

THE SYSTEMATIC LITERATURE REVIEW: AN OVERVIEW ON WORKING CAPITAL MANAGEMENT AND PROFITABILITY

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Abstract

This systematic review examines the relationship between working capital management (WCM) and profitability, with a focus on the impact of cash conversion cycle (CCC) on profitability. Out of the 53 independent studies analyzed, only those that used CCC as a measure for WCM were selected for analysis. The review found that efficient WCM, specifically the optimal level of CCC, has a significant impact on profitability. Firms should review their receivables and payable policy to maintain market value, shareholders' wealth, and minimize the risk of bankruptcy. Accelerating cash collections through proper management, effective policies, and corporate strategies also improves profitability. The study highlights CCC as a powerful tool for firms to manage their working capital efficiently. The review suggests that firms should maintain an optimal CCC level and effective management practices to improve WCM and profitability. Further research using qualitative research methods is needed to gain a deeper understanding of WCM practices.

Keywords: Return on Asset, Return on Equity, Net operating profit, Cash Conversion Cycle

1. INTRODUCTION

A financial metric responsible for the company's financial health, efficiency, and liquidity are known as working capital management. It varies from company to company and industry to industry. It covers short-term accounts including receivables, payables, debt management, inventory management, and cash management, and thus is a result of various activities of the firm. Working capital management's ineffectiveness means a company is unable to meet its short-term obligations. Rahman & Nasr (2007) stated that the profitability and liquidity of a company are affected by working capital management.

Zill-e-Huma (2015) while describing working capital said a large part of the operations of a small-sized organization usually is heavily based on working capital management. Thus, to regularly measure liquidity, efficiency and overall health Company or firm should maintain working capital as it comprises payables, receivables, cash, and inventory. Proper management of investment of funds of any organization is said to have efficient management. There are two main reasons that every business need funds that are for running their business on daily basis or for daily operations and for development and growth. Zafar *et al.* (2016) comment that the profitability of an organization and liquidity at its desired level is explicitly the impact and result of working capital management. They additionally advocate that it helps to manage financial performance and helps in decisions making related to short-term financing and WCM.

Sarwat *et al.* (2017) present arguments to emphasize that for the long-term success of the organization it is very much important that the firm should utilize the organizational resources and these resources can be reutilized by using them into long and short-term assets. Those organizations which maintain their working capital requirement from time to time also tend to maintain liquidity through the continuous flow of production, payment of salaries, purchasing inventory managing labor requirements, and so on.

Iqbal & Zhuquan (2015) defines working capital management as a most significant and important module of finance and states that it has a long-term impact on liquidity, so it is the responsibility of the financial manager to maintain the optimum level of short-term assets because holding them for a longer period can be risky and can negatively

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affect a firm. Agha (2014) observed a significant effect of WCM on firm's profitability of pharmaceutical firms from the period of 1996-2011.

Therefore, this research aims to provide a review of the WCM & Profitability relationship within the context of Pakistan by using a systematic review technique and to know about the gaps which will identify the future research directions. This research covers the review of literature done in Pakistan on this topic and the main objectives of this research are to combine the literature done on WCM previously, to give collective remarks on the relationship between the two factors, and to explore the issues or future research directions in this research area.

The structure of this study is followed by different sections Section 1 is about the introduction of the topic (concepts of working capital management) section 2 literature Review on the relation and association of working capital management (contribution of other researchers on the same topic) is discussed. The third section follows the methodology and then Analysis and results are discussed in the last section.

2. LITERATURE REVIEW

Looking at the importance of working capital management many researchers attempt to provide aggregate results/evidence within the context of WCM's relationship with different components of profitability. Shah and Sana (2005) selected a sample of Oil and gas companies in Pakistan for five years from 2001 to investigate the relationship of WCM and their results indicated that profitability moves positively with efficient working capital management. Therefore, financial manager needs to have efficient management of working capital management for a firm to have better financial wealth. To investigate further the relationship between working capital management and profitability, Raheman and Nasr (2007), took a sample of 94 listed firms in Pakistan from the period 1999 to 2004 and their result showed that there is a negative association between different WCM components and profitability. The estimation technique used by them was Pearson's Correlation and Panel data regression analysis. Afza & Nazir (2008) worked in the same area and gave findings on "elements determining requirements on working capital management and used data from 204 manufacturing firms of Pakistan listed on the Karachi stock exchange in 16 sub-sectors from period 1998 to 2006. The results of their study indicated that WCM plays a vital role in maximizing profit, minimizing, or managing risk, and creating & maintaining the value of the firm if a firm can supervise and maintain day to day operating needs of the firm by looking at its receivables, payables, inventory, and cash.

