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The effect of board of directors' characteristics on the long-term success of the firm

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ABSTRACT

The objective of this research is to investigate the effect of the board of directors' characteristics on the long-term success of the firm. Noticeably, the time scope of this research is 2012-2019. Furthermore, this research has 2 hypotheses. It is in a group of applied research based on its objective, and its methodology is correlational based on the nature and content. This research was conducted in the framework of deductive-inductive reasoning, and panel analysis was used to analyze the hypotheses. The results showed that financial knowledge, among the potential characteristics of the board of directors, have a positive effect and tenure duration has a negative effect on investment efficiency. Moreover, the results showed that only the independence of the board of directors has a positive effect on the investment efficiency among the dynamism characteristics of the board of directors. In addition, the effect of the size of the board of directors and gender diversity is insignificant on the investment efficiency.

Keywords: The potential of the board of directors, the dynamism of the board of directors, the long-term success of the firm

Introduction

A firm is administrated under the guidance and leadership of its board members, then the leadership and guidance are transferred from the board of directors to the CEO and from the CEO to the senior managers to manage and organize the daily tasks of the firm. Therefore, the board of directors supervises and controls the firm on behalf of the firm's shareholders. However, effective and efficient corporate governance is the responsibility of all those who communicate with stakeholders. The board of directors is responsible for the coordination at the top and ensures the existence of a suitable culture and climate in the system. The key to establishing successful corporate governance is to ensure the spread of the principles of sustainability, responsibility, accountability, fairness, transparency, and effectiveness in the organization. Today, the extensive changes in the levels of governance and leadership of organizations occur by the constant changes in the portfolio of stakeholders of organizations and on the other hand the governance dynamism in the business environment. Boards of directors are one of the pillars of governance in today's organizations, most of which are referred to as the executive lever of organizational governance principles and responsible for monitoring and policy-making in firms (Jeberan et al., 2020, 152).

Problem statement

A firm is administrated under the guidance and leadership of its board members, then the leadership and guidance are transferred from the board of directors to the CEO and from the CEO to the senior managers to manage and organize the daily tasks of the firm. Therefore, the board of directors supervises and controls the firm on behalf of the firm's shareholders. However, effective and efficient corporate governance is the responsibility of all those who communicate with stakeholders. The board of directors is responsible for the coordination at the top and ensures the existence of a suitable culture and climate in the system. The key to establishing successful corporate governance is to ensure the spread of the principles of sustainability, responsibility, accountability, fairness, transparency, and effectiveness in the organization. Today, the extensive changes in the levels of governance and leadership of organizations occur by the constant changes in the portfolio of stakeholders of organizations and on the other hand the governance dynamism in the business environment. Boards of directors are one of the pillars of governance in today's organizations, most of which are referred to as the executive lever of organizational governance principles and responsible for monitoring and policy-making in firms (Jeberan et al., 2020, 152). On the other hand, trade and business are a mixture of science, art, and skill, and the condition for its success and permanence is the correct decision, foresight, and experience. Fortunately, business skills are learnable and everything needed can be learned to achieve goals (Yilmaz and Mazeo, 2016). Success is rooted in the regular management of a written or unwritten program to coordinate and guide the talents, efforts, and resources of the various components toward a shared vision and mission. The entrepreneur founder must provide such a vision and mission and explain the leadership needed for the firm. Every CEO should be able to work in a wide range while he/she has a particular area of interest or expertise (such as product sales or development), (Ararat et al., 2015). It is estimated that less than half of the entrepreneurs who start a firm stays in the same initial state for 5 years or more (Pham et al., 2011). Kagsmark et al. (2012) In the United States, more than one million people start a new business each year, and at the end of the first year, at least 40% of them go bankrupt (Bagat and Bolton, 2008). Therefore, it is essential for managers of different firms to be more and better acquainted with the success factors of organizations so that they can manage their organization with more awareness in order to achieve the designed goals. Many factors are effective on the success of the organization. These factors can sometimes vary depending on the type of organization and the prevailing organizational culture. The art of successful managers is leading the organization to predetermined goals and ensure the success and progress of their organization by relying on the required specialized knowledge and applying new management and leadership technics of the organization (Liu et al., 2020). Thus, the main question of this research is to know whether firms' resources and domestic processes are important for the long-term success of the firm which enables the board of directors to fill and complete these resources to do tasks.

