

IMPACT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY OF BOTTLER'S NEPAL (TERAI)

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Abstract

Manufacturing sector contributes immensely to growth of the economy of any nation. It keeps significant role for socio-economy development. But this manufacturing sector has to face dilemma of manufacturing an appropriate trade-off between working capital and profitability in Nepal. In this study, an attempt has been made to identify the impact of WC management on profitability of Bottlers Nepal Limited. Data analysis has been done using descriptive statistics, Pearson correlation, regression analysis and F-test. The data used to analyze one (1) samples size, out of 3 which has found to be covering period 2010-2017 of Bottlers Nepal Limited(Terai). The working capital represents the independent variable variables are Cash conversion period(CCP), Inventor Conversion period (ICP), Receivable conversion period (RCP)and dependent variables is Return on Assets (ROA).The results revealed that the impact of all four independent variables is tested together on dependent variable (ROA). From the model summary the value of R-square=0.754. It indicates that the five independent variables can explain approximately 75.4% of the proportion of variance of dependent variable. However, it is still left 24.6 % unexplained by these independent variables in this study. This indicates that there is a significant relationship between profitability and RCP and ICP. It is indicate that there is no significant relationship between profitability and CCP and PDP.

Key words

Working capital; management; profitability; CCP; ROA

Introduction

Working capital is the life blood for an organization; no business can be run successfully without it. Since there is an inverse relationship between liquidity and profitability therefore a firm should maintain a delicate balance of working capital so that smooth operations can be conducted without disturbing the profitability. There are studies proving both, relevancy and irrelevancy of working capital management with profitability (Sarwat, 2017).

Working capital management is a challenging task since it consists of managing various concepts of current assets, current liabilities along with managing cash, stock movement, trade receivables and trade payables as well. All these elements are inter-connected and affect the other; therefore there is always a risk to be managed. Managing one component in working capital may affect the other components and hence increasing the delicacy of the task; this means that there is always a risk-return trade off involved with working capital decisions (Al-Debi'e, 2011).

Working capital is a financial measure which represents operating liquidity available in a business. Simply working capital is the capital of a business which is used in its day-to-day trading operations.

Decisions relating to working capital and short term financing are referred to as working capital Management (WCM). WCM ensures that a company has sufficient cash flows in order to meet its short-term debt obligations and operating expenses. These involve managing the relationship between a firm's short term assets and its short term liabilities. The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short term debt and upcoming operational expenses (Kodithuwakku, 2015).

The management of working capital involves managing inventories, accounts receivable, accounts payable and cash. Implementing an effective working capital management system is an excellent way for many companies to improve their earnings. Working capital management is vital especially for manufacturing and construction firms, where a major part of assets is composed of current assets (Horne & Wachowitz, 2000). It directly affects the profitability and liquidity of firms (Raheman & Nasr, 2007). Deloof (2003), who conducted his study on Belgian firms, suggests that working capital management has a vital effect on the profitability of a firm. He also states that firms have to make a trade-off between liquidity and profitability.

With working capital management is referred to the net working capital. Net working capital is current assets minus current liabilities. The net working capital is positive when current assets are greater than current liabilities (Hillier *et al.*, 2010). Currents assets are cash and other assets that can be converted into cash within the year. Current liabilities are obligations that require cash payments within one year (Hillier *et al.*, 2010). According to Filbeck and Krueger (2005) the objective of working capital management is to maintain the optimum balance of each of the working capital components namely receivables, inventory and payables. Some firms minimize receivables and inventories while others maximize the payables. A widely used measure of working capital management by previous studies is the Cash Conversion Cycle (CCC) (Deloof, 2003; Padachi, 2006; Garcia-Teruel and Martinez-Solano, 2007; Mathuva, 2009). Similarly, Raheman and Nasr (2007) posit that a company has to determine the equilibrium between liquidity and profitability because increasing profits at the expense of the liquidity of the firm can be harmful in terms of insolvency and bankruptcy of the firm. Accordingly, the three components of the cash conversion cycle are each managed in different ways to improve the profitability. This

is due to firm specific (industry-wise) with different characteristics. Each of the researchers that have conducted case studies in different countries found different results on how the profitability of a firm is related to the cash conversion cycle and its three components. As far as is known, there has been no study on working capital management and its impact on the profitability of multinational manufacturing company in Nepal. It is in this consideration that the research plan in this paper will be directed to the following research question: “What is the relationship between the working capital management components and profitability of Bottlers Nepal(Terai)?”

