, when stock prices fell sharply, companies with a positive reputation for the usefulness of their products/services from their trading network showed a five to seven percent higher stock return than companies with a low reputation score. This suggests that positive reputation among stakeholders can act as insurance against shocks in times of crisis. Miklasiska et al. (2020; 38), in an article in the *Journal of International Financial Markets, Institutions and Money* titled "Does Reputational Risk Matter", showed that companies engage in irresponsible behavior and ignore their social responsibility to advance their goals. . Ahmad Barkat et al. (2018; 16), in an article in the *Journal of Banking and Financial Affairs* titled "Operational Risk and Reputation in Financial Institutions", raises the question of whether the tone of the media makes a difference? In response, they state that pure negative

tone and protest tone have adverse effects on reputation, and tone of uncertainty reduces the adverse effect of reputation. In addition, alternative and simultaneous information sources neutralize the authentic effects of text songs. Eckert (2017), in a study, examined the company's reputation and reputation. In this study, he presented a comprehensive and consistent approach to define and measure company credit and reputation, focusing on (risk) management goals.

**Conceptual Model**

According to the theoretical foundations and research background, the conceptual model is as follows:

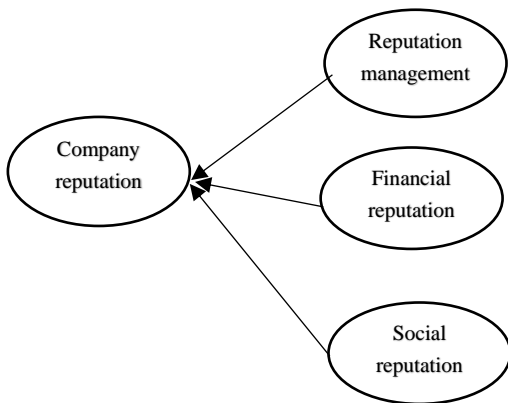


Figure 2-1. Conceptual model of research (Eckert, 2017)

**3- Research method**

Analyzing the data to check the research hypotheses and their accuracy and inaccuracy is very important and is considered one of the main and most important parts of the research. The raw data collected using information gathering tools are analyzed using SPSS and LISREL statistical software and after processing, they are provided to the stakeholders in the form of information. This chapter consists of two parts: descriptive statistics and inferential statistical test. In the descriptive part, the description of the demographic variables of the statistical sample of the research is mentioned, and in the inferential test, using appropriate statistical techniques, the research model is tested.

**Statistical population and sample**

The statistical population of this research is academic experts and Tehran Stock Exchange in the qualitative

section and investors in the Tehran Stock Exchange in the quantitative section. In this research, the members of the sample have been selected for this research as non-probability sampling and a combination of targeted or judgmental and chain methods.

**4- Research findings**

**4-1- The first part of Fuzzy Delphi**

The fuzzy Delphi method was invented in the 1980s by Kaufman and Guetta. The use of this method in order to make decisions and reach consensus on issues where the goals and parameters are not clearly defined, leads to very valuable results (Tabatabai Nasab and Mohammadian, 2018; 358). A one-step fuzzy Delphi method has been used to extract the main and effective criteria on reputation. To implement the fuzzy Delphi method, the opinions of 15 experts were examined.

**Descriptive statistics of responding experts**

In this part, the characteristics of the respondent group of experts including gender, education, age, teaching experience, activity experience in the capital market and academic rank have been investigated. 20% of respondents are women and 80% are men. 53.3 percent of experts are between 30 and 40 years old, 40 percent are between 40 and 50 years old, and 6.7 percent are over 50 years old. The educational level of 13.3 percent of the responding experts is master's degree, 20 percent is a doctoral student, 6 percent is a doctorate, and 6.7 percent is a post-doctorate. The teaching experience of most of the examined experts is equivalent to 73.3% between 5 and 15 years. Most of the examined experts have less than 5 years of experience in the capital market, equivalent to 60%. The academic rank of 40% of the responding experts is instructor, 46.7% is assistant professor, and 13.3% is associate professor.

