Effect of Inventory Management on Profitability: Empirical Evidence from Uniliver Nepal Limited

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Abstract

The study examines the effect of inventory management on the profitability of Uniliver Nepal ltd. in Kathmandu. Secondary data have been collected from the annual financial statements of Uniliver Nepal Ltd. Kathmandu from fiscal year 2071/72 to 2075/76. A regression technique has been used considering statistical package Minitab 16 version to analyze the data .The study reveals the positive impact of efficient inventory management upon the profitability of Uniliver Nepal Ltd. in Kathmandu. Based on the findings the study recommends that Uniliver Nepal Ltd. should adopt effective and efficient inventory management practice,using appropriate modern technology for effective inventory management and employ capable and qualified staff who should be trained regularly on proper and efficient inventory management.

Keywords: profitability, inventory, management, net income, regression.

Introduction

1.1 Background

All organizations keep one form of inventory or the other. The word inventory or stock has been defined by various authors in different ways (Dangol, 2061). Accounting Research Bulletin No. 43 of the American institute of certified public Accountant define the term inventory or stock as the aggregate of those items of tangible assets, which are held for sale in the ordinary course of business or in the process of the production for such sale or to be currently consumed in the production of goods or services to be available for sale.

Inventory includes raw materials and supplies goods in process and finished goods (Dangol, 2061).In simple words, inventories are the items of materials, semi- processed materials and finished goods lying unused and unsold in an expectation that they will be used and sold in the future. Inventory is essential for the firm to facilitate its smooth and uninterrupted production and sales, (Koirala, 2004).

Inventory needs for each type of business organization but inventory should be suitable, should not be maximum and minimum. Maximum inventory increases cost and minimum inventory affects to regular operation of business. For keeping suitable inventory there must be good management in the stores. There fore, the management related with inventory is called inventory management.

Profit is the difference between revenue received from sales and total costs which includes materials cost, labour and so on.Profitability refers to money that a firm produce with the resources it has. The goal of most organization is profit maximization .The profitability shows the ability of a firm to generate earnings from the use of its assets for a certain period of time. Profitability involves the capacity to make benefits from all the business operations of an organization firm or company. (Mwangi, 2016).

Efficient inventory cost management is vital for the successful functioning of manufacturing and retailing organization. Therefor, the adequacy and appropriateness of the movement of stock is essential in order for any company to growth and achieve financial success. The inventory cost management of any organization represents an important decision making function at all stages of the product manufacturing, distribution and sales chain. According to Moore, Lee and Taylor, 2003, inventory often represent as much as 40% of the capital of industrial organizations. (Sawaya and Giauque, 2006) also stated that inventory represents 33% of a company's assets and as much as 90% of working capital, (Etale& Bingilar, 2016).

It is crucial that good inventory management practice is put in place to ensure the organization's growth and profitability to sustain the business as a going concern. Therefore, there should be right goods in stock in the right quantity and are available at the required time. Stores inventory should be checked properly and regularly for avoiding pilferage, wastage and loss of customers due to stock outs. Making the right order for the inventories at all times would promote high turnover thereby improving the profit level of the organization.

Several studies conducted on this field in the past showed the lack of consensus among the findings of scholars indicating a research gap. This study attempted to bridge that gap and contribute to existing literature by identifying a unique set of independent variables as proxy for inventory management.

The main objective of this study was to examine the effect of inventory management on profitability of the Uniliver Nepal ltd. in Kathmandu. This study adopted inventory value of finished goods as proxies for inventory management (The independent variables) while net income was used as proxy for profitability (the dependent variables).

The rest of this paper is structure as follow: Section two provides a review of literature while section three deals with the study method. In section four, presented the study findings and discussion and section five provides the conclusion and recommendations.

1.2 Research Problems

The use of efficient inventory management definitely increase overall profitability and reduce material costs. Now a day many organizations do not follow the sound techniques of inventory management which turns into increase in material costs and reduce profitability. Following are the specific problems related to effect of inventory management on profitability:

- What is the relationship between finished goods value and net income?
- How does the current inventory management affect the total profitability of the concern?
- What does the regression analysis say about the relationship between the two variables?

1.3 Research Objectives

The general objective of the study is to examine the profitability with the analysis and discussion of inventory management. The specific objectives are as follows:

- To identify relationship between finished goods value and net income.
- To analyze inventory management showing the effect on total profitability of the concern?
- To examine regression analysis between the two variables.

