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Cost management practices and firm's performance of Technology companies

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Abstract

This study investigates the relationship that exists between cost management practices and technology companies' performance using data from 30 technology companies listed on the Vietnam stock exchange during the period of 2012 to 2016. The study relied on secondary data extracted from the audited financial statement of the selected companies. Independent variables includes material cost, labor cost, general operation cost, selling cost, general admiration cost, other cost and financial cost while profitability (Return on assets) was taken as dependent variable representing the firm's performance. Correlation and regression analyses were employed to test the hypothesized relationships between the cost management and profitability. The results found a strong support for hypothesized with the direct relationships between cost management and performance measure. The results indicated that cost management practices significantly affect technology companies' profitability. It is therefore recommended that if the profit maximization and wealth creation objective is to achieve, a cost reduction strategy with emphasis on other cost, financial cost, general operation cost, general and administration cost should be embarked.

Keywords: cost management practices, profitability, material cost, labor cost, general operation cost, selling cost, general admiration cost, other cost and financial cost.

Introduction

A business objective is the starting point for any business organization to thrive and it provides direction for action. It is also a way of measuring the effectiveness or otherwise of the actions taken by the management of the organization. According to Lucey (1993), the main function of any business organization is to make and maximize profit and the secondary objectives consists growth, going concern, corporate social responsibility and benefits to employees. Though other objectives are also well thought-out very important as listed above, but profit maximization is usually the ultimate. Charles (1998) said that people prefer to invest in a highly profitable business. Therefore, in the long run only the profit maximizes survive in the business environment. Robert (2007) concluded that a company with adequate cost structure possess the chance of attaining its higher profit target.

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In today's time of rapid technological change, tough global and domestic competition, cost management is central to sustained corporate profitability and competitiveness. Cost management practices are concerned with the analysis and the information used in order to assist managers in decision making and managerial control. It is not an end in itself, but a means to support an organization in achieving its goals (Guilding et al., 2000; Shank and Govindarajan, 1989). Cost management practice has a board focus in accounting system. It is not only concerned with the factors that force costs, such as cycle time, quality, and process efficiency. Thus, cost management requires a deep thoughtful of a firm's cost structure. Managers must be able to determine the long- and short-run costs and processes as well as the costs of goods, services, customers, suppliers.

Researchers are not cleared about the importance of management practices for explaining variations in firm performance. Cooper and Slagmulder et al., (2002) stated that management system plays an important role when it comes to influence the effectiveness of activities and the performance of people engaged in the purchasing, supply and logistics processes.

Concerned with the relationships between cost management practices and enterprises profitability, Abdul and Azeez (2015) examined the nature of relationship between cost management and profitability. Data collected were analyzed using descriptive and non-parametric statistics. The study therefore concluded that the relationship between cost management and profitability is statistically significant.

Some theoretical researchers do indicate the relationships between financial management and profitability. For example, Oyerogba Ezekiel Oluwagbemiga, Olaleye Michael Olugbenga & Solomon Adeoluwa Zaccheaus (2014) investigated the relationship that exists between cost management practices and firm's performance in the manufacturing organizations using data from 40 manufacturing companies listed on the Nigeria stock exchange during the period of 2003 to 2012. Direct material cost, direct labour cost, production overhead cost and administrative overhead cost were taken as independent cost management variables while profitability (Operating profit) was taken as dependent variable representing the firm's performance. The result indicates that a positive significant relationship exists between cost management practices and firm's performance in the manufacturing organization.

Although there have been substantial research efforts by different scholars in determining what seems to be the optimal cost reduction strategy for firms and the effect on the reported profit, yet there is no universally accepted theory. Hence, this study investigated what seems to be the relationship between each element of the cost structure and the firm performance. It is believed that this paper will contribute to the body of existing knowledge and as well make up for the paucity of scholarly paper in Vietnam on cost management and firm performance. Also, it will be of assistance to the company management in their cost reduction activities as well as management accounting students in their research.

Research Design and Methodology

This study adopts causal comparative and descriptive research designs to deal with the fundamental issues associated with the impact of cost management practices on profitability of technology company. The descriptive research design will be adopted for fact-finding and gathering adequate information about cost affecting profitability. Besides, an effort is made to describe the nature of pooled profitability of technology companies listed in the Vietnam stock exchange during 2012 to 2016 using descriptive statistics with respect to cost structure variables. This study is also based on causal comparative research design to ascertain and understand the directions, magnitudes and forms of observed relationship of cost elements and profitability of Technology Company.

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The study relied on secondary data extracted from the audited financial statement of the selected companies. Data of these 30 companies is collected from 2012 to 2016. Audit Financial Statements of these companies will be acquired from the Hanoi stock exchange Library, Ho Chi Minh stock exchange Library, Unlisted Public Company Market Library and websites of these companies listed on the Vietnam stock market.

In the study, panel data regression models were employed to estimate the impact of cost management practices on technology companies' profitability. The panel data regression models were are the Fixed effects model (FEM).

