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THE SIGNIFICANCE OF WORKING CAPITAL MANAGEMENT AND ITS COMPONENTS ON SMES PERFORMANCE - EVIDENCE FROM INDIA

Abstract:

Purpose-The main aim of present study is to empirically examine the importance of working capital management and its components on the profitability of Small and Medium Enterprises (SMEs) in India.

Design/methodology/approach - We employ panel data regression method on a sample of 433 Small and Medium Enterprises (SMEs) from India for the period spanning from 2007 to 2012. Following Deloof (2003); Garcia-Teruel and Martinez-Solano (2007) and Tauringana & Afrifa (2013), we use Cash Conversion Cycle (CCC) as measure of working capital management and its components (inventory, accounts receivable and accounts payable) and Return on Assets (ROA) as the proxy for SMEs profitability.

Findings -Using panel data analysis, we find that the number of days of inventory (DI), number of days of accounts receivables (DAR), the number of days of accounts payables (DAP) and cash conversion cycle (CCC) are negatively correlated with profitability of SMEs in India. Results further show that the management of inventory (DI) and accounts receivables (AR) are important for SMEs profitability in India, albiet the latter is relatively less important than inventory management. Overall, our findings are consistent with the earlier work on SMEs by Garcia-Teruel and Martinez-Solano (2007) and Tauringana & Afrifa (2013).

Research limitations/implications - Our sample is limited to 433 SMEs, and therefore the findings cannot be generalized to all the SMEs in India.

Practical implications -Results of the present study imply that the SMEs in India need to focus their resources on managing inventory and accounts receivables in order to be more profitable.

Originality/value-To best of author's knowledge, the present study is the first to examine the relationship between WCM and its components to SMEs portability in India. The main contribution of this paper is the finding of relative importance of components of working capital management and their differential influence on profitability of SMEs in the Indian context.

Keywords:

Working capital management, Cash Conversion Cycle, India, Return on assets, Small to medium-sized enterprises, number of days of inventory.

JEL Classification: F40, G10

1. Introduction

Small and Medium Enterprises (*hereafter SMEs*) play a pivotal role in any economy through contributing to employment generation and *GDP* growth **(Sunday, 2011).** SMEs are backbone of economic development and one of the most dynamic agents of growth in all countries as they account for almost 80 percent of global economic growth **(Jutla *et al.*, 2002).** In developing countries more than 90% of the firms except agricultural sector are SMEs and contribute a significant portion in their GDP **(Stephen & Elvis, 2011).** Hence, it is crucial for developing countries to accelerate growth of SMEs in order to achieve sustainable development and equitable growth. In India, the sector is referred to **Micro, Small and Medium Enterprise (MSME)**[i] and credited with generating the highest rate of employment growth and accounts for a major share of industrial production and exports. A report of the Working Group on Micro, Small and Medium Enterprises (MSMEs) Growth for 12th Five Year Plan (2012-2017) estimates that SMEs accounts for 45% of the manufacturing output and 40% of total exports of the country.

As per the 4th All India Census[ii] of MSME "*The sector provides employment to about 80.53 million people through 36.2 million enterprises throughout the country. Over 6000 products ranging from traditional to high-tech items constitute product portfolio of SMEs.*" SMEs also play a key role in the development of domestic economy with their effective, efficient, flexible and innovative entrepreneurial spirit. Despite their significant contributions to the economic development, financial management environment of SMEs is not well explored and documented in the finance literature **(Stephen & Elvis, 2011).**

Management of financial affairs is one of most crucial '*value adding*' activity of an organization and thus should be an inseparable part of top management's decision-making process **(Chandra, 2003).** Recent theoretical developments in financial literature have helped managers in improving financial decision making of business organizations. However, these developments are not uniform among all areas of financial management. Major theoretical advances have been reported with respect to the management of long-run financial decisions of the firm while research related to short-run or working capital decision making appears to be relatively neglected **(Pass & Pike, 1987)** despite the fact that a large number of business failures are due to their inability to manage working capital (**Smith, 1973).** Many enterprises went bankrupt owing to mismanagement of working capital **(Kargar & Blumenthal, 1994)** regardless of their healthy operations and profits*.* It is thus important that enterprises manage their working capital more carefully as it is critical for long-term survival of the business. Effective working capital management (*hereafter WCM*) is equally important both during economic turbulence as well as during economic boom.

