

THE EFFECT OF WORKING CAPITAL MANAGEMENT ON THE PROFITABILITY OF SMALL AND MEDIUM ENTERPRISES: META-ANALYSIS

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ABSTRACT

The relatively small amount of literature related to working capital management (WCM) has contributed to some issues relevant to WCM literature, including a lack of inter-country research. The primary aim of this study was to review research on the impact of WCM on SMEs' profitability to help researchers specify gaps in the literature and direct research efforts considering how WCM has attracted research attention, especially after the financial crisis in 2008. This paper has been carried out by adopting the SLR methodology. To the best authors' knowledge, the inter-country review regarding the topic has been almost nonexistent to date. The review has concluded that there is a negative relation between WCM and SMEs' profitability. Complete discussion can be concluded that further researchers can provide more empirical evidence from other countries to support the finding.

Keywords: Literature review, Working capital management (WCM), Profitability, SME, Inter-country

INTRODUCTION

The main goal of the company is to maximize prosperity for its shareholders. One way to achieve this goal is to increase profitability which is used to assess company performance. Gitman and Zutter (2015) define profitability as a company's ability to generate profits over a certain period. From a financial point of view, the possibility of a company to achieve financial success is influenced by profitability because it becomes a reference for stakeholders consisting of creditors, suppliers,

and also investors to see how far the company can generate profit from sales and investment of the company. In order to obtain profitability, all company resources must be mobilized as effectively and efficiently as possible. One part of the resource that can have an impact on profit is working capital.

Singh et al. (2014) state that over the last 40 years, major theoretical developments have taken place in the realm of long-term investment and financial decision-making. Many of these new concepts and related techniques have been applied successfully to

industrial practice. In contrast to this, much less attention is paid to the short-term financial space, especially regarding working capital. Such waiver may be acceptable considering that working capital only has a small level of interest in the company. For this reason, only peripheral research has appeared in the working capital management literature. Other reasons include, first, decisions related to working capital are things that often occur and are routine in nature so that individually, the impact is not significant. Second, unlike policies related to investment capital, these routine decisions can be changed at any time.

However, the financial crisis that occurred in 2008 has attracted managers and researchers to study working capital. Many studies such as those conducted by Deloof (2003), Falope and Ajilore (2009), and Gill et al. (2010) show a large effect of working capital on company profitability. Wang (2002) states that aggressive liquidity management can improve operating performance which is generally associated with an increase in firm value.

Seeing the curiosity of researchers for literature studies that discuss working capital, Singh et al. (2014) in the journal "Working Capital Management: a Literature Review and Research Agenda" conducted a study of published literature on capital management to identify and analyze the main characteristics

of the literature on working capital needed to deepen understanding of the topic. From the analysis conducted on the 126 articles obtained, problems were identified in the available literature, including:

1. The lack of systematic theory development, this is probably due to the minimal number of studies on working capital and most of the research conducted is a test of the effect of working capital on profitability.
2. The dominance of empirical research, only a few studies were conducted using a survey approach.
3. Lack of cross-country research, most studies only use one country or one company as an analysis sample.

Working capital management is important considering its impact on profitability and risk, which in turn affects firm value (Smith, 1980). Specifically, working capital investment involves a trade-off between profitability and risk. Decisions made to increase profitability generally tend to increase risk and vice versa. Gitman (1974) argues that the cash conversion cycle (CCC) is a key factor in working capital management because it reflects the decision on the amount of investment in consumer and inventory accounts, and how much credit to receive from suppliers.

Previous studies have used CCC as a basis for analyzing the effect of CCC's short term on company profitability. Empirical evidence from studies conducted on large companies such as that of Shin and Soenen (1998) on American companies, Deloof (2003) on Belgian companies, and Wang (2002) on companies in Japan shows a significant negative relationship between working capital management and profitability. In this case, it can be concluded that reduced working capital investment will result in higher profitability.

Working capital management is especially important for small and medium enterprises (hereinafter referred to as SMEs) considering that most of the company's assets owned by SMEs are current assets. Not only that, current liabilities are one of the main sources of external financing because in general, SMEs experience difficulties in obtaining long-term funds from the capital market (Peterson and Rajan, 1997) and the financial limitations faced by these companies (Whited, 1997; Fazzari and Petersen, 1993). Therefore, efficient working capital management is especially important for small companies because in general, small companies operate on short-term businesses.