The necessity and importance of research

It is essential for the business units to invest in projects with a positive net present value due to resource constraints and resource efficiency. Actually, over-investing shows investment inefficiency and occurs based on a conflict of interest between managers and investors. The effect of the board of directors on firm performance has been the main subject of organizational behavior research (Deutsch, 2005; Jarboy & Kwab, 2016; Pham et al., 2011; Yilmaz and Mazeo, 2016). The various characteristics of the board of directors have been examined and validated as effective factors in creating value for stakeholders. However, This research facilitates the discussion of the relationship between the board of directors and firm performance, with return on assets (ROA), return on equity (ROE), and Tobin's Q ratio (a commonly used index to show short-term performance) (Ararat et al., 2015; Bagat & Bolton, 2008; Kagsmark et al., 2012; Masoulis et al., 2012; Pham et al., 2011; Welch, 2003). They studied the events about whether and how the board of directors helps the firm's long-term successes. The pieces of evidence show that this effect is small. This research provides new evidence on the relationship between the effectiveness of the board of directors and the investment efficiency of the firm using the data of the listed firms on the Tehran Stock Exchange. It helps the literature of organizational behavior in this regard and emphasis this issues how the potential and the dynamism of the board of directors lead the effectiveness of the board of directors to the investment efficiency of the firm.

Research background

Rashidi Baghi et al. (2016, 74) investigated the relationship between auditing fees and the characteristics of the board of directors in their research. The statistical sample of the research includes 72 listed firms on the Tehran Stock Exchange in 2012-2019. The results of their research showed a positive relationship between audit fees and the characteristics of the board of directors.

Eskandari in investigating the effect of financial reporting and financing technics, and characteristics of the board of directors on the investment efficiency showed no significant effect of size and independence of the board of directors in the investment efficiency. Finally, a significant relationship was found between the financial specialty of the board of directors and the investment efficiency.

Ghanbari (2018) investigated the relationship between the independence and reward of the board of directors and the tenure of the board of directors with investment efficiency. Evidence of Tehran Stock Exchange showed a significant and positive relationship between the independence of the board of directors and investment efficiency and a significant and negative relationship between tenure of chairman of the board of directors and investment efficiency. No relationship was observed between the reward of the board of directors and investment efficiency.

Nakhaei et al. (2017, 2009) investigated the relationship between board characteristics of directors and short-term risk in the listed firms on the Tehran Stock Exchange. The statistical sample of the research includes 120 listed firms on the Tehran Stock Exchange in 2009-2016. The results showed no significant relationship between the diversity of the board of directors (gender and age of the board) and short-term risk in the listed firms on the Tehran Stock Exchange.

Liu et al. (2020) studied the effects of the potential and dynamism of the board of directors and the key factors of the board of directors' effectiveness on the investment efficiency of firms. Their results show that the dynamism and potential of the board of directors have a strong positive relationship with the investment efficiency of the firm. These findings confirm the view that corporate resources and internal processes are essential to a firm's long-term success that enables the board of directors to bring these resources together to solve complex issues.

Jeberan et al. (2020, 2020) investigated the relationship between the diversity of the board of directors and stock risk. According to 2747 Chinese firms, the time scope was 2011-2016. Research has shown that more diversity on the board of directors can reduce the risk of future stock falling.

Safan et al. (2019, 13) studied the effect of long-term debt on a firm's success. The results showed that the debt maturity structure has a positive and significant effect on the success of firms especially on productivity and capital inflows.