Notwithstanding the economic development of the country, WCM remains central to financial management of small firms because capital budgeting and capital structuring issues are comparatively low in such firms. **Berryman (1983)** indicates that poor or

careless WCM is a major cause of SME failure in the UK. Similarly, **Dunn and Cheatham (1993)** also stated that improper working capital management is the primary reason for small business failures in the USA. A substantial fraction of short term funds is usually tied up in different components of working capital. Unlike larger companies, the SMEs have even more limited source of funds and are less likely to have access to financial expertise. It is vital for them to manage their working capital as effectively as possible (**Peel & Wilson, 1996).**

In a recent CFOs survey by **Deloitt (2013)** identifies that *managing working capital* is among top three key organizational concerns faced by companies in India. In another survey by **Ernst &Young (2013)** reveal that the average Cash Conversation Cycle (CCC) of Indian companies is 51 days which is the second highest after their counterparts in Japan that has an average CCC of 57 days.. This shows that Indian and Japanese SMEs are the worst CCC performers as compared to those of other countries, (Canada, Australia and New Zealand have lowest CCC) scoring poorly particularly in the components of accounts receivables and inventories management. The survey further highlighted that SMEs continue to exhibit much higher CCC than large companies. When compared with SMEs, large companies reported superior performance in both receivables and payable management. This is partly due to the fact that in large companies, scale provides greater opportunities to negotiate favorable payment terms with customers and suppliers.

The combination of two above surveys motivate us to empirically investigate the relationship between working capital management and its components to the profitability of Small and Medium Enterprises (SMEs) in the Indian context using a penal data regression method. Our study contributes to the existing literature in a number of ways. The present study is the first to investigate the relative importance of WCM and its components to the profitability of SMEs in India. Secondly, existing research on SMEs in other countries have focused on the listed companies. A lot of information is available about listed companies due to mandatory requirement of publication of financial reports. A very less is known about the working capital management of unlisted companies. The present study provides empirical evidence about the working capital management of 433 unlisted SMEs operating in India and contributes to the literature on SMEs.

The remainder of this paper proceeds as follows: Section 2 briefly discusses the conceptual framework, literature on working capital and hypotheses; Section 3 describes the variables, data, and hypotheses. This is followed by model description in Section 4. Section 5 presents the results of panel data regression analyzes and finally Section 6 offers the summary and conclusion.

2. Literature Review & Hypothesis Development

Although WCM is an integral part of corporate finance and contributes to the success of organizational objectives, this area of corporate finance is less explored in

finance literature*.* But due to significant decline in corporate performance during and after the global financial crisis of 2008 has once again attracted the interest of managers and researchers to WCM because many researchers like **Deloof (2003), Falope & Ajilor (2009)** and **Gill *et al.* (2010)** have proved that WCM affects the profitability of a firm to a great extent.

As widely accepted among market agents, most common objective of firm is to maximize shareholder value and effective management of working capital can contribute significantly towards this goal. Efficient working capital management can anticipate and sometimes avoid potential financial difficulties such as liquidity problems. Empirical evidence suggests that improper working capital management can lead to financial distress, which increases the probability of bankruptcy of the firm. **Smith (1973)** argues that a large number of business failures have been due to improper working capital management. Studies by **Berryman (1983)** and **Dunn and Cheatham (1993)** also state that poor working capital management is the primary reason for small business failures in the UK and the USA.

