

The impact of working capital management on the firm's profitability



Khaled Adnan Oweis *

Accounting Department, Business Administration College, Northern Border University, Arar, Saudi Arabia

ARTICLE INFO

Article history:

Received 26 March 2020

Received in revised form

28 June 2020

Accepted 2 July 2020

Keywords:

Working capital management

Saudi cement sector

Receivable conversion period

Inventory management

Working capital turnover

ABSTRACT

Profitability refers to the state of financial gain production and is the primary goal of all business enterprises as, without it, a business will not last through the long-run. In relation to this, one of the top responsibilities of an entrepreneur is to maintain increasing profitability, and as such, they are in constant look-out to change business for the betterment of its profitability. In the same line of argument, efficient working capital management is believed to lead to enhanced firms' value creation. Therefore, this study aimed to determine the effects of working capital management on the profitability of Saudi organizations, particularly the cement sector. This study's significance lies in the clarification of the capital management's role in organizational success and their contribution to increasing liquidity and profitability while maintaining financial appropriateness, particularly in the face of limited external financial assistance. The study aimed to determine the obstacles and issues that Saudi cement companies face in their working capital application and to determine the effect of its variables, namely liquidity management, inventory management, working capital turnover, and receivable conversion period on the Saudi cement manufacturing companies performance. The secondary was gathered from 13 Saudi cement companies for the years from 2015 to 2020. Data collection was analyzed, and the results were presented along with recommendations for future studies.

© 2020 The Authors. Published by IASE. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

In relation to the topic of working capital management (WCM), the main issue is how to maintain sufficient working capital components (current assets and liabilities). The effect of working capital management on the profitability of the firm is quite significant in that efficient working capital management called for the determination of dependency of profitability ratios on working capital components and the companies' liquidity status. In fact, working capital is in the third position when it comes to the field of decision-making of corporate financial management, to which the primary focus of management is crucial. Additionally, working capital is interconnected with the present account, meaning to say that it gauges the firm's current assets and liabilities. In other words, it refers to the capital needed for the maintenance of daily company activities. It is important for companies to effectively

manage their working capital through investing in related activities for the ultimate optimum functioning of the working capital and its maintenance.

Moreover, the overall corporate strategy that adds value to the firm's investors is positively affected by efficient working capital management (WCM). Organizations equipped with WCM are skilled in justifying or eradicate the risk of not being able to convene short-period objectives because of careless investment in the present resources (Siraj et al., 2019). Firms may also maximize total funds for additional investments by mitigating funds connected to the current assets; Working capital and the series it forms are managed via working capital management. It ensures that recent liability doesn't surpass existing assets so as to keep away from liquidity crisis and that the awareness of liquidity should not supersede the final aim of a production responsibility in which revenue is creation (Olaoye et al., 2019).

Such efficiency and effectiveness of the operations of the firm have been gauged using profitability ratios such as net margin, return on equity, and return on assets. To enhance efficiency and eventually profitability, working capital has been one of the many ways utilized. Several of the

* Corresponding Author.

Email Address: oweiskhaled@yahoo.com

<https://doi.org/10.21833/ijaas.2020.11.007>

Corresponding author's ORCID profile:

<https://orcid.org/0000-0001-5773-1494>

2313-626X/© 2020 The Authors. Published by IASE.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

above ratios are available to measure the working capital efficiency of a firm (Abbas et al., 2018). In particular, the current ratio is linked to the liquidity of the company, where liquidity refers to the company's ability to meet its financial objectives and short-term debts. The current ratio reflects a high-value presence of excess working capital that is required, and in this scenario, it can develop idle funds and maximize opportunity cost (e.g., storage costs and maintenance costs) and mitigate profitability.

In the cement industry, cement is described as a man-made powder, which, when combined with water and aggregates, generates concrete, which is useful in infrastructure development. Infrastructures are the fundamental physical structure required for the societal/enterprise operations, and it has a major role in economic development. In the Saudi context, the cement market is viewed to be the largest in the GCC region, with the Kingdom positioned in the top 15 cement producing nations around the world, contributing 1.4% of the total global output. It was not only after 1956 that Saudi Arabia stopped depending on imports for its entire cement demand. Production of cement was initiated following the setting up of the Arabian Cement Company in Jeddah. Following its establishment, the Saudi cement industry has experienced significant developments, and based on the report provided by the Research Department Sector of 2011, the total production capacity of cement production in Saudi Arabia was at 52.8% tons the year before (2010). In the past five years, the capacity for total production showed an increase of Compound Annual Growth Rate (CAGR) of 16.1%. Meanwhile, the cement consumption in the Kingdom extended at a rate of 11.1% CAGR in the years 2005 to 2010, more expedient compared to the GCC and the global market. Such an increase can be attributed to the robust domestic sales made for the purpose of building housing and commercial infrastructure around the Kingdom.

2. Literature review

Aside from being among the fundamental corporate finance topics, WCM is also a field marked by minimal research. A major portion of research in this line of study has been conducted in emerging markets and not developed ones, and this was related to Etiennot et al. (2012) to the fact that developed economies efficient financial markets easily rectify deviations from optimal working capital policies, in comparison to their emerging counterparts. Hence, the management of working capital in the latter context (financial markets that lack efficiency) is more pertinent for the performance and survival of firms in the long run.