Then based on equation (1)  $F_{AVE} = \frac{\sum l}{n} \cdot \frac{\sum m}{n} \cdot \frac{\sum u}{n}$ , the fuzzy average is obtained from the points and by the relations (2)  $F_{AVE} = (L \cdot M \cdot U)$  and (3)  $X = \frac{L+M+U}{3}$ , the fuzzy average is converted into a definite number. The results of all fuzzification calculations are given in table (1). In this research, the threshold number is considered to be 0.6, and the results show the confirmation of a number of indicators, which are given in table (1) of the results.

Table 1. Fuzzy Delphi results

Condition	De-fuzzified average	Triangular fuzzy average			Criteria	Agents	Row
		U	M	L			
confirmation	700/0	850/0	733/0	517/0	Independence of board members	reputation management	1
rejection	506/0	700/0	500/0	317/0	Size of board members		2
confirmation	617/0	783/0	633/0	433/0	The dual role of the CEO		3
confirmation	628/0	783/0	650/0	450/0	Financial expertise of board members		4
rejection	539/0	750/0	533/0	333/0	CEO tenure		5
rejection	394/0	567/0	383/0	233/0	Gender of board members		6
confirmation	633/0	800/0	650/0	450/0	Existence of the company's risk management committee		7
confirmation	683/0	867/0	700/0	483/0	The ratio of managerial ownership of the company		8
rejection	489/0	683/0	483/0	300/0	State ownership ratio of the company		9
rejection	456/0	650/0	450/0	267/0	The ratio of institutional ownership of the company		10
rejection	439/.	633/.	433/.	250/.	Family ownership ratio		11
confirmation	661/.	817/.	683/.	483/.	Existence of audit committee		12
confirmation	628/.	783/.	650/.	450/.	Existence of internal auditor unit		13
rejection	533/.	700/.	550/.	350/.	The number of board meetings		14
confirmation	800/.	950/.	850/.	600/.	Return on assets of the company	Financial reputation	15
confirmation	722/.	867/.	767/.	533/.	Company's stock returns		16
confirmation	683/.	850/.	717/.	483/.	Return on equity of the company		17
confirmation	700/.	850/.	733/.	517/.	The company's P to E ratio		18
confirmation	617/.	800/.	633/.	417/.	The company's operating cash ratio		19
confirmation	700/.	867/.	733/.	500/.	Company's sales performance		20
confirmation	800/.	933/.	850/.	617/.	company value		21
rejection	589/.	767/.	600/.	400/.	Financial risk of the company		22
rejection	522/.	717/.	517/.	333/.	Financial helplessness of the company		23
confirmation	639/.	833/.	650/.	433/.	Financial limitation of the company		24
rejection	478/.	667/.	483/.	283/.	The cost of research and development of the company		25
rejection	572/.	767/.	583/.	367/.	Export sales to the company's total sales		26
rejection	478/.	717/.	467/.	250/.	Systematic risk of the company		27
confirmation	622/.	817/.	633/.	417/.	The quality of the company's financial information		28
confirmation	656/0	867/0	667/0	433/0	Economic added value of the company	29	
rejection	544/0	750/0	550/0	333/0	Efforts to protect the environment	Company's social reputation	30
rejection	444/0	650/0	433/0	250/0	Efforts to improve the health of employees		31
confirmation	689/0	867/0	717/0	483/0	Efforts to improve product		32

Condition	De-fuzzified average	Triangular fuzzy average			Criteria	Agents	Row
		U	M	L			
					quality		
confirmation	622/0	850/0	633/0	383/0	Diligence to participate in public interest issues		33

In the fuzzy Delphi method, which has a screening mode, variables are confirmed that have a minimum agreement of 60%, and such variables are confirmed and there is no need to repeat them. At this stage, 19 variables have been confirmed.

#### 4-2- The second part of structure analysis

The questionnaire obtained from the previous section, which was approved by experts, has been given to 384 people in this section to investigate the factors affecting reputation.

##### Descriptive statistics

In this section, the characteristics of the audience group, including age, gender, education and occupation, have been studied.

How to distribute the respondents in terms of gender

In this part, the number and percentage of the respondents in terms of gender have been examined. Based on the results, 32% of the respondents are women and 68% are men.