Raheman *et al.* (2010) also tried to explore the "impact of WCM on the firm's performance" by taking a sample of 204 manufacturing Pakistani firms for ten years of data from 1998 to 2007. In their study took the current ratio, current assets to total assets ratio, average collection period, sales growth, debt ratio, average payable period, firm's size, and growth variables for working capital management, and for profitability proxies, they used net operating profitability. Their results indicated that firms in Pakistan need to have effective management to finance well and highlighted that these firms tend to end up investing more in liquid assets to avoid risk and suggested that cash conversion cycle & average inventory age have a significant relationship with performance. Zubairi (2010) by adding more empirical evidence selected the automobile sector for examining the impact on profitability and used regression analysis for panel data to provide true findings and highlighted that a positive relationship between profitability with firm size.

Adding more to the literature Afeef (2011) used return on assets to measure profitability and CCC that is cash conversion cycle to measure working capital management efficiency. These variables were measured on 40 Small and medium Enterprises SMEs that are listed on the Karachi stock exchange for a period of six years from 2003-2008. The sample consisted of Pakistani firms. His study highlighted a noticeable impact on the profitability/performance of any business or organization on WCM.

Ali (2011) examined the relationship of working capital management by picking up the textile sector of Pakistan and the variables used were the Cash conversion cycle, return on asset, profit margin, and return on equity. For analyzing the relationship, they used the Ordinary least square and fixed effect model as estimation techniques on the total sample of 160 textile firms from 2000 to 2005 respectively and his results stated that there is a significant negative relationship between profitability and days receivables & days payables and significant positive relationship was found among profitability and cash conversion cycle.

Haq *et al.* (2011) showed interest in researching firms in the cement sector of Pakistan. The total sample comprises 14 firms from 2004 to 2009. The independent variable used for their study was the age of creditors, current ratio, current assets to total sales ratio, current assets to total assets ratio, age to debtors, liquid ratio, and inventory turnover ratio, and the dependent variable used for their research study was returned on investment. Their findings suggested a certain moderate relationship between WCM and the financial performance/wealth of firms. The statistical estimation technique used by them was regression analysis and correlation analysis.

Rehman *et al.* (2011) for their research study analyzed the relationship between profitability and management of working capital management by picking up data for five years from ear 2005 to 2009 of 65 firms from the Karachi Stock exchange and found that working capital management and profitability have a strong correlation.

Muhammad *et al.* (2012) described WCM as a direct and positive factor to affect the profitability of the business, and to test this empirically they used data from the textile industry of Pakistan for six years from period 2001 to 2006 and their findings suggested a positive link between cash, inventory, credit sales, and profitability. Rehman and Anjum (2016) also found the same positive relationship between working capital management and profitability. Their sample research study consisted of 10 cement companies in Pakistan listed on the Karachi stock exchange for six years of data from 2003 to 2008 respectively.

Tahir & Anuar (2016) purpose of the research study was to “*determine the relationship of working capital management on profitability*” by taking the average collection period in days, current ratio, CCC, net trade cycle, payable period, and found that there is the negative relationship of net working capital level, average collection period, a current asset to operating income, current liabilities to total assets with profitability in terms of ROA whereas cash turnover ratio, net trade cycle, inventory turnover in days, cash conversion cycle, inventory turnover days has a positive association with profitability. They analyzed the result of their study by taking a sample of 127 textile firms listed on the Karachi stock exchange for the period of 12 years data from 2001 to 2012.