Cheung et al. (2019) examined the relationship between over-investment and firm performance. Their results showed that over-investment has a positive relationship with firm performance.

Rabi et al. (2019, 50) studied the relationship between the firm's board of directors’ characteristics and auditing fees. The results showed a positive relationship between the board of directors’ characteristics and auditing fees and showed a relationship between the presence of women in the structure of the board of directors and auditing fees.

Objectives

The general objective of this research is to investigate the effect of the board of directors' characteristics on the long-term successes of a firm.

Applied objectives

1- Promoting the information of current and potential investors including stock market investors, as well as people who intend to invest in capital markets;
2- Strengthening the knowledge of managers of the listed firms on the stock exchange;
3- Financial creditors to firms;
4- Helping capital market analysts;

Research question

Main question: Do the board of directors' characteristics influence the long-term success of the firm?
Secondary questions:
First secondary question: Does the potential of the board of directors influence the long-term success of the firm?
1-1 Does the financial knowledge of the board of directors influence the long-term success of the firm?
1-2 Does the tenure of the board of directors influence the long-term success of the firm?

Second secondary question: Does the dynamism of the board of directors influence the long-term success of the firm?
2-1 Does the size of the board of directors influence the long-term success of the firm?
2-2 Does the independence of the board of directors influence the long-term success of the firm?
2-3 Does the gender diversity of the board of directors influence the long-term success of the firm?

Research conceptual model

The conceptual model of this research can be depicted as follows with these interpretations. According to the research variables, the conceptual model is considered as follows which more clearly shows the relationships between independent variables, control variables, and the dependent variable:

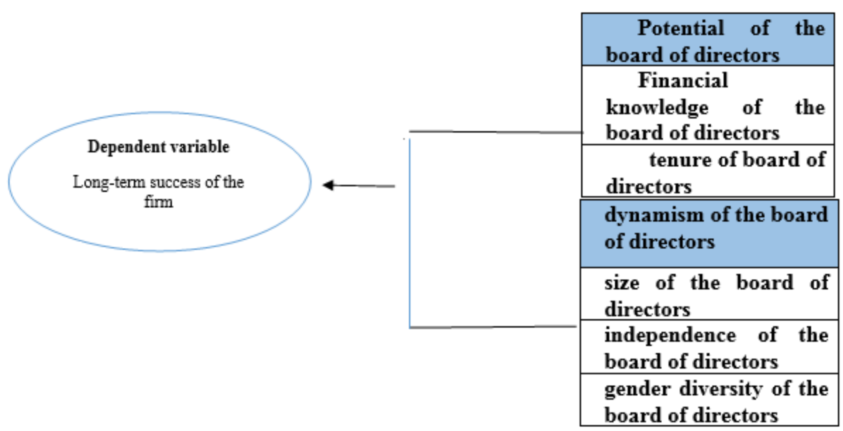

Fig 1- the detailed conceptual model, ref: Iman et al. (2020) research

Based on what mentioned in part of research variables, the dependent variables in the mentioned model include the long-term success of the firm, the independent variable includes the characteristics of the board of directors (potential and dynamism of board of directors), and the control variable include firm value, free cash flow, and firm growth.