41.7 percent of respondents are between 20 and 30 years old, 35.9 percent are between 20 and 30 years old, 16.4 percent are between 40 and 50 years old, and 6 percent are older than 50 years old.

The frequency distribution of the level of education is 17.4 percent of the respondents with a diploma, 11.5 percent with an associate degree, 34.1 percent with a bachelor's degree, 28.9 percent with a master's degree, and 1.8 percent with a doctorate. The distribution of the frequency of activity experience of most of the respondents is equal to 61.2% less than 5 years. Distribution of the frequency of jobs of the respondents: 23.2% are students, 15.9% are official employees, 30.5% are freelancers, 13.8% are contract workers, and 16.7% are unemployed. The frequency distribution of most of the respondents' field of study is equivalent to 58.9 percent not related to accounting.

#### 4-3- Inferential statistics

In this study, exploratory factor analysis and confirmatory factor analysis were used to examine the research model, and the results are as follows.

Exploratory factor analysis

In exploratory factor analysis, the researcher seeks to examine the experimental data in order to discover and identify the indicators and the relationships between them, and does this without imposing any particular model. Exploratory analysis is considered more as a theory formulation and generation method and not a theory testing method (Homan, ۲۰۱۴). In conducting factor analysis, it must be ensured that the available data can be used for analysis; In other words, is the desired amount of data suitable for analysis or not? For this purpose, KMO index and Bartlett's test were used. According to a general rule, the KMO value to perform factor analysis on the data should be higher than ۰.۵, and higher values increase the confidence factor of using factor analysis. Bartlett's test of sphericity should be significant, that is, the significance level of the test (Sig) should be less than ۰.۰۵ (Kearney and Kaiser, ۱۹۷۷; ۴۴). Table ۷ shows the results of both tests.

Table ۷. Results of KMO and Bartlett's sphericity test

Sig	Bartlett's chi-square test	KMO
000/0	091/3296	946/0

According to the obtained results, the Kaiser-Meyer-Elkin (KMO) value is equal to ۰.۹۴۶, which is more than ۰.۵, so the sample size selected in this research is suitable for exploratory analysis. Also, the significance level of Bartlett's test is less than ۰.۰۵, which shows that factor analysis is suitable for identifying the structure of the factor model. According to the results of KMO and Bartlett tests, the data obtained from the research questionnaire are sufficient and suitable for factor analysis, so exploratory analysis can be carried out on the questions of the questionnaire. Using principal component analysis (PCA) and eigen value method, the number of factors is extracted and identified. Using this rule, only factors with an eigenvalue of ۱ or more are considered for review. The eigenvalue of a factor shows the amount of total variance explained by that factor. Finally, Varimax rotation is used to determine the most suitable factors. The test results are shown in

the table below. In order to show in which factor each question of the questionnaire is placed, the highest factor load is indicated in bold in table (7).

According to the obtained results, three factors with an eigenvalue higher than one have been extracted; that all the questions of the questionnaire are placed in these three factors. These 3 factors include

19 items. The first factor alone explained 44.569%, the second factor 5.926% and the third factor 5.127% of the variance, and all three factors explained 55.622% of the variables' variance. In addition, Cronbach's alpha of all factors is more than 0.7 and Cronbach's alpha of the total score is 0.930, so it can be said that the questionnaire has good reliability.