Closer examination of literature on working capital reveals that a large number of studies examined factors affecting working capital management. On the other hand, a limited number of studies have directly examined the WCM effect on firms' performance. The empirical question, whether a short cash conversion cycle is valuable for the company profitability has been questioned in the previous literature by the researchers. A brief review of earlier work is presented in this section.

Shin and Soenen (1998) in a study about American firms found a strong negative relation between the cash conversion cycle and corporate profitability.   **Deloof (2003)** reports a negative relationship between CCC and profitability in a study of large Belgian firms investigated the relationship between working capital management and gross operating profit. Conclusively, results of the study suggests that managers can create value for their shareholders by reducing the number of days of accounts receivable and inventories to a reasonable minimum. After analyzing a sample of Japanese and Taiwanese firms, **Wang (2002)** shows that a shorter cash conversion cycle is related to better operating performance of firms.

Lazaridis and Tryfonidis (2006), in a study of relationship between WCM and profitability of 131 companies listed at Athens Stock exchange, reports a negative relationship between profitability and CCC providing consistent results with Defloof **(2003).** On the contrary, **Raheman and Nasr (2007)** and **Nobanee & AlHajjar (2009)** document a positive relationship between firm profitability and components of WCM for Pakistani and Japanese firms. These findings are consistent with the conservative strategy of WCM.   In the context of emerging markets, **Zariyawati *et al*. (2009)** investigate the relationship between CCC and profitability for the Malaysian firms for the period of 1996-2006 and find a strong negative significant relationship between WCM and firm profitability. Similarly,

Dong and Su (2010) analyzes the same relationship for the listed firms in Vietnam stock market for the period from 2006 to2008 and their result confirm the findings of **Zaryawati et al**. (2009).

With regard to SMEs, **Garcia-Teruel and Martinez-Solano (2007)** find negative relationship between ROA and CCC for Spanish SMEs providing similar results to those focused on large firms (Deloof, 2003 and others). **Stephne and Elvis (2011)** in their study about 232 SMEs operating in Kenya argue that average debtors days, stock turnover and cash conversion cycle can significantly affect the profitability and firms follow conservative working capital management policy.   In a recent study by **Tauringana and Afrifa (2013)** analyse the relative importance of various components of WCM on a sample of 133 SMEs in the UK. They show that the management of accounts payable (AP) and accounts receivable (AR) are particularly important for profitability of SMEs. However, AP management is relatively more important than AR management.

Prior literature on WCM provides conflicting evidence in respect of the relationship between accounts payables (AP) and profitability. For example, Raheman **and Nasr (2007), Lazaridis and Tryfonidis (2006), Alipour (2011) and Mathuva (2010)** report positive and statistically significant relationships between AP and profitability which is consistent with the aggressive strategy. Contrary, **Shin and Soenen (1998)**, **Deloof (2003), Nobanee and Alhajjar (2009)**, **Zariyawati et al. (2009), Falope & Ajilor (2009), Dong and Su (2010)** and **Karaduman et al. (2010)** all document a negative relationship between AP and profitability which is consistent with the conservative strategy of WCM. The literature on WCM is mostly based on large and listed firms operating in developed economic settings and prior studies provide ambiguous evidence of the nature of relationship exist between aggressive and conservative strategies and SME profitability. Further, these studies can provide little to no understanding about management of working capital in SMEs operating in developing economies due to institutional differences between developing and developed economic settings. The present study is an attempt to fulfill the gap in the existing literature and contribute to the growing area of research in finance.

2.1 Hypothesis Development

Given the fact that findings of existing studies are conflicting as to whether the relationship should be positive or negative, no direction is predicted in the present study. In order to determine the importance of WCM and its components to the profitability of SMEs in India, we propose the following hypotheses.

