

Impact of Working Capital Management on Firm Profitability in Textile Industry of Pakistan

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Abstract

This study shows the link between the working capital management and the firm's profitability Current Ratio and Cash Conversion Cycle are studied under Working Capital Management head and Return on Asset & Net Profit Margin is studied under the Profitability head. These relationships are studied under the context of Pakistan textile industry for which we have taken their financial information of the data period from 2006-2012, as this research was based on secondary data. The convenience sampling technique is used for the selection of sample of our study which consists of 6 textile firms. The different descriptive statistics, correlation coefficient and regression of all variables are computed to confirm our hypothesis through IBM and SPSS Software. From data analysis we have conclude that the CR, CCC and NPM, ROA has a negative relationship with each other. The regression results showed that the model is fit for research. The importance of research is given in paper.

Keywords: Working Capital Management, Current Ratio, Cash Conversion Cycle, ROA, NPM

Introduction

In usual production function approach for determination of relationship between output and profit, fixed capital is taken in to account as descriptive variable between others, the role of working capital is ignored. It is there for felt that there is the need to study the important role of working capital in profit generating process. Pakistan Textile Industry is the largest industry of Pakistan. This industry is ranked 8th largest exporter of textile products in Asia. In the context of investment of this sector, it contributes to US \$9.6 billion in year of 2010-2011. It contributes 46% to the total manufacturing and 85% of the GDP collected from manufacturing sector other than agriculture, 38% of the total labor force is employed in this sector and its market capitalization is 5% of the total market capitalization (Pakistan economic survey of SBP 2011, TDAP).

The short term financing that company needs for conducting daily actions is working capital management (WCM). WCM is necessary to maintain the balance between profitability and liquidity of a firm (Eljelly, 2004). WC of a firm include on Current Assets (Horne and unchowitz, 2000). According Raheman and Nasr 2007, WCM directly affects the profitability and liquidity of firm. Generally Current Assets of a firm include Cash, A/R, and Inventory items of firms. Basically in this research, we have seen the effect of cash conversion cycle (CCC) with respect to working capital and see the impact of CCC on profitability. And CCC is the independent variable in our study and profitability is the dependent variable. While the CCC is the amount of time a firm's resources are tied up. The goal is to minimize the length of CCC for profitability.

Pakistan textile sector is suffering with stable and slow growth which decline day by day as evident from 2005 to 2010 and alarm the management to well manage their long run as well as short term financing (WCM) and resources but nothing has done in this respect. To develop the profitability WCM must be addressed to solve the problem of less market share. In the context of our research, it makes sense to look at how profitability behaves in relation to WC policies.

In the corporate financing literature most of the scholars focus only on the study of long term decisions, but this article explains the relationship b/w effective and efficient WCM and firm's profitability. Vedavinayagam Ganesan (2007) found that when the working capital management efficiency is improved by decreasing the days of working capital (DWC), there is an improvement in the profitability of the firms.

There are some objectives of our research.

- To find out CCC impact on the firm's profitability.
- To find out the impact of DWC on firm's profitability.

Literature Review

Many studies try to explore the relationship between working capital level and firms profitability. Few studies however, explore the impact of working capital on firms' performance. The literature review has been set according to the variables.

Working Capital

WCM is most important part of the decision taken by management that influences the Profitability of firm directly. (Haq et al, 2011) on the other side, Net working Capital (NWC) is the excess of Current Assets (CA) over Current Liability (CL) of a firm. WCM is the tool through which you meet the short term debts that fall due and it is the operating requirement which must be maintained (Mohammad and Nasr, 2010).

Working Capital = Current Assets
Net Working Capital= Current Assets- Current Liabilities
Current Assets= Cash+ A/R+ Inventory

Cash Conversion Cycle

Shahid (2011) investigate the effect of working capital management and profitability of textile sector of Pakistani 160 firms for the period of 6 years from 2000-2006. Lazaridis and Tryfonidis (2006) investigated the relationship that is significant between corporate profitability, the cash conversion cycle and its components by using the sample of 131 companies listed in the Athnes Stock Exchange for the period of 2001-2004.

$$CCC= ACP+AAI-APP$$

Working Capital and Firms Profitability

Purpose of the WCM is to make sure that firm meets the operating requirements and also stay in a position to pay short term debt when they fall due (Mohamad & Noriza 2010). Mismanagement of working capital will direct a firm to liquidity crisis by dropping its profitability and creditability, so managing working capital effectively is essential for going concern of the business and also for its profitability (Siddique & Khan 2009).