Research statistical model
In this research, the following statistical model is used to analyze the hypothesis similar to Liu et al. (2020) research:
Model of the first main hypothesis:
BINVi,t+1=β0+β1POTENTIALi,t + β2DYNAMICSi,t + ΣγkCONTROLk,i,t+εi,t
Models 1-1 and 1-2:
BINVi,t+1=β0+β1 Board BCOMP i,t + β2 Board TENURE i,t + β3TOBINQ,i,t+ β4 CFO i,t + β5 GROWTH i,t +εi,t
Model 2-1, 2-2, 2-3:
BINVi,t+1=β0+β1 Board size i,t + β2 Board independence i,t + β3Gender diversity,i,t+ β4TOBINQ,i,t+ β5 CFO i,t + β6 GROWTH i,t +εi,t
Components of model include:
Long-term success of the firm: BINV
Potential of the board of directors: POTENTIAL
Dynamism of the board of directors: DYNAMICS
Financial knowledge of the board of directors: Board BCOMP
Tenure of the board of directors: Board tenure
Size of the board of directors: Board size
Independence of the board of directors: Board independence
Gender diversity of the board of directors: Gender diversity
Firm value: TOBINQ
Free cash flow: CFO
Firm growth: GROWTH
e_i : Regression equation error; and
β: Communication coefficient of variables.
Operational definition of research variables
Variables are the conditions that are manipulated, controlled, or observed by the researcher. In other words, a variable is a characteristic, adjective, or factor that is common among people in the statistical population and can get quantities and different values.
1-7-3- dependent variable
1-7-3- firm's long-term success (BINV)
The investment efficiency formula is calculated as follows to measure the long-term success of the firm in this research.
Residues resulting from the above regression model show the expected investment level deviations. Therefore, these residues are used to measure investment inefficiency. A positive residue means that the firm's investment is higher than expected (over-investment), while a negative balance indicates that the firm's investment is lower than expected (under-investment). The dependent variable is the net value of the residues multiplied by -1. Thus, a high value means high efficiency (investment efficiency).
Bidel et al. (2009) model is used in this research to measure the investment efficiency. According to Bidel et al. (2009) the expected level of investment for firm i for year t is estimated using the following model:

$$Investment_{it} = \beta_0 + \beta_1 SalesGrowth_{it-1} + \varepsilon_{it}$$

In this model:
Investment: investment (net increase in total fixed assets of the firm)
SalesGrowth: The firm's sales growth
Any deviation from this model shows investment inefficiency. Therefore, the residues of this model show the investment inefficiency.

- Independent variable
- Potential of board of directors
- Financial knowledge of board of directors (**board bcomp**)

To measure the knowledge of the board of directors, the ratio of the number of members with a master's degree or higher to the total number of members of the board of directors has been used.

- Tenure of the board of directors (board tenure)

If the tenure of at least one member of the board of directors remains constant for three years, it is 0. If it has changed, it is 1, which means there is diversity in this position.

- The dynamism of the board of directors
- The size of the board of directors (board size)

It is calculated by the number of board of directors.

- Independence of the board of directors (board independence)

It is calculated by the ratio of several non-executive directors to the total number of members of the firm's board of directors.

- Gender diversities of the board of directors (gender diversity)

If there is at least one female representative on the board of directors, it is 1, otherwise, it is 0.

Methodology

This research is in the field of positive theory. It is applied based on objective and descriptive-correlational based on the nature and content. It studies the correlational relationship using the secondary extracted data from the financial statements of the listed firms in the Tehran Stock Exchange. This research will be conducted in the framework of deductive-inductive reasoning. The correlational method is used because it discovers the correlation relationships between the variables. Correlational research is a type of descriptive research. In this research, first, the correlation between the research variables is tested. Then, if there is a correlation between the variables, the multiple regression model is estimated. On the other hand, this research is ex-post facto (semi-experimental), i.e. it is based on the analysis of past and historical information (corporate financial statements). Moreover, this research is a librarian and analytical-causal study based on panel data analysis.

Data collection tool and method

In this research, data were collected using the initial information of firms. It means the needed data generally uses the librarian method and Rahavarde Novin software by referring to Tehran Stock Exchange Organization and studying the financial statements of the listed firms in Tehran Stock Exchange in 2012-2019. In addition to the financial statements, the relevant data to the financial statements are taken from the Stock Exchange website.

Data analysis

In this research, the multivariate regression method is used as a statistical method. The main objective of a regression model is to study whether there is a relationship between the independent variables of research or not? Moreover, data analysis in the descriptive statistics will be started by calculating the central indexes such as mean, median, and distribution indexes such as skewness and kurtosis. The Kolmogorov-Smirnov (K-S) test is then used to check the normality of the data distribution. Then, the Durbin-Watson test is used to test the independence of samples (observations) and the random being of the mentioned sample.