H1.   *There is a significant relationship between number of days of inventory (DI) and profitability (ROA) of SMEs in India.*

H2.   *There is a significant relationship between number of days of accounts receivables (DAR) and profitability (ROA) of SMEs in India.*

H3.   *There is a significant relationship between number of days of accounts payable (DAP) and profitability (ROA) of SMEs in India.*

H4.   *There is a significant relationship between cash conversion cycle (CCC) and profitability (ROA) of SMEs in India.*

3. Data and Variables

3.1 Data

The data used in the present study was obtained from the *Prowess* database. This database was developed by CMIE Pvt. Limited (Centre for Monitoring Indian Economy) and contains financial and economic data of more than 27,000 Indian companies. We searched the companies in the Prowess database using the definition of SMEs, provided by the *Ministry of Micro, Small and Medium Enterprises* (MSME), Government of India. Our final sample consists of 433 non-listed Small and Medium Enterprises (SMEs) with full information on variables for the study period. The reason of using non- listed firms as sample is drawn from the fact that majority of Indian SMEs are non-listed firms while only a few SMEs are listed on stock exchanges. Finally, a balanced panel of 2598 firm-year observations was obtained, correspond to 433 firms over the period of 2007-2012.

3.2 Variables Definition

 We explore the relationship between SME performance and working capital management and its components in India. To achieve this end, we use profitability as the measure of firm performance and Return on Asset (ROA) is used as a proxy for profitability which is the dependent variable following Falope & Ajilor (2009), Garcia-Teruel and Martinez-Solano (2007), Sharma & Kumar (2011), Mogaka & Jagongo (2013), Afeef (2011). For independent variables, this study use Cash Conversion Cycle (CCC) as a measure of working capital. CCC which is calculated by adding the number of days of inventory to number of days of accounts receivables and then deducting the Number of days of accounts payables. Previous researchers have extensively used CCC as a measure of working capital [*for example see Shin and Soenen (1998), Deloof (2003), Nobanee and Alhajjar (2009), Zariyawati et al. (2009), Falope & Ajilor (2009), Dong and Su (2010) and Karaduman et al. (2010)*]. Together with these variables we include three control variables of firm size (SIZE), Growth (GR) and Leverage (LEV) in our models following the earlier work of *Deloof (2003),* Garcia-Teruel and Martinez-Solano (2007) and Falope & Ajilor (2009). Table I. summarizes the variable definitions and the method of their calculations.

Table 1: Variables Definitions and calculations

Variable	Definition
Dependent Variable	
ROA	It is a measure of profitability. Return on Assets is measured as profit before interest and tax (PBIT) for the year scaled to the total assets (TA) at the end of the financial year.
Independent Variables	
(a) Main Variables	
DI	Number of days of inventory. DI signifies the average number of days a company is holding the inventory. DI is calculated as: (inventories/365)/cost of sales.
DAR	Number of days of accounts receivables. DAR indicates the average number of days a company takes to collect receivables from its customers. DAR is calculated as: (accounts receivables/ sales)* 365 days
DAP	Number of days of accounts payables. DAP indicates the average number of days it takes a company to pay its trade creditors. Number of days of accounts receivables is computed by dividing accounts payables by cost of purchase multiplied by 365 days
CCC	Cash conversion cycle. It represents the length of time, in days, that it takes for a company to convert resource inputs into cash flows. CCC is calculated as: number of days of accounts receivables + number of days of inventory - number of days of accounts payable.
Independent Variables	
(b) Control variables	
SIZE	Size measured by log of total assets (TALOG)
GR	Growth is measured by using Sales growth. It is calculated using the formula: (This year's sales - previous year's sales)/previous year's sales
LEV	Leverage is measured by dividing total debt by total assets