2.1 Relationship of firm’s Profitability and CCC

Most of the past researchers have found the relationship of *working capital management and profitability* through cash conversion cycle CCC as a measure for WCM with context to Pakistan such as (Ali (2011), Rehman *et al.* (2010), Ahmed *et al.* 2016, Afeef 2011 etc.). Cash conversion cycle is calculated through three components account receivable collection period, inventory collection period and payable collection period (Abuzayed, 2012). Bhutto *et al.*, (2015), examined same relationship by using CCC as a measure on different industrial groups of Pakistan and concluded negative relationship of cash conversion cycle with return on equity, policies, and revenue whereas positive relationship was also found among total assets, return on assets and investment approaches. For conducting their research study, they collected data from financial statements of 157 public LTD listed firms of Pakistan and used Pearson correlation, ANOVA, and descriptive statistic to investigate the relationship.

Moreover, Tariq *et al.* (2013) while studying the “*relationship of working capital management and performance*” observed positive association of CCC (cash conversion cycle) with profitability of cement sector of Pakistan, as cement sector was sample for their research study to investigate the empirical evidence from 2007 to 2011 five years sample period. Iqbal *et al.* (2014) with the help of results of their research study argued that CCC, account receivable, payable and inventory period has negative relationship with profitability.

3. RESEARCH METHODOLOGY

This research study is based on systematic literature review (SLR) approach, which is an appropriate method to achieve research objective of this research as it helps to construct a scientific summary on a specific phenomenon (Popay *et al.*, 2014). To enhance the reflection of this research phenomenon some basic principles were followed; suggested by Thorpe, Holt, Macpherson and Pittaway (2005). This research adopts systematic review approach regarding working capital management to develop a clear and in-depth understanding regarding WCM.

3.1 Selection Criteria

To achieve the objective of this research, articles were selected on various research criteria:

- The studies which that has discussed direct relationship of WCM and profitability has been selected.
- To maintain high level of standard and quality, studies which were published in master journal list were selected and all other unpublished work, conference proceedings, chapters in book etc are excluded.
- The language of selected research articles must be English.
- Article published from 2007 to 2020 on Pakistani firms were included.

Articles were selected through different electronic database i.e. EBSCO, Econlit & Google Scholar. Keywords this research paper follows the methodology of Singh *et al* (2014) “*Working capital management: a literature review and research agenda*”. They did a detailed literature review on developing and under-developing economics. Keywords used for searching the articles were *Working Capital Management and firms' Performance, the impact of working Capital Management and Profitability, Effects of Working Capital Management, and determinates of working capital management*. A sample of around 53 studies were collected to conduct the systematic review. To collect articles and to conduct research in a more precise way references of selected papers were also checked. While searching and collecting research papers it was observed that most of the articles has studied different proxies

of Profitability (the dependent variable), proxies like Return on assets, return on equity, gross operating profit, net operating margin and return on investment. Finally, 31 papers were selected which analyzed the direct relation of CCC (cash conversion cycle) with Profitability's proxy.

3.2 Collection of literature

For this research, articles contributing to the Pakistani industry were collected by using key works like *working capital management and profitability*, *determinants of working capital management*, *the impact of working capital management and profitability*, and the *relationship of working capital management*. Initially, a huge number of articles was found around 53 after screening we delimited the articles to 31 studies. Articles were screened and sorted based on proxies and measures used by studies. Studies that used the cash conversion cycle as a measure for working capital management and ROA, ROE, NOP, and GOI as a proxy for profitability were selected.

3.3 Analysis by year of publication

The Publication analysis done in this research study indicates that articles on this same topic were published quite regularly from 2007 to 2020. But the number of publications increased after 2010, observing that in 2011 eight articles were published and ten in 2016. The increasing proportion of publications on the same topic can be due to the economic slowdown due to which firms observed the importance of working capital management.

3.4 Analysis of research by the journal in which publication is done.

Analysis of journals by publication is done to know which journals are mostly involved in the adaption of literature on WCM. It was found that among all the journals listed in table 1, eight journals have published more than one article in the same area. *Interdisciplinary journal of contemporary research* and the *European journal of business management in business* was the only two journals in which articles on WCM were published three times. Table 1 represents the analysis of publications journal-wise.