1.4 Limitations of the Study

The study is limited to the following constraints:

- The study focuses the relationship between inventory and profit only.
- It does not include any financial analysis.
- The data is secondary and restricted to the year from 2071/72 to 2075/76.

1.5 Literature Review

This section presents the review of related literature in order to establish a basis for the investigation of the effect of inventory management on the profitability of Uniliver Nepal Ltd. Kathmandu. The review covered previous empirical studies conducted in various countries on this subject.

Etale & Bingilar (2016) stated the effect of inventory cost management on profitability using gross profit margin as dependent variables and Raw material inventories, work in progress inventories finished goods inventories as independent variables. The study revealed that efficient inventory cost management has positive influence on the profitability of brewery companies listed on Nigeria stock Exchange of Nigeria. Enhance it was proved that effective and efficient inventory cost management would lead to higher profitability.

John (2014) studied the Effect of inventory management on profitability of Nigerian Manufacturing sector. Return on equity was used as a proxy for profitability (dependent variables), while inventory conversion period was used as proxy for inventory management.The study identified that there is favourable association between stock administrations between stock administrations and earning of Nigerian manufacturing Companies, however this relationship is not statistically significant.

Kung'u, (2016) revealed the effect of inventory control on profitability of industrial and allied firms in Kenya using inventory control practices as independent variables and profitability as dependent variables. The findings of this study showed that finance managers of manufacturing firms take precautions to ensure that their firms maintain ideal levels of inventories of both rawmaterials and finished goods. This may have led to increased profitability of manufacturing firm in Kenya.Therefore there exists a positive and significant relationship between inventory control and profitability.

Shin, Ennis and Spurlin (2015) investigated the effect of inventory management efficiency on profitability: current evidence from the U.S. Manufacturing industries .Findings of this investigation show a positive relation between profitability and inventory management efficiency. In addition the impact of the inventory efficiency on profitability based on firm size was noticeably significant. Small size firms can receive longer benefits from increased inventory efficiency than medium and large size firms

Panigrahi (2013) examined the relationship between inventory management and profitability: an empirical analysis of Indian cement companies using inventory conversion period as independent variables and gross operating profit as dependent variables. The results of this research indicate that inventory conversion period has an inverse relationship with firm's profitability i.e. when the inventory conversion period days increase the profitability of firm decreases and vice-versa.

Prempeh (2016) studied the impact of efficient inventory management on profitability: evidence from selected manufacturing firm in Ghana using raw materials inventory as independent variables and profitability as dependent variable. This study revealed that there is a significantly strong correlation between main variable, raw materials inventory management and profitability of manufacturing firms in Ghana and it is positive, Thereforeefficient management of raw materials inventory is a major factor to be considered by manufacturing company in enhancing or boosting profitability.

Methods and Materials

The study examined the effect of inventory management on the profitability of the Uniliver Nepal Ltd. in Kathmandu using secondary data collected from the annual income statements of Uniliver Nepal Ltd. The study employed regression analysis technique and descriptive statistics using the computer software Minitab 16 version to examine the relation between inventory management and profitability of the Uniliver Nepal Ltd. in Kathmandu. Finished goods inventory values were identified and employed as the independent variables while net income was employed as proxy for profitability of Uniliver Nepal Ltd in Kathmandu. Relevant information were obtained from 5 year's financial statements of Uniliver Nepal Ltd. Kathmandu between fiscal year 2071/72to 2075/76.

Model Specification

A simple regression model of the following form was developed to capture the relationship between inventories and net profit margin using Minitab- 16 version

Net Profit Margin =f (Inventories)

The above model was explicitly translated in to general regression equation for easy empirical verification as stated below.

NPM = a + β inventory + μ

Where,

NPM= Net profit Margin,Proxy for profitability and dependent variable

A = the constant term

β = the coefficient of the independent variable to be determined.

μ = the error term of the equation

Results and Discussion

The study examines the relationship between finished goods value (independent variable) and net income (dependent variables). Table 1 below is summarized aggregate values of the variables (expressed in percentage on sales) of data collected from the annual financial statements of Uniliver Nepal Ldt. Kathmandu from 2071/72 to 2075/76.

Table 1

Summarized aggregate values of the variables

(% on sales)

Fiscal year	NPM % (dependent variable)	Finished goods inventory % (independent variable)
2071/72	17.38	12.08
2072/73	17.15	12.08
2073/74	21.73	13.96
2074/75	20.52	15.44
2075/76	18.54	14.32

Source. Appendix A.