4. The Model Specification

The present study employ panel data regression models to examine the relationship between dependent and explanatory variables and the following regression models examine the relationship between the various components of WCM and firm performances of SMEs in India:

$$ROA_{i,t} = \beta_0 + \beta_1 DI_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GR_{i,t} + \beta_4 LEV_{i,t} + e_{i,t} \tag{1}$$

$$ROA_{i,t} = \beta_0 + \beta_1 DAR_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GR_{i,t} + \beta_4 LEV_{i,t} + e_{i,t} \tag{2}$$

$$ROA_{i,t} = \beta_0 + \beta_1 DAP_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GR_{i,t} + \beta_4 LEV_{i,t} + e_{i,t} \qquad (3)$$

$$ROA_{i,t} = \beta_0 + \beta_1 CCC_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GR_{i,t} + \beta_4 LEV_{i,t} + e_{i,t} \qquad (4)$$

where: $ROA_{i,t}$, return on assets for firm i in the year t; $DI_{i,t}$, number of days of inventory for firm i in year t; DAP_{it}, number of days of accounts payable for firm i in year t; $DAR_{i,t}$, number of days of accounts receivables for firm i in year t; $CCC_{i,t}$, cash conversion cycle for firm i in year t; $SIZE_{i,t}$, size for firm i in year t; $GR_{i,t}$, sales growth for firm i in year t; $LEV_{i,t}$, leverage for firm i in year t; $e_{i,t}$, random disturbance term; and b_o, constant term.

4.1 Descriptive Statistics

The results of descriptive statistics of the dependent (ROA) and independent variables along with control variables are presented in Table 2. According to the Table, return on assets (ROA) of SMEs in India is on average 11.10 per cent, while the median ROA is 10.31 per cent. This suggests that SMEs used in the sample report profits during 2007-2012. The statistics further reveal that SMEs in India takes on average 72 days to turn over their inventory, while the median of days is 57 days, which suggests that most of the sample SMEs keep stock (inventory) for around two months. It takes an average of 76.71 days for these SMEs to receive payments (DAR) and the SMEs on average take 90 days to pay their trade creditors, with a median of 72.70 days. The difference in the accounts receivable and payable days means that the firms follow conservative credit policies. This result also indicates that SMEs are not likely to suffer from cash flow problems, as they pay their creditors in more time (90 days) than it takes their debtors to pay (76 days) them. The average Cash Conversion Cycle (CCC) of 58.93 days suggests that the SMEs in India take around two months to convert resource inputs into cash flows. It is further evident that sample firms have seen their sales growth by 17.57 percent annually on an average, during the study period and mean value of leverage is found to be 0.29 times which indicates that sample firms have around 29 percent debt in their capital structure.

Table 2: Descriptive Statistics

Variable	Mean	Median	Maximum	Minimum	SD
ROA	0.111046	0.103130	2.013873	-0.423596	0.097779
DAR	76.71947	64.09512	549.3434	1.012483	59.56783
DAP	90.29856	72.70116	575.3086	1.439274	76.06599
DI	72.51645	57.08582	406.0625	1.115278	56.58400
CCC	58.93735	51.50299	564.4146	-281.0978	86.90677
SIZE	5.339647	5.404028	7.590549	2.240710	0.812631
GR	0.175741	0.111443	8.170732	-0.783963	0.482496
LEV	0.290996	0.271208	0.988270	0.000504	0.185922

Note: **ROA**: return on assets for firm; **DI**: number of days of inventory; **DAP**: number of days of accounts payable; **DAR**: number of days of accounts receivables; **CCC**: cash conversion cycle; **SIZE**: size of firm; **GR**: sales growth; **LEV**: leverage for firm.
(Source: Output obtained through SPSS)

5. Results and Discussion

5.1 Correlation Analysis

The correlation coefficients (Pearson) for both dependent and independent variables used in the study are tabulated in Table III.. The results of correlation analysis indicates a significant and negative correlation between profitability as measured by return on assets (ROA) and all components of Cash Conversion Cycle i.e. number of days of inventory (DI), number of days of accounts receivable (DAR) and number of days of accounts payable (DAP). The results further indicate that Cash Conversion Cycle (CCC) – a complete measure of working capital, is also negatively correlated with profitability of SMEs in India. These negative correlations are consistent with argument that the smaller the time duration between production and sale of products, the larger the firm's profitability. Also, the negative relation between number of days of accounts payable (DAP) and return on assets (ROA) indicate that SMEs in India delay their payment towards their suppliers than they collects from the debtors. Our correlation results between ROA and WCM components are in support of **Garcia-Teruel and Martıinez-Solano (2007)** who also found similar effect of WCM on profitability of SMEs in Spain.