Motivated by the third point identified by Singh et al, and the importance of working capital management, especially in small

companies, the researchers decided to conduct a cross-country literature review by recapitulating the studies that had been conducted regarding the effect of working capital management on profitability in SMEs (small to medium -sized enterprises/ SMEs). Until now, researchers have not found any literature review that discusses and concludes the effect of working capital management on the profitability of SMEs in various countries conducted by previous researchers, so this paper is expected to fill this gap in the literature.

LITERATURE REVIEW

Working Capital Management Concept

Working capital management (hereinafter referred to as WCM) is related to all management decisions that affect the size and effectiveness of work management (Kauf, 2010). Working capital management is important to financial health, in both large and small companies.

Working capital is an investment in short-term assets or current assets that are used as the company's daily operating costs. Working capital can be categorized into two, namely gross working capital and net working capital. Gross working capital is the amount of current assets, and net working capital is the amount of current assets minus the amount of current

liabilities. Working capital management manages current assets and current liabilities so that current assets are always greater than current liabilities.

Both current assets and current liabilities are part of short-term finance. Short-term financial management is carried out with the aim of managing each element of current assets and current liabilities to achieve a balance between profitability and risk that makes a positive contribution to company value. Included in current assets include: inventory, accounts receivable (AR), current liabilities, cash and marketable securities). While those included in current liabilities include: debt (accounts payable/AP), accruals, and notes payable.

The cash conversion cycle (CCC) is a popular WCM measurement tool and has been used in many studies such as those conducted by Deloof (2003), Raheman and Nasr (2007), and Garcia-Teruel and Solano (2007) to measure the impact working capital (WCM) on company profitability. CCC is the time difference between the purchase of raw materials and the sale of finished goods. The longer the cycle means the more investment is made in working capital. Reducing CCC to a reasonable minimum generally leads to increased profitability (Karaduman et al., 2011; Jose et al., 1996).

METHOD

As recommended by Fink (2005), a methodology with a systematic approach, an explicit explanation of implementation procedures, and a comprehensive scope including all relevant material related to the phenomenon presented needs to be presented. In this case, the systematic literature review (SLR) method was applied to this study.

A systematic review is a research method used to identify, evaluate, and interpret all research results, topics, or certain phenomena of concern (Kitchenham, 2004). Contrary to an individual study which is a form of primary study, a systematic review is a secondary study which is useful for synthesizing various relevant research results. In principle, a systematic review is a research method that summarizes the results of primary research to present more comprehensive and balanced facts. This systematic review is carried out in the following order:

- 1) Identification of research questions
- 2) Setting limits on the data to be used
- 3) Data search
- 4) Selection of relevant and appropriate research results
- 5) Data extraction from selected individual studies

- 6) Synthesize the results with the narrative method
- 7) Presentation of results

profitability is measured through Return of Assets (RoA).

RESULT AND DISCUSSION

In this study, researchers have searched published journals that discuss the effect of working capital management on profitability. Researchers used the Google Scholar search site and most of the journals were obtained from Emerald. The search starts with a keyword which is then restricted at a later stage. The limitations used in the literature taken include:

- 1) Articles published within the last 15 years (2006-2021).
- 2) The paper discusses the effect of working capital management on profitability in one country, with a population of at least 300 SMEs.
- 3) Working capital management is measured through CCC and

Because the majority of research on the effect of working capital management on profitability discusses large companies or only discusses one company, there are not many articles that can be used as research material. From searches conducted through the Google Scholar search site, there are a total of 9 articles that discuss the effect of working capital management (WCM) on profitability in SMEs in a country. The recapitulation of the articles in question is sorted based on the order of publication year and can be seen in Table I:

Table I Publication of Working Capital and Profitability for 2006 - 2021

No	Title	Author	Country	Aim	Method			Result
					Type	Populati on	Proxi	

No	Title	Author	Country	Aim	Method			Result
					Type	Populati on	Proxi	
1.	Effects of Working Capital Management on SME Profitability (2007)	Pedro Juan Gracia-Teruel & Pedro Martinez-Solano	Spain	Analyze the influence of working capital management on the profitability of SMEs	Metode Panel Data	8,872 SMEs in Spain in 1996-2002	1) Independent variables : WCM is measured by CCC, AR, AP, & inventory 2) The dependent variable: Profitability is measured by RoA 3) Control variables : company size, sales growth, leverage	1) WCM is important for SMEs 2) There is a negative relationship between SME profitability and the number of days of accounts receivable (AR) and inventory 2) There is no significant relationship between the number of account payable (AP) days and the return on SME assets 3) There is a negative relationship between CCC and profitability so that SMEs should pay attention to WCM by creating value by reducing