Independent variables includes material cost, labor cost, general operation cost, selling cost, general admiration cost, other cost and financial cost while profitability (Return on assets) was taken as dependent variable representing the firm's performance. Correlation and regression analyses were employed to test the hypothesized relationships between the cost management and profitability.

The general formula for the study model was as follows:

$$PRO = \beta_1 + \beta_2 MC_i + \beta_3 LC_i + \beta_4 GC_i + \beta_5 SC_i + \beta_6 GAC_i + \beta_7 OC_i + \beta_8 FC_i + u_i$$

Where; PRO = Profitability (ROA)

ROA = Return on assets = Net profit/Total assets

MCi = Material Cost

LCi = Labour Cost

GCi = General operation Cost

SCi = Selling Cost

GACi = General & administration Cost

OCi = Other Cost

FCi = Financial Cost

In the model, β0 = the constant term and the coefficient of βij from 1 to 8 was used to measure the effect of the independent variables on dependent variables. It shows how a unit change in independent variables will affect the dependent variables. u is the random error term which captures the unexplained variations in the model.

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Research Findings

Table 1. Descriptive statistic

Model FEM

Dependent variable: ROA

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
MC	-	16,444,159,386,787	273,930,334,390	1,429,716,335,379	10.06	111.73
LC	279,188,700	5,250,349,855,969	153,013,529,311	674,893,983,110	6.11	38.75
GC	2,117,306,612,448	18,151,037,957,486	153,918,452,895	1,436,869,588,654	(1.92)	45.41
SC	-	2,638,454,515,198	81,355,208,091	332,306,071,935	6.07	38.50
GAC	143,972,835	2,751,158,473,432	99,484,324,473	390,938,064,377	5.48	29.71
OC	(8,305,266,207)	162,087,668,902	6,434,478,405	20,673,654,313	5.18	29.84
FC	(15,180,463,659)	694,213,959,980	28,424,667,342	100,702,574,589	5.12	26.86
ROA	(0.36)	0.21	0.02	0.09	(1.58)	4.82

Note. The descriptive statistic for the study presented in table1 was for Technology company for period of five years covering 2012 to 2016. In reference to the explanatory variables, MC refers to the material cost, LC refers to the labor cost, GC represent the general operation cost, SC represent the selling cost, GAC represent the general & administration cost while OC and FC were used to represent the other cost and financial cost respectively.

Table 2. Model summary

Indicators	Coefficients
R-squared	0.735637
Adjusted R-squared	0.638623
S.E. of regression	0.054289
F-statistic	7.582802
Prob(F-statistic)	0.000000
Durbin-Watson stat	1.960569

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Note. R-square value was found to be 0.73567. This implies that the combined effects of Profitability was found to be negatively correlated with other cost and financial cost. material cost, labour cost, selling cost and administrative overhead cost, general operation cost, other cost, financial cost explained 73.56% of the variation in the profitability of technology companies while the remaining 26.44% was due to the other variables not captured in this study.

Table 3 Regression Results

	Coefficient	**Std. Error**	**t-ratio**	**p-value**
Constant	0.096101	0.021413	4.488009	0.0000
Material cost	-4.86e-14	4.57e-14	-1.063627	0.2898
Labor cost	9.01e-14	1.79e-13	0.503159	0.6159
General Operation cost	-3.73e-14	4.12e-14	-0.905336	0.3673
Selling cost	-8.14e-14	4.85e-13	-0.167759	0.8671
General & Administration cost	-2.76e-13	3.81e-13	-0.723351	0.4710
Other cost	-3.65e-12	8.06e-13	-4.531507	0.0000
Financial cost	-3.43e-13	1.58e-13	-2.174753	0.0318

Note. Profitability was found to be negatively correlated with general & administration cost. This result supports the findings of Ghanshyam Prasad Shah and RadheShyam Pradhan (2016) which suggests an inverse relationship between profit and non-variable cost. It means that profitable maintained low general & administration cost.

Furthermore, the relationship between profitability and labor cost was positive, it was found that profit increases as direct labor cost increases. This implies that an increase in direct labour leads to increase in production and revenue and thereby leads to increase in profitability.

Research Findings

The findings of Forsaith et al (2003) which perceived a link between profitability and indirect cost was supported by this result. Profitability was also perceived to be inversely related to the other cost. Although, the relationship was statistically significant as supported, it was not support by the existing literature such as Shal (2011), Mishra and Guptal (2010), thereby create avenue for further research.

Conclusion

The purpose of the present study was to investigate whether there is a significant relationship between manufacturing cost and firm performance of technology companies listed on the Vietnam stock exchange during the period of 2012 to 2016. The study relied on secondary data extracted from the audited financial statements of the selected firm. Independent variables includes material cost, labor cost, general operation

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cost, selling cost, general admiration cost, other cost and financial cost while profitability (Return on assets) was taken as dependent variable representing the firm's performance.

Practical suggestions

The results found a strong support for hypothesized with the direct relationships between cost management and performance measure. The study indicated that cost management practices significantly affect technology companies' profitability. It is therefore recommended that if the profit maximization and wealth creation objective is to achieve, a cost reduction strategy with emphasis on other cost, financial cost, general operation cost, general and administration cost should be embarked.

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