3.5 Citation analysis

"Citations means that someone has cited or referred any author's work in his/her research article". This information on citations was collected from Google scholar. There were around six papers that were cited more than 50 times out of these six articles three were cited more than 100 times. These articles were from journals such as. Raheman, A., & Nasr, M. (2007) in journal of *International review of business research papers*, Raheman *et al.* (2010) in *International Research Journal of Finance and Economics*, Nazir, M. S., & Afza, T. (2009) In *IUP Journal of Applied Finance*. Table 2 represents the Citation analysis.

3.6 Industry-wise analysis

Industry-wise analysis of the studies indicated that research in the area of WCM is not restricted to any one industry but researchers have used a wide range of different industries and sectors including the textile sector which was taken by 10 researchers, cement sector and manufacturing firms were taken by 8 types of research, food sectors by three kinds of research, SME by 3 types of research, chemical by 2, automobile and oil by one and one for pharmaceutical. Multiple industries were taken by different researchers for the analysis of their studies. Few studies also worked on financial firms. See Table 2.

3.7 Content analysis

Content analysis is done in both types of research whether it is qualitative or quantitative and while doing content analysis it was observed that most of the research articles concentrated on identifying the impact of WCM and its relationship to profitability and very few articles have considered the working capital practices approach. Articles on working capital approaches and practices were not considered or selected in this research study. Moreover, 17 studies used ROA, 9 studies used ROE, 3 studies used NOP, and 2 studies used GOI as a proxy for profitability.

4. DISCUSSION

While highlighting the major themes and subthemes it was found that most of the studies have discussed about CCC as a major and most important component of working capital management. So CCC was considered a subtheme under WCM. Moreover, most of researchers have classified relationship between WCM and CCC in terms of debt financing, operational management, corporate strategy, proper management, and effective policies. The overall themes highlighted for WCM provides with insights that it is very much important for any organization to accelerate cash conversion and should have estimated and evaluated cash flows since WCM is considered a powerful tool and can help businesses to create more opportunities, minimize risk, and help from bankruptcy. If an organization has low WCM it will face difficulties to meet its daily operations. Therefore, a firm must manage WCM effectively not

only to minimize or to deal with risk or to meet daily expenses but also to avoid an excessive proportion of investment made in these assets which may create a loss of opportunity cost.

Under profitability it was found that most of the research studies have used proxy of return on assets, return on equity, net operating profit, and gross operating profit. While highlighting major themes and doing content analysis, It was identified that if a firm maintains its WCM effectively business or organization can grow and can increase value creation for its shareholders. So, optimization of CCC is very much important to have smooth and uninterrupted production and boost profitability, market value, and wealth maximization.

5. CONCLUSION

To examine the relationship between “*working capital management and profitability*” systematic review technique was adopted. Overall, 53 independent studies were found, which studied the relationship between profitability and WCM by using a variety of techniques out of these 53 independent studies 31 independent studies, examined the direct relationship of profitability and CCC that is cash conversion cycle individually, since cash conversion cycle is the most important determinant of WCM which includes payable period, collection period and receivable period. Therefore, for analysis, those articles which has taken CCC as a measure for working capital management were selected. These research studies used different proxies of profitability like Return on assets ROA, return on equity ROE, net operating profit NOP and gross operating profit GOP.

The review was finally done by making themes and sub-themes. The main theme for review was working capital management and profitability. Under these themes, the subtheme made were the proxies used by other researchers to identify the relationship. While conducting this process it was observed that most of the researchers have used ROA, ROE, GOI & NOP for profitability and CCC for working capital management. Moreover, while going through all selected research it was observed that most of the studies have found a significant impact of efficient WCM on profitability. The content analysis of these articles gave following insights: firms should utilize the optimal level of cash conversion cycle for the enrichment of profitability. To have smooth and uninterrupted production firm should effectively review the receivables and payable policy so that it can maintain the market value, and shareholders' wealth, minimize the risk, and reduce the chances of bankruptcy. Accelerating cash collections means the firm has proper management, optimal and effective's policies, and proper corporate strategies to maintain its worth in the competitive market. Few researchers have also considered CCC as a powerful tool. Results are supported by Raheman *et al.* (2010), Afeef (2011), Nazir, M. S., & Afza, T. (2009), etc. Moreover, it was also observed that researchers are reluctant to choose methods like case studies, and primary surveys to study working capital management practices in depth. Research in this area should be encouraged through systematic theory-building methods also, as where less work in this area has been done using the qualitative technique.