No	Title	Author	Country	Aim	Method			Result
					Type	Population	Proxi	
								CCC to a minimum as far as it is reasonable.
2.	Working capital management profitability : sensitivity analysis (2013)	Arun kumar O.N & T. Radha R	India	Knowing the results of the relationship between the level of working capital measured by the cash conversion cycle (CCC) and the profitability of small and medium enterprises (SMEs)	Correl analysis and small squares regression analysis	1,198 manufacturing companies listed on India's Economic Monitor for the 5th term	1) Independent variables : WCM is measured through the number of debtor days, inventory days, number of creditor days, current ratio, current liability ratio to total assets, financial assets to total assets, size, & asset turnover ratio	1) There is a positive relationship between RoA and the number of debtor and inventory days. 2) There is a negative relationship between the number of creditor days and profitability , which means that the more number of days payable (AP) leads the company to lower profitability and vice versa.

No	Title	Author	Country	Aim	Method			Result
					Type	Populati on	Proxi	
							2) Depende nt variable: Profitabil ity is measure d by ROA	
3.	The Relative importanc e of working capital manageme nt and its componen ts to SME's Profitbilty (2013)	Venanci o Tauring ana & Godfred Adjapo ng Afrifa	England	Analyze the effect of working capital on the profitability of SMEs	Regressi on analysis and question naire	133 SMEs registre d in the Alternati ve Investme nt Market (AIM) in the period 2005- 2006 UK compani es	1) Independ ent variable: WCM is measure d by cash conversi on cycle, number of days accounts receivabl e, inventor y and accounts payable 2) The depende nt variable: Profitabil ity is measure d by Return of Assets (RoA) 3) Control variables : quick	Shows that Debt managemen t (AP) and accounts receivable (AR) are important to inventory profitability , And CCC managemen t is not critical to profit.

No	Title	Author	Country	Aim	Method			Result
					Type	Populati on	Proxi	
							ratio, inventor y, total assets, fixed assets, & leverage	
4.	Influence of Working Capital Management on Firms Profitability: A Case of SMEs in Kenya (2013)	Muchina Stephen & Kiano Elvis	Kenya	Analyze the influence of working capital management on the profitability of Kenyan companies	Panel data method	Fixed panel data from 232 companies were used	1) Independent variables : WCM is measured by APP, stock turnover rate in days (STRD), ACP, & CCC 2) Dependent variable: Profitability is measured by (ROA)	1) There is a significant negative effect between ITID and ACP on profitability 2) There is no evidence that APP affects RoA 3) CCC has a significant effect on profitability , but the research does not state the relationship directors.
5.	Impact of Working Capital Management and Corporate Governance on The Profitability of Small and Medium	Muhammad Musa Tsagem , Norhani Aripin, & Rokiah Ishak	Nigeria	Provides a research model on the effect of working capital management on profitability in SMEs in Nigeria.	Regression Analysis	378 SMEs in Nigeria Period 2005-2013.	1) Independent Variable: WCM is measured by ARP, IHP, APP, CCC, CH,	There is a negative relationship between CCC and profitability

No	Title	Author	Country	Aim	Method			Result
					Type	Population	Proxi	
	Sized Entities in Nigeria: A Proposed Model (2014)						EWCM, CGM 2) Dependent variable: Profitability is measured by RoA and GoP 3) Control variables : Size, Leverage , SGROW , Age, GDP	
6.	Effect of Working Capital Management on SME's Performance in Pakistan (2014)	Snober Javid	Pakistan	To prove the researchers' expectations regarding the possible influence of WCM efficiency on the performance of small and medium enterprises in Pakistan	Random effects regression model on panel data	54 SMEs listed on the Karachi stock exchange for a period of five years 2006-2010	1) Independent variables : WCM is measured by ITID, ACP, APP, CCC, and NTC 2) Dependent variable: Profitability is measured	1) SME with shorter ITID, ACP, and APP results in greater profitability . 2) No evidence was found that CCC and NTC have any effect on profitability .

