

Cost Management Practices and Firm's Performance of Nepal Oil Corporation

Ghanshyam Prasad Shah¹, RadheShyam Pradhan²

¹Corresponding Author, PhD Scholar, Mewar University, Chittorgarh, Rajasthan, India

²Professor (Management Faculty), Tribuvan University, Nepal

Abstract

This study finds the relationship between cost management practices and firm's performance in Nepal Oil Corporation using data from 2004 to 2014. The study relied on secondary data extracted from the audited financial statement of the Nepal Oil Corporation. Independent variables includes direct material cost, direct labour cost, selling and distribution overhead cost and office and administrative overhead 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 result indicates that a direct significant relationship between cost management practices and firm's profitability. It is therefore recommended that if the profit maximization and wealth creation objective is to achieve, a cost reduction strategy with emphasis on selling and distribution overhead cost and office and administrative overhead cost should be embarked.

Keywords: Administrative overhead cost, cost firm performance, cost management, direct labour, direct material cost, manufacturing organizations, selling overhead cost

Introduction

A business function is the starting of any business organization to flourish and it provides direction for action. It is a way of measuring the efficiency 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 maximizers survive in the business environment. Robert (2007) concluded that a company with adequate cost structure possess the chance of attaining its higher profit target.

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 (Guinding 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. Syverson (2011) argued that profit maximization will lead firms to reduce costs. Woodward (1958) stated that every organization is adopting its own best practices.

Asaolu and Nassar (2007) in their study stated costs changes or do not changes in an organization. The level of activity was described as the amount of work done. Drury (2005) defines cost as expenses, which have been great in earning revenue. Lucey (1997) defined the profitability as the surplus of revenue and cost. In other word, profit is resolute by deducting cost from revenue. The term "variable" and fixed cost known as indirect and direct expenses have been usually used in the management accounting to describe how costs react to changes in activity level. Short-term variable costs changes in direct proportion to the volume of activity (Fischer and Schmitz, 1998).

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. Bloom & Van Reenen found that management practices are positively correlated to better firm performance even when controlling for different factors like capital intensity, ownership, firm size and employee education. They also found that different management practices within the same firm lead to better performance. Regarding controlling for firm size they find that firm size correlates positively with good management. An explanation for this is that more efficiently managed firms gain higher market share over time. Another explanation is that running larger firms is more complex, meaning that better structured management is required. There may also be fixed costs associated with adopting some of these management practices, so only larger firms will find it worthwhile and have the necessary resources to apply them (Bloom & Van Reenen et al. 2013).

In globalized competitive economy, company constantly strive to improve their performance and a vast amount of research is being done. Management practices are a rather unknown entity and quite ignored in the economical literature. Thus research question of this study is:

□ What is the effect of cost management practices on performance?

The objective of this study is to contribute to the new groundbreaking empirical approach to management studies, and thereby fill the gap in the international map of management by adding a new market to the studies of Nepal Oil Corporation. The issues is also related with the following question:

□ What is the relationship between management practices and firm performance?

Hornrgren (2006) stated that a controllable cost can be defined as any cost that is influence a given responsibility centre manager for a given time period. Zengin and Ada (2010) revealed that costs and revenue must be traced to individual who are responsible for their incurrence. Drury (2005) defined a cost

centre where managers are accountable for sales revenue and expenses and an investment centre; where chief of the organization are accountable for sales, revenue and expenses, and also responsible for some capital investment decisions; where managers are liable for the charge that are under their control and a profit centre.

Theoretical basis of research:

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 Nepal Oil Corporation. 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 Nepal Oil Corporation during 2004 to 2014 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 Nepal Oil Corporation.

Based on the brief literature review on the cost elements and profitability of the Nepal Oil Corporation are influenced by several variables. Nepal Oil Corporation publishes various reports including profit and loss account, income statement and balance-sheet of the Nepal Oil Corporation. The necessary data related to cost elements variables are collected from these reports. The study is based on the pooled OLS of Nepal Oil Corporation.

The method of secondary data analysis in this study consists of econometric models including several statistical tests of significance. Econometrics model consists of pooled OLS. The study has also used descriptive statistics, correlation analysis and the statistical tests. The details of models and statistical test of significance have been presented in the following sections.

In his study, econometrics models are used to describe the various components of profitability of Nepal Oil Corporation. Pooled OLS was used to measure various component of profitability. This study uses profitability as the dependent variable and direct material cost, direct wages cost, manufacturing overhead cost and administrative overhead cost is taken as independent variables. This basic test is used in this to regress dependent variable against independent variables.

Research Background

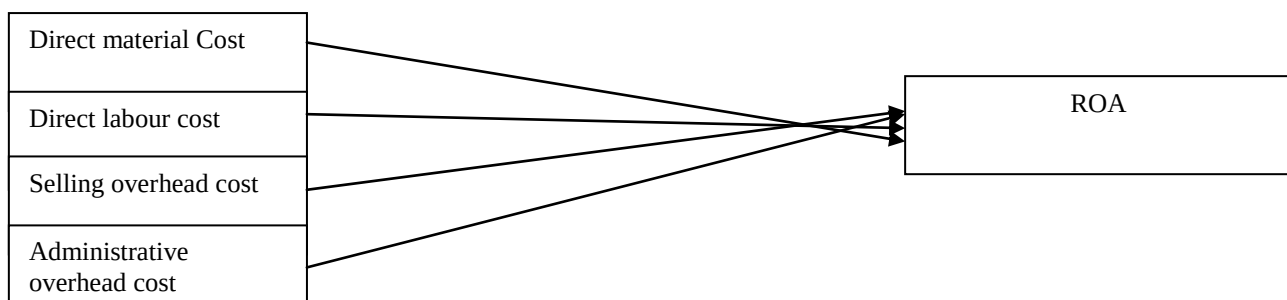


Figure 1 presents the conceptual framework on cost management practices and performance of Nepal oil Corporation.