Literature review

Evcı and Sak (2018) examined that the Findings show the existence of tradeoff working capital management profitability. A negative relationship exists between return on assets and payables deferral period, cash conversion cycle, the ratio of short-term financial debts to short-term debts, and the ratio of fixed assets to total assets while return on assets is positively related to inventory conversion period and sales growth. This study aims to reveal the tradeoff between working capital components and firm’s profitability by using the data of the firms listed on Borsa Istanbul Industry Index in

Turkey. Annual data of 41 firms are used for the period 2005–2016 in the study. The working capital components and firm's profitability tradeoff was examined via the fixed effects panel regression model. Dependent variable is defined as return on assets; independent variables are cash conversion cycle, inventory conversion period, and payables deferral period; and control variables are sales growth, the ratio of short-term financial debts to short-term debts, and the ratio of fixed assets to total assets. Sathyamoorthi (2018) the results showed that only three variables out of the seven independent variables were statistically significant, namely Average Payment Period, Current Ratio and Quick Ratio. The remaining four variables were found to be statistically insignificant. The above findings have implications for the management of the listed retail store in Botswana. This study focused on the effect of working capital management on the profitability of the listed retail stores in Botswana Stock Exchange for the period 2012-2016. Financial statements of the listed Retail Stores were used as the main source of data. Return on Assets was used as the dependent variable to measure profitability and the components to measure working capital management comprised of Average Collection Period, Inventory Conversion Period, Average Payment Period, Cash Conversion

Cycle, Debt, Current and Quick Ratios. Correlation analysis revealed that a few variables were significantly correlated with each other. Average Payment Period and Inventory Conversion Period were found to be positively and significantly correlated and Cash Conversion Cycle was significantly and positively correlated with Inventory Conversion Period.

Naskar and Guha(2017) examined that the all components of working capital namely Receivable days(RD), Payable days(PD), Inventory holding periods (ID), Current ratio (CR) and Quick ratio (QR) have strong impact on profitability. Cash conversion cycle (CCC) is negatively related with the profitability, Firm size is also linked with working capital. If firm size increases, the need of working capital will be more. It has been found that the firm size has also significant impact on EBIT but insignificant impact on ROA and ROE. Finally the study has established a relation between working capital management and firm's profitability. This study sought to examine the effect of working capital management on profitability of select companies listed in BSE The study used a sample of 53 companies. The study used secondary data for a period of 5 years from 2011–2015. The data have been analyzed using the Pearson correlation

and the multivariate regression analysis.

Ahmed (2017) explained that the study showed that, there is statistically significant relationship between working capital management and profitability of the Bangladeshi textile companies. More specifically, this study revealed that Current ratio and Current liabilities to total asset has most significant impact on profitability of textile companies in Bangladesh. On this background, the objective of this study is to examine the impact of different components of working capital management on profitability of the Bangladeshi textile companies. To examine that authors have used 8 (eight) years data from the time period of 2007-2014 of 22 textile companies listed in Dhaka Stock Exchange (DSE) and logistic regression has used to analyze the data.

Thanh *et al.* (2016) explained that the paper analyzes the impact of working capital on financial performance of the small and medium-sized enterprises in Vietnam. Using panel data for 1,209 enterprises in the period from 2008 to 2015, with OLS method, REM and FEM, the paper finds that receivables and working-capital turnover impact negatively on financial performance of enterprises. Meanwhile, accounts payable period and inventory conversion period

have a direct relationship with corporate financial performance. In addition, the results of the study also find that the growth rate, size, and age of enterprises also affect financial performance directly. Mawutor (2014) and Kodithuwakku (2015) on manufacturing companies of Ghana (2006-2010) and manufacturing companies listed on Columbia Stock exchange (2008-2012) respectively presented a similar view. The results showed that the working capital management had significantly negative influence on the profitability. Further, it was also shown in the analysis that the variables like growth, the size of the company and debt-equity ratio also had a strong influence on the profitability apart from the working capital management. Marobhe (2014) has assessed the relationship between working capital management and profitability of twelve manufacturing companies listed in East African stock exchange during the period, 2005-2012. This study used ROA and Operating Margin as dependent variables whereas Current ratio, Quick ratio, Cash Cover Ratio, Inventory holding period, Receivables Collection Period, Payable Deferred Period and Cash Conversion Cycle are used as independent variables, while Sale growth, Debt ratio, and Company size are used as control variables. It was observed that there

exist a notable relationship between cash conversion components and profitability using Pearson correlation and multiple regressions.

Almazari (2013) has examined the relationship between the Working Capital Management (WCM) and firm's profitability on 13 Saudi cement manufacturing companies during 2008-2012, a period of 5 years. He proposed a model that addressed four hypotheses namely; H1: Liquidity position has significant impact on profitability, H2: Size has notable impact on profitability, H3: There is significant relationship between debt financing and profitability and H4: Working capital management has noteworthy impact on profitability. The study results proved that current ratio affects the profitability, and as the size of firm increases, the profitability also increases. Moreover, when debt financing increased, profitability declined. He analyzed that, linear regression test confirmed a higher degree of association exist between the working capital management and profitability.