**Table 7. The matrix of factors rotated by principal component analysis and varimax rotation**

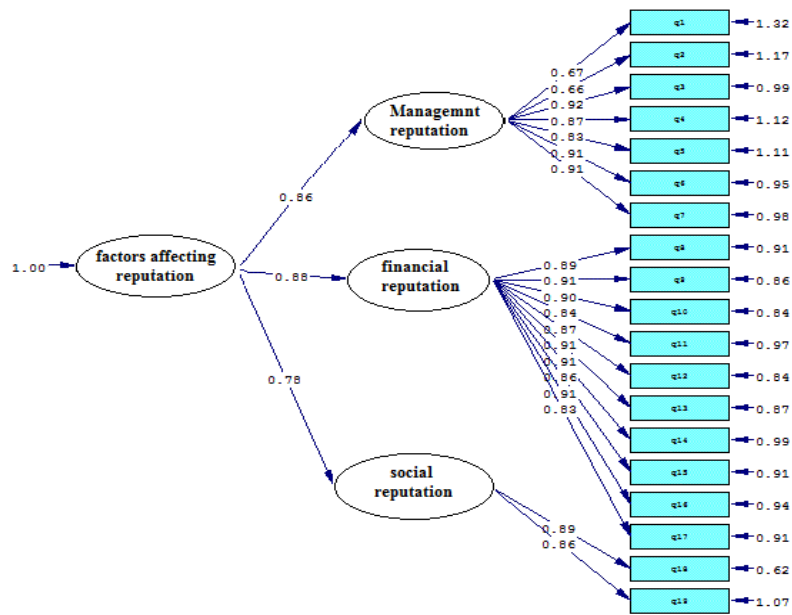
Company's social reputation	Financial reputation	reputation management	Question number
185/.	166/.	765/.	1q
139/.	221/.	808/.	2q
265/.	174/.	660/.	3q
248/.	238/.	561/.	4q
474/.	145/.	594/.	5q
127/.	447/.	554/.	6q
165/.	446/.	598/.	7q
106/.	646/.	312/.	8q
146/.	732/.	204/.	9q
340/.	526/.	475/.	10q
203/.	620/.	235/.	11q
248/.	695/.	175/.	12q
215/.	621/.	310/.	13q
048/-	739/.	391/.	14q
175/.	688/.	332/.	15q
201/.	512/.	439/.	16q
352/.	503/.	357/.	17q
593/.	206/.	415/.	18q
839/.	159/.	096/.	19q
974/1	261/2	468/8	special value
127/5	926/5	569/44	Percentage of explained variance
622/55	495/50	569/44	Cumulative percentage of explained variance
768/0	896/0	814/0	Cronbach's alpha

**Confirmatory factor analysis**

Second-order confirmatory factor analysis has been used to measure the factors affecting reputation. Diagram (1) of the second-order confirmatory factor analysis model shows the factors affecting reputation in the mode of coefficient estimation. In this chart, numbers or coefficients are divided into two categories. The first category is called first-order measurement equations, which are the relationships between hidden and obvious variables (relationships between ovals and rectangles). These coefficients are called first-order factor loadings. The second category is the structural equations which are the relationships

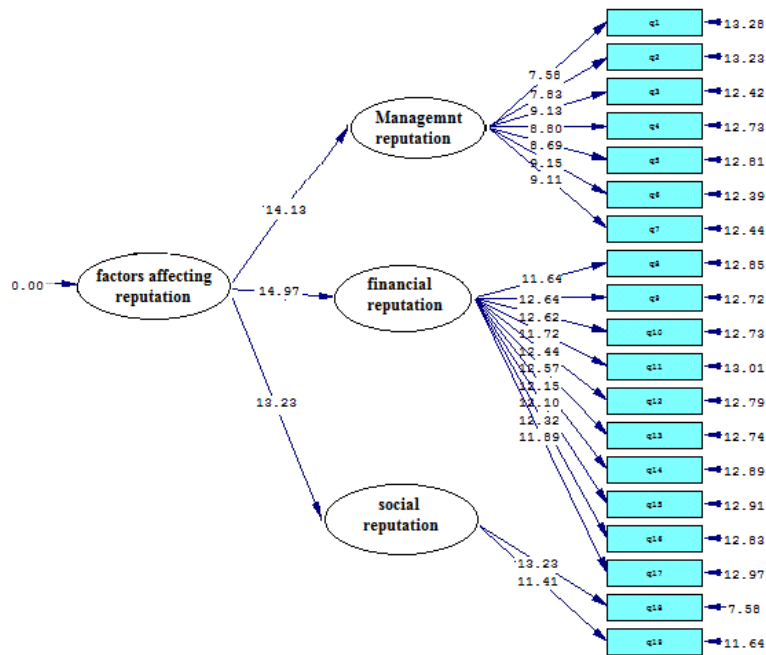
between latent and latent variables. These coefficients are called path coefficients or second-order factor loads.