No	Title	Author	Country	Aim	Method			Result
					Type	Population	Proxi	
							through RoA 3) Control variables : financial debt ratio, firm size, sales growth, & current ratio	
7.	Working Capital Management and SMEs Profitability: Portuguese Evidence (2015)	Maria Amélia, Pais Paulo, M Gama	Portugal	Provides empirical evidence regarding the influence of WCM on SMEs in Portugal	Panel data method	6,063 SMEs in Portugal in the period 2002-2009 obtained from SABI database (Iberian Balance Sheets Analysis System)	1) Independent variables : WCM is measured by AR, AP, INV, & CCC 2) The dependent variable: profitability is measured by RoA 3) Control variables : firm size (SIZE), SGROW ,	1) There is a negative relationship between AR, INV, & CCC with profitability 2) There is a positive relationship between AR and profitability 3) There is a positive relationship between SIZE, SGROW, GDPGR, & CLR with profitability , and negative with DEBT.

No	Title	Author	Country	Aim	Method			Result
					Type	Population	Proxi	
							leverage (DEBT), CAR, & CLR	
8.	The effect of working capital management on profitability in small and medium enterprises in Indonesia (2016)	Farah margaretha & Cindy oktaviani	Indonesia	Knowing the effect of the components of working capital management consisting of cash conversion, day in account, receivable period, day of inventory, and day in account payable period on those measured using ROA, ROE, gross operating profit	Regression equation with the calculation of working capital and profitability.	42 SMEs that have been listed on the PEFINDO index 25 for the 2009-2014 period	1) Independent variable: WCM is measured by CCC 2) Dependent variable: Profitability is measured by RoA and RoE	1) CCC has a negative effect on profitability when measured by ROA 2) CCC has a positive effect on profitability when measured by ROE
9.	Effects of Working Capital Management on SME Profitability: Evidence from an Emerging Economy, 2021	Italy and Argentine	Luca Sensini & Maria Vazquez	This paper's main objective was to evaluate the influence of working capital management policies on Argentine agro-industrial firms' profitability	Regression	326 MSMEs	individual determinants of working capital (DSO, DSI, DPO and CCC) as independent variables, while EBITDA	The results of the study show that the variables (DSI, DPO and CCC) have a negative effect on company profitability, meaning that investing in

No	Title	Author	Country	Aim	Method			Result
					Type	Populati on	Proxi	
								inventory and asking for greater extensions from suppliers causes additional costs that cannot offset the benefits generated.

Source: processed by researchers in 2023.

After selection based on predetermined limits, studies conducted in the Czech Republic, Pakistan, England, Kenya and Indonesia were eliminated because they did not meet the minimum population requirements so that only 5 articles would

be discussed in this study. Recapitulation of selected articles that discuss the effect of working capital management (WCM) on profitability in SMEs identified through the SLR can be summarized in Table II:

Table II Recapitulation of research articles that have been published after selection

No	Journal	Country	Author	Aim	Method			Result
					Type	Populati on	Proxi	
1.	Effects of Working Capital Management on SME Profitability (2007)	Pedro Juan Gracia-Teruel & Pedro Martinez-Solano	Spain	Analyze the influence of working capital management on the profitability of SMEs	Data Panel Method	8,872 SMEs in Spain in 1996-2002	1) Independent variables : WCM is measured by CCC, AR, AP, & inventory	1) WCM is important for SMEs 2) There is a negative relationship between SME profitability and the number of days of accounts

No	Journal	Country	Author	Aim	Method			Result
					Type	Populati on	Proxi	
							2) The dependent variable: Profitability is measured by RoA 3) Control variables : company size, sales growth, leverage	receivable (AR) and inventory 2) There is no significant relationship between the number of account payable (AP) days and the return on SME assets 3) There is a negative relationship between CCC and profitability so that SMEs should pay attention to WCM by creating value by reducing CCC to a minimum as far as it is reasonable.