The sign and the significance of control variables are also reported in Table 3. Size reports positive but statistically insignificant coefficient while growth (GROW) shows a positive and

significant association with firm profitability. Leverage (LEV) as measured by ratio of debt to total assets exhibits negative and statistically significant coefficient.

Table 3: Correlation Matrix

	ROA	DAR	DI	DAP	CCC	SIZE	GR	LEV
ROA	1.0000							
DAR	-0.1533***	1.0000						
DI	-0.1891***	0.2193***	1.0000					
DAP	-0.1211***	0.4238***	0.3044***	1.0000				
CCC	-0.1222***	0.4572***	0.5349***	-0.3865***	1.0000			
SIZE	0.0045	0.0092	-0.0104	0.0383**	-0.0340*	1.0000		
GR	0.1365***	-0.051***	-0.1302***	-0.0888***	-0.0423**	-0.0154	1.0000	
LEV	-0.1044***	-0.0238	0.0974***	-0.0775***	0.1149***	0.0522***	0.0207	1.0000

Notes: *Variables as defined in Table 1; ***, **, *statistically significant at 0.01, 0.5 and 0.1 levels, respectively*
(Source: Output obtained through SPSS)

5.2 Regression Results and Discussion

The present study employs panel data regression method to test the four hypotheses. Panel data regression is a comparatively reliable technique for a sample of cross-sectional time series data **(Ismail, 2006).** We used balanced panel data regression as compared to the unbalanced panel data because balanced panel data allows the equal observations for every unit of observation for each time period **(Tauringana & Afrifia, 2013).** We conducted two sets of tests in order to test the fixed effects model against the standard model (the fixed effects) and the random effects against the fixed effects model (Hausman test) respectively. The fixed effects test was performed first to see whether the result of standard or fixed effects model is appropriate. The fixed effects test evaluates the statistical significance of the estimated effects. The results of fixed effects models indicate that fixed effect is acceptable in the estimates. **Hausman** test compares the fixed versus random effects under the null hypothesis that the individual effects are uncorrelated with the other regressors in the model **(Hausman, 1978)**. Hausman's key findings are that the covariance of an efficient estimator with its difference from an inefficient estimator is zero (Greene, 2003; Baltagi, 2001; Woodridge, 2002). The outcome of our analysis of Hausman's test

found that null hypothesis is rejected thereby indicating that fixed effects models are preferred over random effects in the present study.

Table 4 presents the results of fixed effect panel data regression obtained after regressing the equations (1), (2), (3) and (4). As one would expect, the statistically significant coefficient shows that the number of days of inventory (DI) is negatively associated with the profitability of SMEs in India. Further, model (1) explains 30.50 per cent of the variation in profitability. Among the control variables in model (1), growth (GR) has a strong positive relationship with the profitability of the firm as the variable takes a statistically significant coefficient at 1% confidence level; however size (SIZE) has negative but not statistically significant impact on firm profitability. Surprisingly leverage (LEV) shows a significant inverse relationship with profitability despite the tax advantages of debt capital in firm's capital structure.   Overall the results of model (1) indicate that SME's return on assets is reduced by lengthening the number of days of inventory. This support and accept our hypothesis (H1) that there is a significant relationship between number of days of inventory (DI) and profitability (ROA) which is negative.