Diagram (2) shows the second-order factor analysis model of factors affecting reputation in the significance mode of coefficients (t-value). This model actually tests all measurement equations (factor loadings) of the first and second order using the t statistic. According to this model, the factor loading is significant at the 95% confidence level if the t-statistic value is greater than 1.96 or less than -1.96. The results of factor loadings of the model of factors affecting reputation are summarized in Table (4)



Chi-Square=404.01, df=149, P-value=0.00000, RMSEA=0.067

Diagram 1. Model of factors affecting reputation in the mode of coefficient estimation



Chi-Square=404.01, df=149, P-value=0.00000, RMSEA=0.067

Diagram 2. The model of factors affecting reputation in the significance mode of coefficients

**Table 4. Results of confirmatory factor analysis of factors affecting reputation**

standard error (SE)	T	factor load	Question number	Variables
088/0	58/7	67/0	1q	reputation management
084/0	83/7	66/0	2q	
101/0	13/9	92/0	3q	
099/0	8/8	87/0	4q	
096/0	69/8	83/0	5q	
099/0	15/9	91/0	6q	
100/0	11/9	91/0	7q	
076/0	64/11	89/0	8q	Financial reputation
072/0	64/12	91/0	9q	
071/0	62/12	9/0	10q	
072/0	72/11	84/0	11q	
070/0	44/12	87/0	12q	
072/0	57/12	91/0	13q	
075/0	15/12	91/0	14q	
071/0	1/12	86/0	15q	
074/0	32/12	91/0	16q	
070/0	89/11	83/0	17q	
067/0	23/13	89/0	18q	Company's social reputation
075/0	41/11	86/0	19q	

Based on the results obtained in Table (4), all the values of the first-order factor loadings are greater than 0.4 and also the calculated values of t for each of the factor loadings are above 1.96. In fact, the above results show that what the researcher intended to measure with the questions of the questionnaire has been achieved by this tool. The fit indices of the model are shown in Table 5.

According to the results obtained in table (5), validity and fit of the model have been confirmed. In order to facilitate the interpretation of the results of the

second-order factor analysis of factors affecting reputation, the estimated parameters are summarized in two graphs (1) and (2) in the table below.

Based on the results obtained in Table (6), the values of the t statistic for all factor loadings of the second order are above 1.96; therefore, with 95% certainty, it can be said that all the investigated factors have a significant effect on reputation. So that according to the coefficients of the path, financial reputation has the greatest effect and social reputation of the company has the least effect on reputation.

**Table 5. Model fit indices of factors affecting reputation**

The amount obtained	acceptable values	Description	title of exam
711/2	3>	Relative chi-square	$\chi^2/df$
067/0	1/0>	The square root of the approximation error	RMSEA
91/0	9/0<	Adjusted fitness index	GFI
077/0	1/0>	root mean square residual	RMR
96/0	9/0<	Soft fit index	NFI
98/0	9/0<	Comparative fit index	CFI

**Table 6. The results of the second-order factor analysis of factors affecting reputation**

rank	t	path coefficient	Dimensions	variable
2	13/14	86/0	reputation management	Factors affecting reputation
1	97/14	88/0	Financial reputation	
3	23/13	78/0	Company's social reputation	

### Validity and reliability results

In this research, the method of using Cronbach's alpha coefficient is used to determine reliability with emphasis on internal correlation. In this method, components or parts of the studied data are used to measure the reliability coefficient of the test. If the alpha coefficient is more than 0.7, the test has acceptable reliability. The results of Cronbach's alpha of the present study showed 0.87, which shows that the test has acceptable reliability. In this study, qualitative content validity method was used to determine validity. For this purpose, since the validity of the content depends on the judgment and opinion of specialists and experts in the subject under study, interviews were conducted with a number of experts who had both academic education in this field and experience related to the subject of the research. From the summation of the professors' and experts' opinions, its formal validity and its content were confirmed.