References

- Afeef, M. (2011). Analyzing the Impact of Working Capital Management on the Profitability of SME's in Pakistan. *International Journal of Business and Social Science*, 2(22).
- Alam, H. M., Ali, L., Rehman, C. A., & Akram, M. (2011). The impact of working capital management on profitability and market valuation of Pakistani firms”. *European Journal of Economics, Finance & Administrative Sciences*, 32, 48-54.
- Azam, M., & Haider, S. I. (2011). Impact of working capital management on firms' performance: evidence from non-financial institutions of kse-30 index. *Interdisciplinary journal of contemporary research in business*, 3(5), 481-492.
- Ali, S. (2011). Working capital management and the profitability of the manufacturing sector: A case study of Pakistan's textile industry. *The Lahore Journal of Economics*, 16(2), 141.
- Afza, T., & Nazir, M. S. (2008). Working capital approaches and firm's returns. *Pakistan Journal of Commerce and Social Sciences*, 1(1), 25-36.
- Agha, H. (2014). Impact of working capital management on profitability. *European Scientific Journal, ESJ*, 10(1).
- Ali, A., & Ali, S. A. (2012). Working capital management: Is it really affects the profitability? Evidence from Pakistan. *Global Journal of Management and Business Research*, 12(17).
- Ahmed, Z., Awan, M. Z., Safdar, M. Z., Hasnain, T., & Kamran, M. (2016). A nexus between working capital management and profitability: A case study of pharmaceutical sector in Pakistan. *International Journal of Economics and Financial Issues*, 6(3S).
- Bhutto, N. A., Abbas, G., ur Rehman, M., & Shah, S. M. M. (2015). Relationship of Cash Conversion Cycle with Firm Size, Working Capital Approaches and Firm's Profitability: A Case of Pakistani Industries. *Pakistan Journal of Engineering, Technology & Science*, 1(2).