The highest NPM was recorded in the year 2073/74 with NPM of 21.73% and the lowest in 2072/73 with 17.15% for the period covered. It can also be observed that the profitability nature has not been steady, going up and down over the period. This should be due to the changing nature of the independent variables with finished goods inventory also exhibiting the same characteristic. A summary of the Descriptive statistics results are presented in table2 below:

Table 2

Descriptive statistics: net profit, inventories

Variables	Mean	St. Dev.	Minimum	Maximum
Net profit	8753	1936	6099	10666
Inventories	6274	1634	4297	8241

Source. Appendix A.

The following observations can be made from the above table 2 which was prepared on the basis of five years data:

- The NP of the company range between 6099 and 10666 with mean 8753 and standard deviation of 1936 indicating low variance,
- Inventories value range between 4297 and 8241 with mean 6274 and standard deviation of 1634 indication suitable variability.

The above analysis concludes that selected variables are not high variance as their standard deviation. The low variance is normally related with effective inventory management.

Table 3

General regression analysis: net profit versus inventories

Regression Equation:

Net Profit = 1641.07 +1.13363 inventories coefficients

Term	Coef.	SE Coef.	T	P
Constant	1641.07	1284.29	1.27780	0.291
Inventories	1.13	0.20	5.68618	0.011

Summary of Model

S =651.414 R-Sq = 91.51% R- Sq (adj.) =88.68%

PRESS = 3027913 R- Sq (pred) = 79.80% F- statistics = 32.3327

F- Charge= 0.011 Durbin-Watson statistics = 2.68266

The table above shows the summary of the regression results of the inventory management variables: Inventories and their effect on the profitability (NPM) of Uniliver

Nepal Ltd. in Kathmandu. The results show that inventory management significantly positive on (NPM) the profitability of Unliver Nepal Ltd. Kathmandu.

The explanatory power of the model as informed by R-Sq 91.51% is positively and statistically significant given the high value of the F- statistics 32.3327. This indicates that the model is a very good fit and independent variable influenced the dependent variable.

The regression model demonstrates a good fit given that 88.68% of the variation in the dependent variables (Profitability) is explained by changes in the observed behavior of inventories value. The relatively high adjusted R^2 of 88.68% shows that the regression model fits the data well. About 4.5% variation in profitability can be explained by other unknown variables not capture in the present model. The study also shows that the calculated F statistics value 32.33 is significant at 5% level of significance as P- value $0.011<0.05$. A unit increase or decrease in inventories would lead to an increase or decrease in NPM (Profitability) of Uniliver Nepal Ltd. Kathmandu with a margin 1.13. This indicates a significant relation between the inventory management and profitability of Uniliver Nepal Ltd. in Kathmandu Thus it has revealed that efficient inventory management have positive effect on profitability.

Conclusion

This study examined the effect of inventory management on the profitability of Uniloiver Nepal Ltd. in Kathmandu. Inventory management proxy by Inventory values was regressed against profitability proxy by Net Profit Margin. Secondary data was collected from the annual financial statement of Uniliver Nepal Ltd. Kathmandu from 2071/72 to 2075/76.General regression model was adopted to determine relationship between inventory management and profitability of Uniliver Nepal Ltd. The study revealed that efficient inventory management has positive influence on the profitability of Uniliver Nepal Ltd. Therefore it was proved that effective and efficient inventory management would lead to higher profitability. Good inventory management practices in the Uniliver Nepal Ltd. in Kathmandu would save this Ltd. from loss of profit and disappointment of valued and loyal customers.

Based on the findings, it is recommended that Uniliver Nepal Ltd. adopt effective and efficient inventory management practices as well as adopting appropriate modern technology from effective inventory management. It is also recommended that capable and qualified staff be employed and trained regularly on proper and efficient inventory management by the managers of Uniliver Nepal Ltd. This study recommends the management of Uniliver Nepal ltd. to develop effective strategic policies and guidelines on inventory management to guide the staff to ensure they hold optimal inventory levels. Handling optimal inventory would help the firms to minimize costs and maximize their profitability.

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Appendix

Appendix: A

Data Collection Sheet

Fiscal year	Sales (Rs. In lakhs)	Inventories (Rs. In lakhs)	Net Income (Rs. In lakhs)
2071/72	42324.69	5113.22	7358.13
2072/73	35566.62	4297.49	6098.85
2073/74	44424	6200	9652
2074/75	48684	7578	9992
2075/76	57541	8241	10666

Note. Annual financial Statement of Uniliver Nepal Ltd., Kathmandu, 2071/72 to 2075/76.