

Examining the impact of corporate governance on the relation of management accounting system and performance of the listed companies in Tehran stock exchange

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Abstract: The aim the current research is to examine the role of corporate governance on the relation between management accounting system and the performance of the listed companies in Tehran stock exchange. Tehran stock exchange was selected as the statistical population of the research during 2010 to 2013. Wang and Lin (2014) research is used to measure management accounting system in this research. The research is practical and analytical-descriptive based on purpose and components, respectively, in which we try to develop the results and findings to all statistical population using logic samples. As well, statistical analyses were performed through EVIEWS 7 software. The obtained results indicated that there is a significant association between management accounting system and the performance of the listed companies in Tehran stock exchange. Also, corporate governance index significantly impacts on the relation between management accounting system and the performance of those companies.

Key words: Corporate governance index; Management accounting system; Financial performance

1. Introduction

Some investigations have shown the randomly relation between corporate governance structures, acceptance of management accounting systems and firm performance. As well, the above suggestions based on Baron and Kenny (1986) research give us a reasoning which a corporate governance structure may adjust the randomly relation between acceptance of the management accounting systems in business on a firm performance. However, intermediary and moderating roles of corporate governance have not been statistically examined in terms of acceptance of management accounting systems and a firm performance (Kate, 2012). In this article, we discuss about the intermediary and moderating roles, then examine how corporate governance structure statistically impacts on the acceptance of management accounting systems.

We define the acceptance of management accounting systems based on the above approaches for this research by which a firm selects and performs those systems comprising both traditional techniques of business management (mentioned above) and developed techniques. Regarding a firm performance, this variable is often measured based on a firm's all outcomes during a determined period. A firm performance is measured through traditional indices such as return on assets and return on equity, while a financial performance is assessed based on innovation, quality and customer satisfaction indices. As well, these financial and nonfinancial indices are applied in researches of

Wang and Honi (2013) and Honi and Lin (2013) which we use financial performance in this research. Generally, we try to examine whether a relation is existed between management accounting system and performance of the listed companies in Tehran stock exchange? Does corporate governance index significantly impact on performance of the listed companies in Tehran stock exchange? Since the research is performed for the first time in Iran, we hope that the research be useful for stakeholder groups.

2. Researches' background

Daller et al. (2011) examined the relation between corporate governance and management accounting in Australian family firms. The obtained results demonstrated that ownership of family firms, senior managers and board members of firms have not any positive or negative tendency toward operational and strategic management accounting.

Gao and Komara (2012) investigates the relation between corporate governance and performance of the listed companies in Sri Lanka stock exchange. The findings indicate that board size and non-executive board managers' ratio have negative relationship together.

Amba (2013) deals with the relationship among corporate governance and financial performance of firms. Their results indicate that duality of duty of chief executive, non-executive board members ratio, negative leverage impact, audit committee and institutional ownership ratio positively impact on financial performance of a firm.

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Min Wang and Hein (2014) examined the role of corporate governance in the relation between management accounting system and firm performance. The results showed that corporate governance plays a moderating and monitoring role in effectiveness of accepted management accounting systems in business on firm performance.

3. Research methodology

3.1. Research method

Research hypotheses

- Management accounting system significantly impact on performance of the listed companies in Tehran stock exchange.
- Corporate governance index significantly impact on performance of the listed companies in Tehran stock exchange.

3.2. Research population and statistical sample

To perform the research, the listed companies in Tehran stock exchanged during 2010 to 2013 were selected as statistical population and the statistical sample were extracted. Our sample includes the firms which have the following condition:

- Their stocks should be traded in Tehran stock exchange.
- Their fiscal year ends in 19/3/...
- They should not be part of banks, financial intermediary, investment and insurance companies.

According to the above condition, 81 firms were selected between 376 firms based on Morgan table.

$$QT_{it} = a_0 + a_1MAS_{it} + a_2FIRM\ SIZE_{it} + a_3LEVERAGE_{it} + a_4GROWTH_{it} + \varepsilon_{it}$$

$$QT_{it} = a_0 + a_1MAS_{it} + a_2CGI_{it} + a_3MAS_{it} \times CGI_{it} + a_2FIRM\ SIZE_{it} + a_3LEVERAGE_{it} + a_4GROWTH_{it} + \varepsilon_{it}$$

- QT_{it}: Tobin's Q
- MAS_{it}: Management accounting system
- CGI_{it}: Corporate governance index
- FIRM SIZE_{it}: The size of a firm.
- LEVERAGE_{it}: Financial leverage
- GROWTH_{it}: Growth rate.

3.5. Data analysis method

In this research, F-Limer test is used for selecting between common effects and fixed effects methods. If fixed effects model is selected, Hausman test would be used to select among fixed effects or random effects models. Also, model's error term autocorrelation, heteroskedasticity and data normality would have been examined. To illustrate the description power of descriptive variables, to examine the significance of variables and to investigate the adequacy of whole model, adjusted coefficient of determination, T-statistics and F-Fisher test are used, respectively. As well, statistical analyses are done through EVIEWS 7 software.

3.3. Operational definition of the variables

1. Management accounting system: To measure the variable based on Wang and Lin (2014) research, number 1 is used when sampled firms use one of management accounting methods for costing of management accounting such as activity-based costing, target costing, etc except traditional costing method for determining cost prices, otherwise 0.
2. Corporate governance index: This is the place that each firm takes it through corporate governance index/rate (based on Salimi's corporate governance, 2011) regarding four components of ownership impacts, shareholders' equity, transparency and board effectiveness among firms (Yeganeh et al, 2012).
3. Firm performance: Tobin's Q (assets book value / (stock market value+ debts book value)) is used (Kordestani et al, 2012).
4. Firm size: Natural logarithm of total assets book value (Yeganeh, 2005)
5. Financial leverage: Total debts to total assets ratio (Moafi et al, 2010).
6. Growth rate: (current year sale-previous year sale)/ previous year sale (Yeganeh, 2005).