### 5- Discussion and conclusion

In this study, in order to achieve the objectives of the research, a questionnaire including 33 indicators affecting reputation was given to 15 experts and they were asked to express their opinion about each criterion in the form of variables included in the questionnaire. In the fuzzy Delphi method, which has a screening mode, variables are confirmed that have a minimum agreement of 60%, and such variables are confirmed and there is no need to repeat them. At this stage, 19 variables have been confirmed; Components such as the independence of the board members, the dual role of the CEO, the financial expertise of the board members, the existence of the company's risk management committee, the company's managerial ownership ratio, the existence of the audit committee, the existence of the internal auditor unit, the company's asset return, the company's stock return, the company's equity return, the company's P to E ratio, the company's operating cash ratio, the company's sales efficiency, the company's value, the company's financial limit, the quality of the company's financial information, the company's economic added value, the effort to improve product quality and the effort to participate in public benefit issues have been confirmed. ; And in the second stage, 384 people have been provided to investigate the factors affecting reputation. In this regard, the results of the descriptive

statistics of the questionnaires completed by the statistical sample of this research have shown that out of the 384 people in the sample, Survey, 32% of them are women, 68% of them are men. Also, the results related to the frequency distribution of the studied sample based on age have shown that among the 384 studied samples, the highest frequency is related to the age group of 20 to 30 years (41.7%) and the lowest frequency is related to the age group of more than 50 years. (6 percent).

The results related to the frequency distribution of the studied sample in the present study based on the level of education have shown that among the 384 studied samples, the highest frequency related to the level of education is bachelor's degree (34.1 percent); which can be said to be consistent with the highest frequency of the age group (20 to 30 years); Further, the results of confirmatory factor analysis have shown that all factors (management reputation, financial reputation and social reputation) have a significant effect on reputation. So, according to the coefficients of the path of financial reputation, the company's social reputation has the most influence and the least influence on the reputation. This shows that the company's reputation is seen by most investors as its financial reputation and good financial performance. In this regard, the results of this study are in line with the results of the studies of Barkat et al. (2018), Eckert (2017) and Davis et al. (2008; 220); Because they also showed in their studies that things like management reputation, social reputation and financial reputation affect the company's reputation. In this regard, it can be said that the risk of reputation occurs when the company is weak in terms of financial performance, and also if a company fails to fulfill its duties, responsibilities, ethical principles and satisfy its customers, and the good management of the company in If it is reduced among the investors, the risk of reputation will occur, in the sense that the reputation of the company among the general shareholders will be at risk.

Regarding the reputation of management, it can be said that the reputation of managers is a point of reflection in the performance of companies in providing information richness. It is argued that independent directors with stronger reputational incentives reduce corporate transparency. This is important because independent directors rely on a clear and accurate company-specific information

environment for effective monitoring and advice. The need for company-specific information means that independent directors with reputational motives are concerned about private information and do not voluntarily provide it; because managers hesitate to disclose information. Faced with greater reputational incentives, publicly available information—scrutinized by analysts, auditors, regulators, and the media—will become more important to independent directors; therefore, this shows that managers with more reputation have more reputation risk. Regarding financial reputation, it can be said that reputation risk management has a close and intertwined relationship with the management of other risks (including credit risk, market risk, liquidity and operational risk), which causes financial reputation for the organization and any inefficiency in management. Optimum of these types of risks can be a serious threat to the good reputation of the organization. Social reputation states that reputation risk management is known with ethical, environmental and social aspects of interaction with customers. Also, risk management in business exchanges requires a set of supervisory processes with transparent and responsible roles. Therefore, policies such as the company's environmental policy, with regard to energy and non-renewable resources, set criteria and investment, as well as the company's employment policy, specify measures for de-discrimination in the employment and management of employees.

### Offers and Limitations

The fact that reputation risk is not yet included in the list of capital market regulations and that it still does not have a standard approach for management and measurement should be considered. – It is suggested that companies pay attention to the results of this research to assess the correct amount of their real capital, which is somehow the company's reputation, because social reputation and management, along with good financial reputation, are the overall builder of the company's reputation. – It is suggested to the stock exchange to rank the companies in terms of their reputation and risk according to the results of this research and related research and disclose the reputation report of the companies as well. In the way of conducting a study, there are problems and challenges and limitations. But these limitations and challenges do not mean that the results of the study are

not used. Considering that it is necessary to state these limitations for the audience of a study, some of the limitations of this study are mentioned below:

- 1) The results of this study are only related to a specific geographical area (active companies of the Tehran Stock Exchange).
- 2) The components considered in the present research may be only a part of the components affecting reputation risk.

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