Table 4: Fixed Effect Regression Results

	Model 1	Model 2	Model 3	Model 4
Adjusted R^2	0.305067	0.299754	0.304142	0.29549
F- Statistics	3.614798 (0.0000)	3.549765 (0.0000)	3.603399 (0.0000)	3.49836 (0.0000)
Hausman-test	18.743380	18.596027	22.347317	23.680019
Main Variables[a]				
Number of days of Inventory (DI)	-0.000318 (-5.513556)***			
Number of days of Accounts receivables (DAR)		-0.000218 (-3.711104)***		
Number of days of Accounts payable (DAP)			-0.000201 (-5.242608)***	
Cash conversion cycle (CCC)				-0.000090 (-3.43838)***
Control Variables[b]				
SIZE	-0.002883 (-0.456097)	-0.004465 (-0.704746)	-0.003819 (-0.605075)	-0.006458 (-1.019813)
LEVERAGE	-0.131997 (-6.686705)***	-0.139144 (-7.048554)***	-0.153391 (-7.767860)***	-0.140122 (-6.960203)***
GROWTH	0.021052 (5.638110)***	0.023173 (6.243817)***	0.022826 (6.197932)***	0.024814 (6.698332)***

Notes: [a,b] *All variables as defined in Table 1; t- statistics are shown in parentheses; *** statistical significant at 0.01 level.*

(Source: Output obtained through SPSS)

In model (2), return on assets (ROA) is regressed on the number of days of average receivables (DAR). The results show that the number of accounts receivables (DAR) is negatively associated with profitability and highly statistically significant at 1 percent level. These results indicate that profitability of SMEs is reduced by increasing the number of days of accounts receivable. The coefficients of control variables included in the model are highly significant except for firm size (SIZE). Our finding is in support of **Myers and Majlof (1984); Rajan and Zingales (1995); Shin and Soenen (1998) and Deloof (2003)** who found a negative relationship between leverage and profitability. Growth (GR) is found to be positively associated with the profitability. This indicates that increase in sales affect the profitability of SMEs in a positive way. **Deloof (2003); Garcia-Teruel and Martıinez-Solano (2007); Tauringana & Afrifa (2013)** and **Raheman *et al*. (2007)** also concluded that sales growth had a positive relationship to firms profitability. Overall, the results of model (2) support our hypothesis that there exists a significant relationship between the number of days of accounts receivables (DAR) and profitability of SMEs in India and the relationship is negative for Indian SMEs.

In DAP model (3), number of days of accounts receivables (DAR) is replaced with number of days of accounts payable (DAP). The coefficient of number of days of accounts payable is also found to be negative which implies that lengthening the payment period to creditors decrease the profitability of SMEs in India. The coefficient of DAP takes a negative value but highly statistically significant at 1 per cent level. Such significant negative association between number of days of accounts payables and profitability goes in line with the arguments for conservative strategy of working capital management. It is also consistent with the view that less profitable firms wait longer to pay their bills. The findings of model (3) are consistent with the earlier studies by **Deloof (2003); Padachi (2006); Garcia-Teruel and Martinez-Solano (2007) and Tauringana & Afrifa (2013)** which also found negative and statistically significant association between number of days of accounts payable and profitability thereby confirming the conservative WCM policy. There is no change in the direction of regression coefficients generated for control variables as Leverage (LEV) and growth (GROW) shows negative and statistically significant association with ROA. Overall, the results of model (3) confirm and accept our hypothesis (H3) that there is a significant relationship between the number of days of accounts payables (DAP) and SMEs profitability and the association is negative in India.