3.4. Regression model

4. Results

4.1. Examination of heteroskedasticity

To examine heteroskedasticity, Arch error terms test (LM) is performed. The obtained results are as follow:

Table 1: The results of Arch error term test (LM)

Description	Statistics amount	Probability
F-statistic	0.514226	0.096
Obs*R-squared	1.714202	0.096

* 5% error level

Regarding Table 1, due to the significance level of f-statistics is not significant in 5% error level, homogeneity of variance is confirmed and heteroskedasticity of error terms are rejected.

4.2. Significance test of fixed effects method

Table 2: F-Limer and Hausman test

F-Limer test			
Description	Statistics amount	Freedom degree	Probability
Cross-section F	1.612332	80	*0.000
Cross-section Chi-square	98.162745	80	*0.005
Hausman test			
Description	Statistics amount	Freedom degree	Probability
Cross-section F	8.032254	17	*0.000

*5% error level

Regarding the results of both table (F and Hausman), the obtained probability were less than 5% in each tests, so fixed effects method should be used in the related regression model. Regarding the Table 3, since Durbin-Watson statistic test value is determined among 1.5 to 2.5, there is no correlation between errors and regression can be used.

4.3. Research hypothesis test

Table 3: regression and model significance test

Variable	Estimated coefficients	Estimation of deviation	t-statistics	Significance level
Fixed	0.414	0.074	5.594	*0.016
Management accounting system	0.698	0.162	4.038	*0.027
Firm size	2.218	0.347	6.391	*0.005
Financial leverage	0.641	0.184	3.843	*0.034
Growth rate	1.015	0.234	4.337	*0.021
Durbin-Watson	2.001			
F-statistics	116.842			
Significance level	**0.000			
Adjusted coefficient of determination	0.324			

*5% error level, **1% error level

Independent variable of management accounting system has positive and direct impact on dependent variable of firm performance regarding estimated coefficient 0.698. If management accounting system is increased in a firm, the firm performance would be increased. Regarding significance level of t-statistics in 5% error level, the relation is significant. It can be said that management accounting system

significantly impacts on performance of the listed companies in Tehran stock exchange. The independent and control variables of the research can predict 32.4% of changes, and significance level of F-statistic indicates that the research's model is significant in 1% error level. The research's empirical model is defined as:

$$QT_{it} = 0.414 + 0.698MAS_{it} + 2.218 FIRM SIZE_{it} + 0.641 LEVERAGE_{it} + 1.015GROWTH_{it} + \epsilon_{it}$$

4.7. Second hypothesis test

Table 4: Regression and model significance test

Variable	Estimated coefficients	Estimation of deviation	t-statistics	Significance level
Fixed	0.269	0.097	2.773	0.069
Management accounting system	2.478	0.421	5.887	*0.012
Corporate governance index	0.662	0.134	4.941	*0.036
Corporate governance index* management accounting system	0.574	0.121	4.743	*0.039
Firm size	6.365	0.647	9.837	*0.000
Financial leverage	0.594	0.163	3.664	*0.042
Growth rate	0.747	0.174	4.293	*0.040
Durbin-Watson	1.554			
F-statistics	97.621			
Significance level	**0.000			
Adjusted coefficient of determination	0.462			

*5% error level, **1% error level

Regarding the Table 4, since Durbin-Watson statistic test value is determined among 1.5 to 2.5, there is no correlation between errors and regression can be used. Independent variable of management accounting system has positive and

direct impact on dependent variable of firm performance regarding estimated coefficient 2.478. If management accounting system is increased in a firm, the firm performance would be increased. Regarding significance level of t-statistics in 5%

error level, the relation is significant. It can be said that corporate governance index significantly impacts on management accounting system and performance of the listed companies in Tehran stock exchange. The independent and control variables of

$$QT_{it} = 0.269 + 2.478 MAS_{it} + 0.662 CGI_{it} + 0.574 MAS_{it} \times CGI_{it} \\ + 6.365 FIRM\ SIZE_{it} + 0.594 LEVERAGE_{it} + 0.747 GROWTH_{it} \\ + \varepsilon_{it}$$

5. Conclusion and recommendations

The research's results indicated that there is a significant relationship among management accounting system and performance of the listed companies in Tehran stock exchange. As well, corporate governance index significantly impacts on the relation between management accounting system and performance of those firms. Hence, Min Wang and Hein (2014) showed that corporate governance plays a moderating and monitoring role in effectiveness of accepted management accounting systems in business on firm performance. The investigations of Woo and Fan (2013) demonstrated that corporate governance such as female board members, duality of duty of chief executive, board members' related experience and compensation for board members positively influence on firm performance measured by return on assets. The following suggestion can be made based on the obtained results:

- 1- It is recommended to those firms which use not one of legal and suitable management accounting system to follow this way, because enhanced performance situation is one of positive outcomes.
- 2- It is suggested that the related organizations tend to provide comprehensive standard to oblige them to apply a related suitable production system and to disclose dimensions of used system in order to make a responsibly decision via increased transparency.

It is recommended to firms to approach toward enhancing their corporate governance index, because it can highlight the monitoring aspect of corporate governance mechanisms and help them to implement suitable accounting systems and improving firm performance.

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the research can predict 46.2% of changes, and significance level of F-statistic indicates that the research's model is significant in 1% error level. The research's empirical model is defined as:

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