Sampling method and research statistical population

The real data required for this research will be collected from the real information of the listed firms on the Tehran Stock Exchange. Systematic removal technic is used. For this purpose, the following 5 criteria are considered and if the firm has met all the criteria, it is selected as a research sample and the remains are removed.

Table 1: The procedure of sample selection

Total number of the listed firms in Thran stock Exchange in 2019	522
Criteria	
Number of the inactive firms in stock exchange in 2012-2019	185
Number of the listed firms in stock exchange since 2019	63
Number of firms that have been holding, investing, financial intermediation, banking or leasing	52
Number of firms with the financial year ending in the last day of winter	53
Number of firms that have had a trading break of more than 3 months	31
The number of firms with inaccessible data in the research time scope	
Number of sample firms	138

Research scope

This research is theoretically related to the field of management and accounting which tries to investigate the effect of board of directors' characteristics on the long-term successes of firm. The spatial scope of the research includes the listed firms on the Tehran Stock Exchange. The time scope in this research is 8 years in 2012-2019.

Table 2: Descriptive statistics of the quantitative variables

Number of variables			Central indexes		Kurtosis indexes				
Variables	Abbreviation	No.	mean	median	St.dev	skewness	kurtosis	min	Max
Investment efficiency	INV_INEFF	1104	-0.059	-0.027	0.061	-2.13	13.32	-0.292	-0.0008
Financial knowledge board of directors	Board BCOMP	1104	0.28	0.2	0.21	0.34	1.8	0.000	1
tenure of board of directors	Board tenure	1104	4.16	3	4.17	2.77	7.24	1	30
Size of board of directors	Board Board size	1104	5.03	5	0.27	7.51	58.67	5	7
Independence of board of directors	Board independence	1104	0.671	0.6	0.189	-0.296	2.754	0.2	1
Firm value	TOBINQ	1104	2.01	1.89	0.77	2.46	8.8	0.32	8.58
Free cash flow	CFO		0.039	0.036	0.12	0,26	3.52	-0.24	0.341
Firm growth	GROWTH		0.22	0.19	0.4	1.26	4.09	-0.76	1.94

Table 3: Descriptive statistics of research qualitative variables

Variable	**Abbreviation**	**Existence**		**Non-existence**		**Total**	
		No.	%	No.	%	No.	%
Gender diversity of board of directors	Gender diversity	211	19.39	877	80.61	1104	100

Descriptive analysis of research variables: All research variables except investment efficiency and independence of the board of directors have positive skewness. Since skewness is positive, it can be said that the distribution of the mentioned variables has skewness to the right. Moreover, the skewness of all variables is positive. Since the normal distribution is 3, it shows their position than the normal distribution. The mean investment efficiency (-0.027) is higher than its mean (-0.059), which shows that the slope is toward the left. Furthermore, a high distance of standard deviation (0.23) from the mean shows a proper distribution. The mean financial knowledge of the board of directors as the first index is 0.28 and shows that 28% of listed firms in the board of directors have MSc. and higher degrees than all members. The mean members of the board of directors are about 5 and 67% of firms were non-exclusive. The firm value based on Tobin's Q index has a mean of 20.01. The descriptive statistics of other variables are shown in Table 3. Table 3 shows that 19% of firms (211 year-firm) have at least 1 female representative on the board of directors.