Quaiyum (2012) in his study investigated the relationship between working capital management and profitability of manufacturing firms from 2005 to 2009. The purpose of study was to explain the optimum level of working capital

in order to maximize the profitability. Similar ingredients of working capital management and profitability were considered as in (Marobhe, 2014). With the sample size of four industries, this study concluded that except in food industry, all other selected industries exhibit a significant level of relationship in profitability indices and various working capital components in addition to that; there is a valid relationship that varies from industry to industry.

Lingesiya and Nalini (2011) in a study determined the relationship between working capital management and firm's performance on the basis of various components of working capital; cash conversion cycle, current ratio, quick ratio, stock to current assets and return on total assets as a variable of profitability. This study used estimated equation on 30 manufacturing corporations which are listed companies during the period 2006-2010, and indicated that excessive investment in inventories and receivables lead to lower profitability and current assets to total assets lead to higher profitability. The result concluded that there is a strong relationship between working capital management and performance.

Gill, Biger and Mathur (2010) concluded that no significant relationship exists

between inventory conversion period and firms profit. They were of the view that collection period of accounts receivables is most influencing factor among components of cash conversion. Thus, managers can generate value for shareholders by shortening the average collection period as with Gill *et al.* (2010) study on manufacturing firms.

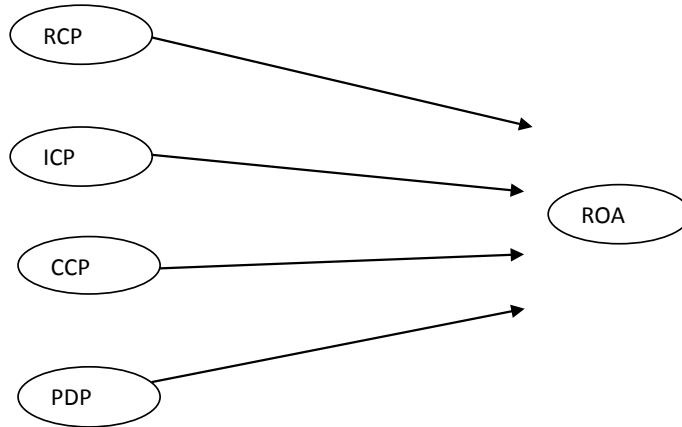
Mohamad and Saad (2010) analyzed the effect of working capital management on the profitability of 172 firms over a five-year period (2003-2007) listed on Bursa Malaysia. They found negative relationship between working capital management components (cash conversion cycle, current liabilities to total asset ratio, current assets to current liability ratio and profitability captured by return on equity (ROE) and return on total asset (ROA). On the other hand, they also concluded that there is a significant positive relationship between the current assets to total assets ratio and firms' profit.

Samiloglu and Demirgunes (2008) conducted a research on manufacturing firms in Turkey. They showed that account receivable period and inventory conversion period have significant negative effects on profitability. However, the research revealed cash conversion cycle has no significant effects on firm's profit.

Raheman and Nasr (2007) investigated the effect of different components of working capital management including average collection period, average payment period, cash conversion cycle, inventory turnover and current ratio on the net operating profit of firms in Pakistan. The findings indicated a negative relationship between the various components of working capital and profit. Deloof (2003) researched the relationship between working capital management and profitability of non-financial firms over a five year period between 1992 and 1996. Using cash conversion cycle, inventory policy and trade credit policy as measures of working capital management, the conclusion was that if managers are able to reduce the number of days of accounts receipts and inventory conversion period, it would increase profit, proving there is a negative relationship between profitability and working capital management.

Conceptual framework

Below presents schematic conceptual framework of the relationship between working capital management measures and profitability of Bottlers Nepal(Terai):



Research Methods

Secondary data were used in the study. The data were collected from one (1) listed multinational manufacturing company of Nepal. Among the 3 listed multinational manufacturing company of Nepal, one has taken as a sample size. Descriptive and causal research methods were used to analyze the data collected from one company.

The data collected is analyzed using the computer software known as Statistical Package for Service Solution (SPSS) version 21.0. Descriptive, correlations and regression analysis was

applied to study and compare the effect of independent variables on the dependent variable.

Data Presentation and Analysis

This study analyzed the working capital management and its impact on Profitability Bottlers Nepal (Terai) between the years 2010 to 2017. In the study variables which were included are Return on Assets (ROA), Inventory conversion period (ICP), Receivable conversion period (RCP), Cash conversion period (CCP) and Payable deferred ratio (PDR). This study analyzes the variables involved:

Table No. 1 Explained variables

Variables	Description
ROA	Return on Assets
Explanatory Variables:	
Variables	Description
ICP	Inventory conversion period
RCP	Receivable conversion period
CCP	Cash Conversion period
PDR	Payable deferred ratio

Data analysis

The collected data has been analyzed by descriptive statistics and inferential statistics. Firstly, data are analyzed by descriptive statistics. Mean and standard deviation is used in the descriptive statistics.