- Bagh, T., Nazir, M. I., Khan, M. A., Khan, M. A., & Razzaq, S. (2016). The Impact of Working Capital Management on Firms Financial Performance: Evidence from Pakistan. *International Journal of Economics and Financial Issues*, 6(3).
- Haq, I. U., Sohail, M., Zaman, K., & Alam, Z. (2011). The relationship between working capital management and profitability: a case study of cement industry in Pakistan. *Mediterranean Journal of Social Sciences*, 2(2), 365-372.
- Hedges, L. V. (1990). Olkin, I. (1985). *Statistical methods for meta-analysis*. Orlando, FL: Academic Press.
- Iqbal, N., Ahmad, N., & Riaz, Z. (2014). The relationship between working capital management and profitability: Evidence from Pakistan. *International Letters of Social and Humanistic Sciences*, 20(9), 14-25.
- Javid, S., & Zita, V. P. (2014). Impact of Working Capital Policy on Firm's Profitability: A case of Pakistan cement industry. *Research Journal of Finance and Accounting*, 5(5), 182-191.
- Khan, M. I., Akash, R. S. I., Hamid, K., & Hussain, F. (2011). Working capital management and risk-return trade off hypothesis: empirical evidence from textile sector of Pakistan. *European Journal of Economics, Finance and Administrative Sciences*, 40, 146-152.
- Khan, M. N., Rasheed, S., Ahmed, H. I., & Rizwan, M. (2016). Impact of working capital management on firm financial performance: An empirical evidence from nonfinancial sector of Pakistan. *International Journal of Advanced Scientific Research and Management*, 1(5), 150-158.
- Muhammad, M., Jan, W. U., & Ullah, K. (2012). Working Capital Management and Profitability An Analysis of Firms of Textile Industry of Pakistan. *Journal of Managerial Sciences*, 6(2).
- Nazir, M. S., & Afza, T. (2009). Working capital requirements and the determining factors in Pakistan. *IUP Journal of Applied Finance*, 15(4), 28.
- Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Duffy, S. (2014). Guidance on the Conduct of Narrative Synthesis in Systematic Reviews : A Product from the ESRC Methods Programme Guidance on the Conduct of Narrative Synthesis in Systematic Reviews A Product from the ESRC Methods Programme with, (May). <https://doi.org/10.13140/2.1.1018.4643>
- Raheman, A., & Nasr, M. (2007). Working capital management and profitability—case of Pakistani firms. *International review of business research papers*, 3(1), 279-300.
- Raheman, A., Afza, T., Qayyum, A., & Bodla, M. A. (2010). Working capital management and corporate performance of manufacturing sector in Pakistan. *International Research Journal of Finance and Economics*, 47(1), 156-169.
<http://www.eurojournals.com/finance.htm>.
- Rehman, C. A., Ilyas, M., Alam, H. M., & Akram, M. (2011). The impact of infrastructure on foreign direct investment: The case of Pakistan. *International Journal of Business and Management*, 6(5), 268.
doi:10.5539/ijbm.v6n5p268.
- Rehman, M. U., & Anjum, N. (2013). Determination of the impact of working capital management on profitability: an empirical study from the cement sector in Pakistan. *Asian economic and financial Oreview*, 3(3), 319.
- Shah, S. A., & Sana, A. (2005). Impact of working capital management on the profitability of oil and gas sector of Pakistan. *Editor-In-chief or e*, 15(3), 301-307.
<http://www.eurojournals.com/ejsr.htm>.
- Singh, H. P., Kumar, S., & Colombage, S. (2017). Working capital management and firm profitability: a meta-analysis. *Qualitative Research in Financial Markets*, 9(1), 34-47.
<https://doi.org/10.1108/QRFM-06-2016-0018>.
- Sarwat, S., Iqbal, D., Durrani, B. A., Shaikh, K. H., & Liaquat, F. (2017). Impact of Working Capital Management on the Profitability of firms: Case of Pakistan's Cement Sector. *Journal of Advanced Management Science* Vol, 5(3).
<http://www.joams.com/uploadfile/2017/0613/20170613034528528.pdf>.
- Tahir, M., & Anuar, M. B. A. (2016). The determinants of working capital management and firms performance of textile sector in pakistan. *Quality & Quantity*, 50(2), 605-618.
<https://link.springer.com/article/10.1007%2Fs11135-015-0166-4>.
- Tariq, H., Mümtaz, R., & Rehan, M. F. (2013). Working Capital Management and Firm Performance: Evidence from Pakistan. *European Journal of Business and Management*, 5(20), 86-91.
- Talreja, S., Ahmed, F., & Ali, R. (2018). Nexus Between Working Capital Management and Sectoral Performance. *Esensi: Jurnal Bisnis dan Manajemen*, 8(1).
- Thorpe, R., Holt, R., Macpherson, A. & Pittaway, L. (2005). Using Knowledge within Small and Medium-Sized Firms: A Systematic Review of the Evidence. *International Journal of Management Reviews*, vol.7:4, pp.257-281. <https://doi.org/10.1111/j.1468-2370.2005.00116.x>

Zill-e-Huma, F. M. S. Impact of Working Capital on the Profitability a Case of Pakistan State Oil.

Zubairi, H. J. (2010). Impact of working capital management and capital structure on profitability of automobile firms in Pakistan. <http://dx.doi.org/10.2139/ssrn.1663354>.