H.Jamal Zubairi (2010) studied Pakistan automobile sector and checked the impact of WCM and capital structure on profitability of the firm. To determine the profitability they used income before interest and taxes. Singh and Pandey(2008) discussed the impact of working capital management in the profitability of Hindalco Industries Limited. Regression results showed that current ratio, liquid ratio, receivable turnover ratio and working capital to total assets had statically vital impact on profitability.

Raheman and Nasr (2007) and Burki (2008) complete a research in the Pakistani context. This study finds that Working Capital Management is significant part of corporate finance because it has effect on profitability and liquidity. After in 2011; they again conduct this research to examine the effects of working capital management on profit performance of Pakistan textile industry (2003-2008).

Padachi (2006) use 56 manufacturing firms from 1998-2003. In his study he said more the receivables and higher the inventory level are less profitable for the firms. Rahnama Roudposhi & Kae et al (2007) studied the WC- Strategies that Tehran stock exchange companies follows.

The purpose of their paper is to establish a relationship that is statistically significant between profitability, the cash conversion cycle and its components. The results of their research showed that there is statistical significance between working capital and firm's profitability, measured through gross operating profit, and the cash conversion cycle. Moreover managers can create profits for their firms by handling correctly the cash conversion cycle and keep each different component to an optimum.

Research Model

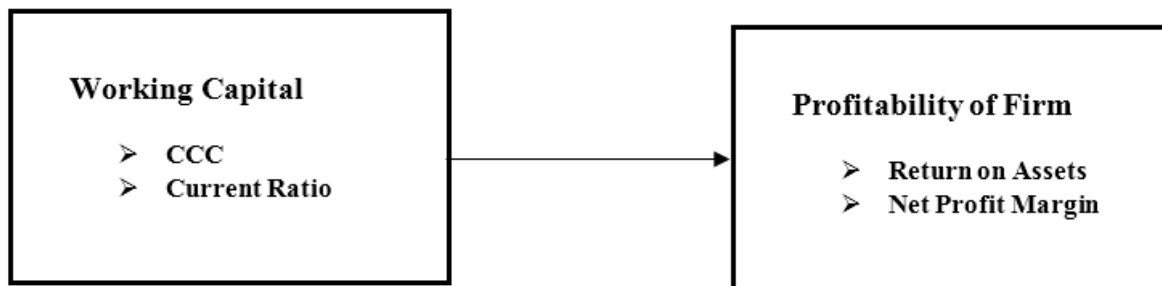


Fig 1: proposed research model

Hypothesis

H1: There is a negative relationship between CCC and Net Profit Margin & Return on Assets.

H2: There is a negative relationship between CR and Net Profit Margin & Return on Assets.

Research Methodology

Sample Size:

The sample of this study is the Pakistani textile mills which cover up the data from 2006- 2012. The sample of this study covers the financial information of manufacturing firms of Pakistan. For the analysis, the essential information is deriving from the financial reports of 6 manufacturing firms.

- The **dependent variable** of our research is firms' profitability which is calculated by the following:
 - Return on assets (ROA) = Net Profit/ Total Assets

- Net profit margin (NPM) = Net Profit / Total Sales
 - The **independent variable** has been separated into two sets.
- First is WCM which includes:
- Cash conversion cycle (CCC) is used to determine the working capital management efficiency. CCC is measured as:

$$CCC = ACP + AAI - APP$$
- Second is control variable which includes:
- Current Ratio (CR) = Current Assets / Current Liabilities

Data analysis

Descriptive statistics

In this section, we have calculated minimum, maximum, mean and standard deviation of all variables in our research. The table 1 shows the descriptive statistics of our variables. The minimum value of CR of all firms is 28% and maximum value is 55% while the mean is 46.4% and SD is 10.3%. The CCC has 26 days as minimum time and 31 days are the maximum time of the textile firms while the mean and SD values are 28.5 & 208.8 days respectively. The minimum value of NPM is -1% while the maximum value of NPM is 2% and mean is -3.2% and standard deviation of NPM is 3.1%. The minimum value of ROA is -3% and maximum value is 7% and the mean is 1.03% and SD is 4.02%. Table 1 shows the theoretical relationship among independent and dependent variables.