Descriptive statistics and correlation statistics

The descriptive and correlative statistics of the explanatory and explained variable in this study are presented in

table no. 2. It is based on a panel data set organized from mine Bottlers Nepal Limited(Terai) in Nepalese financial market during the period from 2010 to 2017. Looking at them, generally, the statistics indicators of impact of working capital management on profitability of Bottlers Nepal Limited (Terai)

Table No. 2 Descriptive and Correlations Statistics

	Mean	S.D.	ROA	RCP	ICP	PDP	CCP
ROA	0.26	0.18	1				
RCP	26.33	24.03	-0.522	1			
ICP	99.46	22.36	-.728*	0.575	1		
PDP	60.29	104.13	-.919**	0.449	.755*	1	
CCP	65.5	82.32	.812*	-0.12	-0.516	-.929**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Descriptive and correlation statistics is presented in above table no. 2. It shows that on average company's earn a net profit before interest and tax of 26%with standard deviation of 0.18, whereas company take average 99.46 days to convert inventory into final goodswith standard deviation of 22.36. Company delays their payables for 60.29 days with standard deviation of 104.13 and average

collection period for company is 26.33 days with standard deviation of 24.03. On average firms' cash conversion cycle is 60.5 days with standard deviation of 82.32.

From table we can easily find the relationship between profitability and components of working capital. It shows the net profit after interest and tax is

negatively correlated with receivable conversion period and inventory conversion period, which shows that any increase in any of these factors will reduce net profitability of company. It shows that payment period has a negative significant relationship with net profitability, which means if company's delay their payments they will earn less profits; the reason behind this is that firms can take the advantage of discounts by paying soon. It shows that cash conversion period has a positive significant relationship with net profitability.

The above table describes about correlation matrix between variables under investigation. There is no

significant relationship between ROA and RCP ($r=-0.522$, $p>0.05$). There is significant negative relationship between ROA and ICP ($r=-0.728$, $p<0.05$). There is significant negative relationship between ROA and PDP ($r=-0.919$, $p<0.05$) and there is significant negative relationship between ROA and CCP ($r=-0.812$, $p<0.05$).

Regression analysis

The R-square is measure of the goodness of fit of the working capital management variables in explaining the variations in profitability of Bottlers Nepal Limited (Terai). The regression analysis of ROA on working capital management has been separately analyzed below:

Table no. 3 Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.379	.210		1.804	.146
	RCP	-.002	.002	-.332	-1.402	.234
	ICP	-.001	.002	-.190	-.691	.528
	CCP	.001	.000	.675	2.984	.041
	PDP	.001	.000			0.000

a. Dependent Variable: ROA

The results are the findings of the research on the basis of observations and analysis. Regression analysis includes the major results extracted from the analysis of data to determine the impact of working capital management on profitability of Bottlers Nepal Limited (Terai) from 2010 to 2017.

The findings of the analysis are based on the significant level (alfa) of 0.05, degree of freedom (df) of 4 and two-tail test indicated. The impact of all four independent variables is tested together on dependent variable (ROA). From the model summary the value of R-square=0.754. It indicates that the

five independent variables can explain approximately 75.4% of the proportion of variance of dependent variable. However, it is still left 24.6 % unexplained by these independent variables in this study.

From the ANOVA table, the estimated regression model is statistically significant ($F = 8.144$, $p = .035$). Four independent variables (ICP, RCP, CCP and PDP) have been good predictors for ROA. Above table describes about the multiple regression analysis. Four variables i.e. RCP ($b = -0.02$, $p > 0.005$), ICP ($b = -0.001$, $p > 0.05$) CCP ($b = 0.001$, $p < 0.05$), and PDP ($b = 0.001$, $p < 0.05$) have significant impact on ROA. This indicates that there is a significant relationship between profitability and RCP and ICP. It is indicate that there is no significant relationship between profitability and CCP and PDP.

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Conclusion

Working capital management is of importance in company's financial management. It is therefore vital to manage the trade-off between profitability and working capital management. The purpose of this study was to investigate the impact of working capital management on profitability of Bottlers Nepal Limited (Terai). This would assist firms to understand the nature and extent of the impact of working capital components on company's profitability. Such an understanding is essential for managers as they try to enhance company's profitability and ultimately its value. This indicates that there is a significant relationship between profitability and RCP and ICP. It is indicate that there is no significant relationship between profitability and CCP and PDP.

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