Appendices

Table 1: List of Articles by Journals

S.No	Name of Journals	Qty
1	<i>International Journal of Business and Social Science,</i>	1
2	<i>European Journal of Economics, Finance & Administrative Sciences,</i>	2
3	<i>The Lahore Journal of Economics,</i>	1
4	<i>Interdisciplinary journal of contemporary research in business</i>	3
5	<i>International Letters of Social and Humanistic Sciences,</i>	1
6	<i>International review of business research papers</i>	1
7	<i>International Research Journal of Finance and Economics,</i>	1
8	<i>International Research Journal of Finance and Accounting</i>	1
9	<i>In Proceedings of 3rd international conference on business management</i>	1
10	<i>Global Business and Management Research,</i>	2
11	<i>International Journal of Academic Research in Business and Social Sciences</i>	1
12	<i>IUP Journal of Applied Finance</i>	2
13	<i>European Scientific Journal, ESJ,</i>	1
14	<i>Arabian Journal of Business and Management Review</i>	1
15	<i>Global Journal of Management and Business Research,</i>	1
16	<i>Asian economic and financial Oreview,</i>	1
17	<i>Journal of Managerial Sciences</i>	1
18	<i>Journal of Economics and Behavioral studies</i>	1
19	<i>International Journal of Business and Management,</i>	2
20	<i>African Journal of Business Management</i>	2
21	<i>IOSR Journal of Business and Management</i>	1
22	<i>Pakistan Journal of Commerce & Social Sciences</i>	1
23	<i>International Journal of Economics and Financial Issues</i>	2
24	<i>Human Systems Management</i>	1
25	<i>International Journal of Scientific and Engineering Research</i>	1
26	<i>IUP Journal of Bank Management</i>	1
27	<i>Pakistan Journal of Social Sciences (PJSS)</i>	1
28	Doctoral dissertation, CAPITAL UNIVERSITY	1
29	<i>Journal of Commerce and Social Sciences</i>	1
30	<i>International Journal of Economics and Finance</i>	1
31	<i>International Journal of Accounting and Financial Reporting</i>	1
32	<i>Esensi: Jurnal Bisnis dan Manajemen,</i>	1
33	<i>Quality & Quantity (springer)</i>	1
34	<i>Journal of Economics and Sustainable Development</i>	1
35	<i>International Journal of Advanced Scientific Research and Management</i>	1
36	<i>JOURNAL OF MONEY, INVESTMENT AND BANKING</i>	1
37	<i>International Journal of Information Research and Financial Review</i>	1
38	<i>Journal of Finance & Economics Research</i>	1
39	<i>International Journal of Information, Business and Management</i>	1
40	<i>European Journal of Accounting, Auditing and Finance Research</i>	1
41	<i>Pakistan Journal of Engineering, Technology & Science</i>	1
42	<i>papers.ssrn</i>	1

Table 2: List of Articles by Citation and Industry Wise

S.No	Name of Journal	Cited	Industry	Year
1	<i>International Journal of Business and Social Science,</i>	57	SME	2011
2	<i>European Journal of Economics, Finance & Administrative Sciences,</i>	22	Manufacturing	2011
3	<i>The Lahore Journal of Economics,</i>	38	Textile industry	2011
4	<i>Interdisciplinary journal of contemporary research in business</i>	60	Non-financial institutions	2011
5	<i>International Letters of Social and Humanistic Sciences,</i>	18	Manufacturing firms	2014
6	<i>European Journal of Economics, Finance and Administrative Sciences,</i>	4	Textile sector	2011
7	<i>International review of business research papers</i>	861	Manufacturing firms	2007
8	<i>International Research Journal of Finance and Economics,</i>	186	Manufacturing firms	2010
9	<i>Interdisciplinary Journal of Contemporary Research in Business,</i>	29	Manufacturing	2011
10	<i>European Journal of Business and management,</i>	36	SME	2013
11	<i>In Proceedings of 3rd international conference on business management</i>	22	Textile sector	2013
12	<i>Global Business and Management Research,</i>	24	Textile sector	2011
13	<i>European Journal of Business and Management,</i>	6	Cement sector	2013
14	<i>European Journal of Business and Management</i>	7	SME	2014
15	<i>International Journal of Academic Research in Business and Social Sciences</i>	7	Manufacturing firms	2014
16	<i>IUP Journal of Applied Finance</i>	105	Manufacturing firms	2009
17	<i>Interdisciplinary Journal of Contemporary Research in Business</i>	30	Cement sector	2013
18	<i>European Scientific Journal, ESJ,</i>	49	Pharmaceutical industry	2014
19	<i>Arabian Journal of Business and Management Review</i>	29	Food sector	2012
20	<i>Global Journal of Management and Business Research,</i>	16	Manufacturing	2012
21	<i>Asian economic and financial Overview,</i>	13	Cement sector	2013
22	<i>Journal of Managerial Sciences</i>	14	Textile sector	2012
23	<i>Journal of Economics and Behavioral studies</i>	18	Cement sector	2011
24	<i>International Journal of Business and Management,</i>	12	Pakistani firms	2015
25	<i>African Journal of Business Management</i>	9	Textile, chemical, engineering and sugar	2012
26	<i>IOSR Journal of Business and Management</i>	23	Manufacturing sector	2013
27	<i>Pakistan Journal of Commerce & Social Sciences</i>	12	Cement, chemical and engineering sector	2014
28	<i>International Journal of Economics and Financial Issues</i>	2	Pharmaceutical sector	2016
29	<i>Human Systems Management</i>	1	Cement sector	2016
30	<i>International Journal of Business and Management</i>	12	Pakistan firms	2015