No	Journal	Country	Author	Aim	Method			Result
					Type	Populati on	Proxi	
2.	Working capital management profitability : sensitivity analysis (2013)	Arun kumar O.N & T. Radha R	India	Knowing the results of the relationship between the level of working capital measured by the cash conversion cycle (CCC) and the profitability of small and medium enterprises (SMEs)	Correl analysis and small squares regression analysis	1,198 manufacturing companies listed on India's Economic Monitor for the 5th term	1) Independent variables : WCM is measured through the number of debtor days, inventory days, number of creditor days, current ratio, current liability ratio to total assets, financial assets to total assets, size, & asset turnover ratio 2) Dependent variable: Profitability is measured by ROA	1) There is a positive relationship between RoA and the number of debtor and inventory days. 2) There is a negative relationship between the number of creditor days and profitability , which means that the more number of days payable (AP) leads the company to high profitability and vice versa.
3.	Impact of	Muham	Nigeria	Provides a	Regressi	378	1)	There is a

No	Journal	Country	Author	Aim	Method			Result
					Type	Population	Proxi	
	Working Capital Management and Corporate Governance on The Profitability of Small and Medium Sized Entities in Nigeria: A Proposed Model (2014)	mad Musa Tsagem, Norhani Aripin, & Rokiah Ishak		research model on the effect of working capital management on profitability in SMEs in Nigeria.	on Analysis	SMEs in Nigeria Period 2005-2013.	Independent Variable: WCM is measured by ARP, IHP, APP, CCC, CH, EWCM, CGM 2) Dependent variable: Profitability is measured by RoA and GoP 3) Control variables : Size, Leverage, SGROW, Age, GDP	negative relationship between CCC and profitability
4.	Working Capital Management and SMEs Profitability: Portuguese Evidence (2015)	Maria Amélia, Pais Paulo, M Gama	Portugal	Provides empirical evidence regarding the influence of WCM on SMEs in Portugal	Panel data method	6,063 SMEs in Portugal in the period 2002-2009 obtained from SABI database	1) Independent variables : WCM is measured by AR, AP, INV, & CCC 2) There is a positive relationship	1) There is a negative relationship between AR, INV, & CCC with profitability 2) There is a positive relationship

No	Journal	Country	Author	Aim	Method			Result
					Type	Population	Proxi	
						(Iberian Balance Sheets Analysis System)	2) The dependent variable: profitability is measured by RoA 3) Control variables : firm size (SIZE), SGROW , leverage (DEBT), CAR, & CLR	between AR and profitability 3) There is a positive relationship between SIZE, SGROW, GDPGR, & CLR with profitability , and negative with DEBT.
5.	Effects of Working Capital Management on SME Profitability: Evidence from an Emerging Economy, 2021	Italy & Argentine	Luca Sensini & Maria Vazquez	This paper's main objective was to evaluate the influence of working capital management policies on Argentine agro-industrial firms' profitability .	Regression	326 MSMEs	individual determinants of working capital (DSO, DSI, DPO and CCC) as independent variables , while EBITDA	The results of the study show that the variables (DSI, DPO and CCC) have a negative effect on company profitability , meaning that investing in inventory and asking for greater extensions from suppliers causes additional

No	Journal	Country	Author	Aim	Method			Result
					Type	Populati on	Proxi	
								costs that cannot offset the benefits generated.

Source: processed by researchers in 2023.

Gitman (1974) argues that the cash conversion cycle (CCC) is a key factor in working capital management. Many researchers who use CCC as a basis have established a significant negative relationship between working capital management and profitability. All the studies discussed in the table have results that are in line with previous studies where research conducted in Spain, India, Nigeria, Portugal and Argentina showed a negative relationship between working capital management and profitability.

RESULT

Departing from the problems identified by Singh et al. (2014) in the journal "Working Capital Management: a Literature Review and Research Agenda" regarding the lack of cross-country research, where most studies only use one country or one company as a sample analysis of the available literature, this literature review was made with the aim The main objective is to recapitulate the research that has been

conducted on the effect of working capital management on profitability in SMEs (small to medium-sized enterprises/ SMEs) with the hope that it will make it easier for other researchers to explore the topic and make comparisons on topics in various countries. This literature review was carried out by adopting the SLR method which in the end recapitulated 4 articles that met the criteria. All articles recapitulated show results that are in line with other studies conducted using CCC as a basis, where there is a negative relationship between working capital management and profitability in SMEs in various countries. Based on this, the researcher concludes that there is a negative relationship between working capital and SME profitability. The lack of literature and empirical evidence in other countries makes research and the search for empirical evidence from other countries that can support or reject the proposed hypotheses necessary for future research.

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