Table 4: Results of model 1 estimation

Variable	Coefficient value	T-value	P-value	Result	VIF
Board BCOMP	0.34	2.79	0.016	Positive and significant	1.08
Board tenure	-0.17	-2.19	0.029	Negative and significant	1.09
TOBINQ	-0.012	-2.14	0.031	Negative and significant	1.26
CFO	0.013	-1.066	0.012	Insignificant	3.21
GROWTH	0.15	1.98	0.048	insignificant	1.71
C (constant)	-6.41	-13.90	0.000	Negative and significant	-
F-value		8.095	F-value		0.0000
Determination coefficient (R^2)		0.4698	Durbin-Watson		2.041
Adjusted determination coefficient		0.34206			

According to the results of Table 4, the p-value for the relevant t-value to the financial knowledge is less than 0.05 (0.000) which means insignificant (0.016). Its coefficient is positive (0.34) and its t-value is 2.79. This value is in the range of the H_0 area. Therefore, it is concluded that financial knowledge is effective and positive. It means financial knowledge has a positive and significant effect on investment efficiency. In addition, the p-value for the relevant t-value to the tenure of the board of directors is less than 0.05 which means significant (0.029). Its coefficient is negative (-0.17) and its t-value is -2.19. This T-value is in the range of the H_0 area. Therefore, it is concluded that the tenure of the board of directors is significant and negative in the research model, i.e. the tenure of the board of directors has a significant and negative effect on investment efficiency.

Fitting model 2 for the second hypothesis of research

The second secondary hypothesis: dynamisms of the board of directors on the long-term success of the firm.

2-1- size of the board of directors on the long-term success of the firm

2-2- independence of the board of directors on the long-term success of the firm

2-3- gender diversity of the board of directors on the long-term success of the firm

Model 2 regression estimation

Table 5: Results of model 2 estimation

Independent variable: investment efficiency					
Variable	Coefficient value	T-value	P-value	Result	VIF
Board size	1.21	1.276	0.179	Insignificant	1.11
Board independence	1.43	2.08	0.049	Positive and significant	1.21
Gender diversity	0.76	1.54	0.073	Insignificant	1.34
TOBINQ	-0.028	-2.04	0.045	Negative and significant	1.26
CFO	-0.13	-0.986	0.287	Insignificant	2.87
GROWTH	0.36	3.23	0.000	Negative and significant	1.64
C (constant)	-2.65	-10.54	0.000	Negative and significant	-
F-value		4.135	F-value		0.000
Determination coefficient (R^2)		0.5124	Durbin-Watson		1.98
Adjusted determination coefficient		0.48709			

According to the results of Table 5, the p-value for the relevant t-value to the size of the board of directors is less than 0.05 (0.179) which means insignificant (0.016). Its coefficient is positive (1.21) and its t-value is 2.276. This value is not in the range of the H_0 area. Therefore, it is claimed that the size of the board of directors is insignificant on the investment efficiency. In addition, the p-value for the relevant t-value to the gender diversity of the board of directors is higher than 0.05 which means insignificant (0.073) and its t-value is 1.54. This T-value is not in the range of the H_0 area. Therefore, it is concluded that the gender diversity of the board of directors is insignificant. However, the p-value for the relevant value to the independence of the board of directors is less than 2.08. This t-value is in the H_0 area. Therefore, it can be claimed that the independence of the board of directors in the research model is significant and positive. It means the independence of the board of directors is positive and significant on the investment efficiency.

Conclusion

The result of the first hypothesis showed that financial knowledge has a positive effect and tenure has a negative effect on investment efficiency among the potential characteristics of the board of directors. It is concluded based on this result that the high expertise and knowledge of the members can lead to the use of more experience and expertise in estimating the benefits of the project, thus reduce underinvestment and overinvestment, and reduce the likelihood of investing in projects with less added value. This result is in agreement with the result of Eskandari's (2019) research, which showed that there was a significant effect between the financial expertise of the board of directors and investment efficiency.