31	<i>International Journal of Scientific and Engineering Research</i>	1	Textile spinning companies	2015
32	<i>IUP Journal of Bank Management</i>	1	Banking sector	2015
33	<i>Pakistan Journal of Social Sciences (PJSS)</i>	1	Textile firms	2016
34	Doctoral dissertation, CAPITAL UNIVERSITY	-	-	2016
35	<i>Journal of Commerce and Social Sciences</i>	12	Industrial group	2008
36	<i>Global Business and Management Research</i>	9	Cement industry	2014
37	<i>International Journal of Economics and Finance</i>	7	Non-financial	2015
38	<i>International Journal of Accounting and Financial Reporting</i>	6	Oil sector	2015
39	<i>Eseni: Jurnal Bisnis dan Manajemen,</i>	-	Food & automobiles	2018
40	<i>African Journal of Business Management,</i>	13	Manufacturing firms	
41	<i>Quality & Quantity (springer)</i>	5	Textile sector	2016
42	<i>Journal of Economics and Sustainable Development</i>	2	Listed firms	2014
43	<i>International Journal of Advanced Scientific Research and Management</i>	-	Non-financial sector	2016
44	<i>JOURNAL OF MONEY, INVESTMENT AND BANKING</i>	-	Non-financial firms	2013
45	<i>International Journal of Information Research and Financial Review</i>	2	Listed firms	2016
46	<i>International Journal of Economics and Financial Issues</i>	7	Non-financial	2016
47	<i>Journal of Finance & Economics Research</i>	2	Non-financial firms	2016
48	<i>International Journal of Information, Business and Management</i>	3	Pakistani firms	2015
49	<i>European Journal of Accounting, Auditing and Finance Research</i>	1	Food sector	2016
50	<i>Research Journal of Finance and Accounting</i>	5	Cement sector	2014
51	<i>Journal of Applied Finance</i>	-	Industrial group	2009
52	<i>Pakistan Journal of Engineering, Technology & Science</i>	13	Industrial group	2015
53	<i>papers.ssrn</i>		Textile sector	2017

Table 3: List of Articles By Themes and Dimensions

WCM	CCC	<ul style="list-style-type: none"> · Ccc as most important variable of working capital management · Operational management · Review of collection & payment policies · Accelerate cash collections · Slow down their payments · Optimal & effective policy · Proper management. · Corporate strategy · CCC powerful tool · More business opportunities · Well estimated and evaluated cash flows · Formulate financing · Shortfall of future risk · Help from bankruptcy · Liquidity management
Profitability	ROA, ROE	Growth and success of business Shareholders value.

		<p>Well organized management Value creation for shareholders Smooth uninterrupted production CCC at a optimal level Optimization of CCC Longer cash conversion is more profitable. Boost up profitability by managing cash account receivables and inventories.</p>
	NOP, GOP	<p>Longer cash conversion is more profitable. Perceptible impact on profitability WCM influence profitability Smooth uninterrupted production Shortening of inventory Enrichment of profitability Implementation of effective policy sufficient level of working capital has an essential impact on net operating profitability and liquidity of firm. working capital management directly influence risk and profitability of a firm Profitability is related to the goal of shareholders' wealth maximization, and investment in current assets is made only if an acceptable return is obtained.</p>