In model (4), Cash Conversion Cycle (CCC) - a complete measure of working capital management is included with other variables. The results provide strong evidence of a negative relationship between CCC and ROA where the coefficient is negative and highly significant at 1 per cent level. This result is in agreement with the predictions of financial literature that shortening the CCC will generate more profits for the SMEs. This also means that by keeping the CCC to minimum level, Indian SMEs can create value for their shareholders. The overall results indicate negative and statically significant relationship

of the number of days of accounts receivables (DAR), number of days of inventory (DI), number of days of accounts payable (DAP) and cash conversion cycle (CCC) with profitability of SMEs in India. These results mean that SME's return on assets is reduced by increase in the number of days of accounts receivables (DAR), number of days of inventory (DI) and number of days accounts payable (DAP), leverage and size. The results of panel data regression highlight the significance of having an efficient working capital management for SMEs in India. The Mangers of SMEs can increase profitability by reducing the number of days of inventory (DI) , number of days accounts receivables (DAR), number of days accounts payables (DAP), number of days of cash conversion cycle (CCC), and leverage (LEV). Panel data regression results reveal that the adjusted R-Square lies between 29 to 30% in all four fixed effect models and F-statistics are significant. Finally, in order to investigate the relative importance of WCM components, the regression t-values, are analysed as presented in Table IV. Closer examination of *t-* statistics as given in parentheses indicate that, management of number of days of inventory (DI) is the most important to the profitability of firms, followed by number of days of accounts payables (DAP). Further, the negative *t*-values of these variables imply that SMEs in India that pay the accounts payable (AP) and collect their accounts receivable (AR) more quickly are more profitable. The relative importance of inventory management compared to accounts payable management to the profitability of Indian SMEs means that inventory management practices make considerable difference to the profitability most likely due to the minimising of risk of stock-out, opportunity cost of lost order. This indicates that sample SMEs are more concerned about maintaining inventory. This finding is contrary to the study by **Tauringana & Afrifa (2013)** who stress that management of accounts payable (AP) is more important than managing inventory or managing accounts receivable for SMEs in the UK,. Further comparison of t-statistics between accounts payables (DAP) and accounts receivables (DAR) indicate that managing accounts payables is more important than managing accounts receivables in SMEs in India.

6. Conclusion

Working capital management is important for all kind of businesses but in particular for small and medium-sized (SMEs) enterprises. This is due to the fact that significant fraction of the assets of such business is in the form of current assets. The main objective of the present study was to investigate the effect of WCM and its components on profitability in Small and medium enterprises (SMEs) in India. The study was based on the financial data of 427 SMEs over period 2007-2012.

 Our findings revealed that number of days of inventory (DI), number of days of accounts receivables (DAR), number of days of accounts payables (DAP) and cash conversion cycle (CCC) exhibits negative relationship with SMEs profitability (ROA) in India. The results further indicate that management of inventory and accounts payable period are the two most important WCM components affecting profitability of SME firms. The results imply that SMEs in India should focus on inventory management and relationship with creditors

(suppliers) in order to maximize the benefits from both accounts receivable period and accounts payable period. SMEs should also focus on suppliers in order to reduce its inventory turnaround time. Also, a strong relationship between a company and its suppliers will lead to better terms being offered to the firm by suppliers. This is very important in case of SMEs as suppliers' credit (creditors) is most important source of working capital financing. This is practically true in case of Indian SMEs as evident from sample data that average number of days of accounts payables is higher (90 days) than the number of days of accounts receivables (76 days).All in all, the findings of the present study highlights that management of working capital (WCM) and its components should be the concern of all the SMEs in India and need to be given due importance as it affects the profitability of firms.

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End Notes

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[i] *In accordance with the provision of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two Classes.*

Manufacturing Sector

Enterprises	*Investment in plant & machinery*
Micro	*Does not exceed twenty five lakh rupees*
Small	*More than twenty five lakh rupees but does not exceed five crore rupees*
Medium	*More than five crore rupees but does not exceed ten crore rupees*

Service Sector

Enterprises	*Investment in equipments*
Micro	*Does not exceed ten lakh rupees:*
Small	*More than ten lakh rupees but does not exceed two crore rupees*
Medium	*More than two crore rupees but does not exceed five core rupees*

[ii] *The fourth All India census of MSME was launched by the Office of Development Commissioner (MSME) in May 2008 with 2006-07 as reference year and completed during 2011-12.*