Moreover, there are various theories about the effect of tenure on performance. According to several views, the long tenure of the board of directors can positively impress the investment efficiency of the firm in three ways. First, the longboard of directors enables managers to acquire more specific knowledge and skills. As the tenure board of directors' increases, managers expand and improve their knowledge and experience through learning. Therefore, they can better evaluate managers' investment proposals and eliminate issues that may undermine shareholder value. Second, the long-term of the board of directors reflects the high level of cohesion of the board of directors, which encourages the knowledge and motivation of managers to participate in group decision-making. Thus, it leads to an effective board of directors. However, some researchers argue that the long-term board of directors is tied to the negative effects that may be detrimental to investment performance. For example, the long-term tenure of the board of directors may disable the firms to respond to environmental changes. In addition, when managers serve too long on the board of directors, their independence may be compromised which may lead to investment inefficiency. Nonetheless, the result of this research showed that increasing the tenure will reduce investment efficiency. This result is agreed with the findings of Liu et al. (2020) and Ghanbari's (2018) research. Liu et al. (2020) showed that a board of directors with higher potential leads to over-investment. Ghanbari (2018) showed a significant and negative relationship between the tenure of the chairman of the board of directors and investment efficiency. The result of the second hypothesis showed that only the independence of the board of directors has a positive effect on investment efficiency among the dynamism characteristics of the board of directors. In addition, board size of directors and gender diversity had an insignificant effect on investment efficiency. There are two main schools about the size of the board of directors. One school claims that larger boards of directors have a potential advantage in terms of advice and have more access to resources. However, another school believes that a small board of directors makes decisions more quickly than the larger board of directors because they are easier to coordinate, but no significant relationship was found for this case in this research. Eskandari (2019) showed that the size of the board of directors does not have a significant effect on investment efficiency, but Ami (2016) showed that the size of the board of directors has a reverse relationship with the sensitivity of the cash flow of investment. There are two landscapes about the effect of the independence of the board of directors on efficiency. According to one landscape, the board of directors is heterogeneous in terms of senior management records with a higher proportion of independent directors. Therefore, it can offer a wide range of perspectives and provide wider investment opportunities. According to another landscape, the independent board of directors coordinates the risk priority of the directors with the shareholders. Thus, improving the dynamism of the board of directors and preventing management conservatism which is a barrier to high-risk but potential projects. The result of this research shows that increasing the independence of members can increase investment efficiency. This result is because of the non-obligation of members and so their independence from the orders of firm executives who often do not consider only their short-term interests. This result is in agreement with the findings of Nur (2017) and Liu et al. (2020).

Most views believe about the effect of gender diversity on the investment efficiency that women presence in the board of directors can improve disclosure quality, more emphasis on morality, conservatism, or emphasis on the further performance of the firm because of having newer views that can influence the investment efficiency. However, the result of this research showed no significant effect in this field which can be caused from one hand by the absence of women in the board of directors of Iranian firms, and on the other hand for their weaker role in making a decision. Nonetheless, Shin et al. (2019) showed that female managers improve investment efficiency which is in contradiction with the results of this research.

Suggestions

- It is suggested based on the results of the first hypothesis (potential characteristics of the board of directors) based on the positive effect of the financial knowledge of the board of directors on investment efficiency that capital market participants and business owners should consider the financial expertise of board members because they can prevent investing in negative value-added projects by increasing experience.
- It is suggested based on the result of the first hypothesis (potential characteristics of the board of directors) based on the negative impact of tenure on investment efficiency that business owners should reduce the tenure of members because the appointment of new people will create an innovative spirit and new ideas, and prevent their independence reduction.
- It is suggested based on the result of the second hypothesis (dynamism characteristics of the board of directors) based on the positive effect of the board of directors independence on investment efficiency that capital market participants should consider the presence of more non-executive members in the board of directors because it can prevent over-investment and under-investment by correctly estimating the added value of the project.
- It is suggested based on the result of the second hypothesis (dynamism characteristics of the board of directors) with no effect of gender diversity on investment efficiency and based on the low average of this index according to descriptive statistics that firms should increase the women present in the board of directors, because their conservative attitudes, according to the research literature, can prevent miscalculations of the added value of investment projects.

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