Table: 1 Descriptive Statistic

| | Minimum | Maximum | Mean | Std: Deviation |
|-----|---------|---------|-------|----------------|
| CR | .28 | .55 | .4645 | .10345 |
| CCC | .25.5 | 31.0 | 28.59 | 2.0886 |
| NPM | -.11 | .02 | -.031 | .04428 |
| ROA | -.03 | .07 | .0103 | .04027 |

Correlation Analysis:

The Pearson correlation is used to find the relationship among all variables of our research.

Table: 2 Correlations Analysis:

| | CR | CCC | NPM | ROA |
|-----|-------|-------|-------|-------|
| CR | 1 | .116 | -.697 | .218 |
| CCC | .116 | 1 | -.130 | -.749 |
| NPM | -.697 | -.130 | 1 | .257 |
| ROA | .218 | -.749 | .257 | 1 |

The Table 2 shows Pearson Correlation Matrix among the concerned variable (independent variables and dependent variables). Results shows that there was negative correlation of NPM, CR and CCC because ($r = -.697$, $p > 0.01$). There is negative correlation among CCC and NPM & ROA because when firm shorten its CCC as much as possible without disturbing its operation it will enhance the profitability. Results shows there was negative correlation of ROA, CR and CCC because ($r = .218$, $p > 0.01$). The CR and NPM & ROA has a negative correlation among them because when a firm invest its resources in to productive assets – fixed assets instead of investing into current assets, that firm will be able to make larger profit.

Regression Analysis

The results of regression are presented in table 3 given below. The beta value of NPM, CR and CCC is (-.697), significance of “F” is (.124), adjusted R square is (.357) and value of “T” is (1.469). All the results show the negative relationship between the variables CCC, CR and NPM. It shows that our Hypothesis one is accepted because result shows the negative relation between CCC, CR and NPM.

Table: 3 Regression Analysis:

| No | DV | IV | Beta | T | Sig. T | F | Sig. F | Adjusted R Square |
|----|-----|-----|-------|-------|--------|-------|--------|-------------------|
| 1 | NPM | CR | -.697 | 1.469 | .216 | 3.774 | .124 | .357 |
| | | CCC | | | | | | |
| 2 | ROA | CR | .218 | .447 | .763 | .199 | .678 | .191 |
| | | CCC | | | | | | |

The beta value of ROA, CR and CCC is (-.218), significance of “F” is (.678), adjusted R square is (.191) and value of “T” is (.447). All the results show the negative relationship between the variables CCC, CR and NPM. It shows

that our Hypothesis one is accepted because result shows the negative relation between CCC, CR and ROA.

Conclusion

The existing literature suggests that there is a negative relationship b/w the components of WCM and firms' profitability. In study has been conducted in the context of Pakistan textile industry, for which its financial data is taken from 2006 – 2012 Consistent with the literature review; we study their relationship by computing the minimum, maximum, mean, standard deviation, correlation and regression of all variables. For data analysis we have adopted the methodology of Hayajneh and Yassine (2011) which they used for Jordanian manufacturing firms to find out the same relationship.

From data analysis of our study, it is concluded that components of WCM – CR & CCC have the negative effect on the firms' profitability- ROA & NPM. With the effective management policies, the firms are able to reduce its operating cycle days without disturbing its operations that leads to higher profitability. In short, the effectiveness of management policies strengthens the relationship of WCM and Profitability.

Limitations

Pakistan's textile industry is the largest industry that contributes 60% - 65%. The first limitation of our study is the lack of authentic, accurate, and updated data, though the financial statements of some textile firms, Govt. Organizations, Agencies data e.g. Textile Commission Organizations (TCO), Federal Bureau of Statistics (FBS), Export Promotion Bureau (EPB) and Economic Surveys reports are gathered for our research' data analysis. And the second limitation in conducting this research was the shortage of time which was 1 to 2 months.

Future Direction

The future direction of research is that the same study can be conducted in the context of other manufacturing concerns or in non – manufacturing concerns. In non- manufacturing concerns like financial institutions- banks, insurance companies & etc the stated relationship may differ. At financial firms where the current assets are of most importance and required in more abundant form, there may be possible that the relationship among CR, CCC and NPM, ROA may be positive. And other determinants can be added in order to measure the WCM efficiency,

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