The above figure shows the conceptual framework of cost management practices on performance of Nepal Oil Corporation in which dependent variable is return on assets and independent variables are direct material cost, direct labour cost, selling and distribution overhead cost and office and administration overhead cost. This shows the relationship between dependent variables and independent variables. Direct material cost is the cost which can be easily identified with the unit of production. Direct labour cost is a payroll which is associated with the manufacture of a product or provision of a service. Selling and administrative overhead costs both are the non manufacturing cost that represents other than manufacturer's expenses. Return on assets measures the profitability of a firm. It gives an concept of how efficient management is using its assets to generate revenues.

Research methodology

The following models are used to examine the relationship between the independent and dependent variables of Nepal Oil Corporation.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where; Y = Profitability

X1 = Direct Material Cost

X2 = Direct Labour Cost

X3 = Selling Overhead Cost

X4 = Administrative Overhead Cost

In the model, β_0 = the constant term and the coefficient of β_{ij} from 1 to 4 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. μ is the random error term which captures the unexplained variations in the model.

Research tools

To fulfill the above objective of the study, the following hypotheses were developed and tested by using statistical tools.

H₁: There is a positive relationship between direct material cost and profitability.

H₂: There is a positive impact of direct labour cost on profitability.

H₃: Selling overhead leads to decline in profitability.

H₄: There is inverse relationship between administrative overhead cost and profitability of Nepal Oil Corporation.

The Analysis of Data

Table 1 Descriptive Statistics:

	Mean	Median	Std. Dev.	Kurtosis	Skewness	Min	Max	Co
ROA	-0.65	0.74	0.66	-0.10	0.01	-1.87	0.6	11
DM	6.31	4.49	3.78	-0.63	0.83	2.32	13.8	11
DL	2.79	2.77	1.50	1.23	0.30	1.05	5.18	11
SO	3.29	4.24	2.43	-1.72	-0.03	3.82	6.43	11

AO	1.33	0.83	9.81	-0.99	0.72	3.51	31.79	11
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Note. The descriptive statistic for the study presented in table1 was for Nepal Oil Corporation for a period of eleven years covering 2004 to 2014. In reference to the explanatory variables, DM refers to the direct materials which represent the mean of direct materials for the period under consideration. DL represents the direct labour while SO and AO were used to represent the Selling overhead and administrative overhead respectively.

Table 2 Model Summary

Indicators	Coefficients
R Square	0.086
Adujusted R Square	0.522
Standard Error of Estimate	0.8191
Observations	11

Note. In order to establish the statistical significance of the independent variables on the dependent variable (performance) regression analysis was employed. The results indicate that the independent variables; Direct materials, Direct labour, selling overhead and Administrative overhead are significant in explaining the performance of Nepal Oil Corporation. This was supported by the R square 0.086.

Table 3 Correlation matrix

	Direct material cost	Direct labour cost	Selling overhead	ROA	Administrative cost
Direct Material Cost	1	0.7058	0.8717	0.0276	0.9794
Direct labour cost		1	0.8311	0.1729	0.63
Selling overhead			1	0.0644	0.8377
ROA				1	-0.0272
Administrative cost					1

Note. The correlation coefficient for the study presented in table3 was for Nepal Oil Corporation for a period of eleven years covering 2004 to 2014. In reference to the explanatory variables, DM refers to the direct materials which represent the mean of direct materials for the period under consideration. DL represents the direct labour while SO and AO were used to represent the Selling overhead and administrative overhead respectively.

Table 4 Regression Results

Model 1: OLS, using observations 1-11

Dependent variable: ROA

	Coefficient	Std. Error	t-ratio	p-value
Constant	-0.9813	0.6613	-1.484	0.1884
Direct Material Cost	1.71788e-011	4.13836e-011	0.4151	0.6925
Direct labour cost	9.69014e-010	3.42962e-09	0.2825	0.7870
Selling overhead	-2.69434e-010	2.80468e-09	-0.09607	0.9266

Administrative overhead	-7.04738e-010	1.46370e-09	-0.4815	0.6472
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In this study, R-square value was found to be 0.086. This implies that the combined effects of direct material cost, direct labour cost, selling overhead cost and administrative overhead cost explained 8.6% of the variation in the profitability of Nepal Oil Corporation while the remaining 91.4 was due to the other variables not captured in this study. Profitability was found to be negatively correlated with administrative overhead cost. This result supports the findings of Wadley and kuisi (1998) which suggests an inverse relationship between profit and non-variable cost. It means that profitable maintained low administrative overhead cost.

Furthermore, the relationship between profitability and direct material cost was positive. This result was in disagreement with the postulation of Ayinde (2006) which affirmed that profit can be improved by cost reduction. Similarly, it was found that profit increases as direct labour 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 Selling overhead cost. Although, the relationship was statistically significant as supported, it was not support by the existing literature such as Shal (2011), Mishra and Gupta (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 Nepal Oil Corporation. Nepal Oil Corporation was selected for the period of 2004–2014. The study relied on secondary data extracted from the audited financial statements of the selected firm. Direct Material Cost, Direct Labour Cost, selling overhead Cost and Administrative overhead cost were considered as independent variables while profitability (operating profit) was taking as dependent variable representing firm performance.

Practical suggestions:

The results indicate a significant positive relationship between direct material cost, direct labour cost and firm performance. However, Selling overhead cost and administrative overhead cost were found to be negatively correlated with firm performance. It is therefore recommended that cost management strategies that focus on reduction of selling overhead and administrative overhead should be embarked upon by the Nepal Oil Corporation if their profit maximization and wealth creation objectives will be met.

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