According to literature dedicated to the topic (Ukaegbu, 2014), there is a negative relationship between WCM measures and profitability, and similar to the above, others like Gill et al. (2010) supported the finding with statistically significant

results tested for 88 American firms listed in the New York Stock Exchange for the years 2005 to 2007. Contrastingly, Malik and Bukhari (2014) reported a positive and significant relationship between CC and profitability in Saudi Arabia for the years 2007 to 2011. The authors indicated that the average payment period-profitability relationship is negative, illustrating that firms that were not as profitable paid bills much later than their profitable counterparts.

In the same way, Ukaegbu (2014) focused on the manufacturing firms from Egypt, Kenya, Nigeria, and South Africa when examining the relationship between WCM and profitability for the years 2005 to 2009. The author categorized the countries into three groups on the basis of their industrial performance, classified by the UN Conference on Trade and Development. In particular, Egypt was under forerunners, South Africa was underachievers, and both Kenya and Nigeria were under countries that were falling behind. The classification was made according to the industrial performance indicators of African nations, and based on the findings, a negative relationship existed between profitability and receivable collection period, a positive one with inventory turnover, and a negative one with accounts payable period for all countries, with the exception of Egypt.

Abdullah and Siddiqui (2019) focused on discovering the active relative of working capital financing with admiration to the profitability of the organization, and for that reason, data has been collected from three dissimilar sectors, i.e., chemical, cement, and FMCG. To analyze the outcome, the section least square method has been in use for which the fixed point of data sequence has been checked throughout the panel unit root examination. The outcome shows the data sequence was non-motionless on level 1, but it has been motionless on the first dissimilarity. The results show that there is an unimportant but negative association among return on assets (ROA) and all the variables of working capital except current assets and sales in a mutual regression model and current resources and debt ratio in fixed/random effect model. In concise, this research suggests that the profitability of the organization is not dependent on investment in working capital of substance, cement, and user sector of Pakistan.

Other studies dedicated to examining the impact of WCM on corporate profitability were conducted in the Turkish context. For instance, Ukaegbu (2014) worked on a sample comprising of 74 manufacturing firms listed for the period from 1991 to 2005 in Borsa Istanbul. Based on his findings, corporate profitability had a negative relationship with CCC, accounts receivable as well as inventory periods but a positive relationship with the accounts payable period. Also, in Vural et al. (2012), on Borsa Istanbul, listed firms for the years from 2002 to 2009 yielded the same results. In contrast, Çakir (2013), worked on a sample comprising of 52 manufacturing firms also listed in Borsa Istanbul from 2000 to 2010 and

did not produce a negative WCM-profitability relationship. Meanwhile, in India's Dhaka Stock Exchange-listed companies for the year 2005 to 2009, [Enqvist et al. \(2014\)](#) examined the WCM-profitability relationship. Their results showed that in industries, there was a significant relationship between profitability indices and working capital components, with the exception of the food industry.

Moreover, the relationship between capital structure and profitability was investigated in [Mohammadzadeh et al.'s \(2013\)](#) study in the context of 30 Iranian pharmaceutical firms. Financial data for the period from 2001 to 2010 were gathered, with net margin profit used to indicate profitability and debts to asset ratio used to indicate capital structure, and structure chosen as the control variable. The findings supported a negative profitability-capital structure relationship. Meanwhile, in Alba County, [Ajanthan \(2013\)](#) focused on the WCM efficiency among firms by determining the relationship between it and the profitability of 20 firms, with data gathered from their financial statements for the years 2004 until 2008.

In Saudi Arabia, [Aktas et al. \(2015\)](#) conducted a study to investigate WCM-profitability correlations using regression analysis. The findings from the analysis showed negative and positive relationships in the Saudi cement industry—more specifically, a negative one between gross operating profits, inventory conversion period, and receivables collection period.

In Alba County, [Innocent et al. \(2013\)](#) laid stress on the WCM efficiency of firms and highlighted the relationship between the variable and profitability among 20 firms, with data used encompassing financial statements for the years 2004 to 2008. The findings indicated a weak negative linear relationship between the two variables.

Added to the above studies, [Agarwal and Varma's \(2013\)](#) study was conducted in India to assess the WC performance among non-financial listed firms in the stock index BSE 500 numbering 366. They revealed a positive WCM-firms' profitability association.

In [Ben-Nasr's \(2016\)](#) extensive study involving 54 countries multinational privatized companies, the author considered the foreign and state ownership of the firms and determined if it affected the net working capital value curve. In the Iranian context, [Forghani et al. \(2013\)](#) placed emphasis on the relationship between WCM-FP relationship among 56 firms listed in Tehran Stock Exchange, for the years from 2003 to 2007. The relationship was measured with the help of key performance measures (ROA, ROE and ratio of market value to book value). The authors illustrated a positive and significant relationship between the variables and recommended managers to effectively utilize strategies of WCM to enhance firms' profitability and to adopt control strategies in light of account receivables and debt collection to mitigate the period of debt collection and to maximize cash for WC improvement.

The WC components relationship with the profitability of firms was also the focus of [Mobeen et al.'s \(2011\)](#) study, involving 65 listed firms in KSA, for the years 2005 to 2009. A strong correlation was found between the constructs. In [Taani's \(2011\)](#) study, WCM elements were found to have a positive association with financial performance and in [Sharma and Kumar's \(2011\)](#) study, CCC and ACP positively correlated with the firms' financial performance. This was supported by [Akinlo and Olufisayo's \(2011\)](#) findings between the two variables.

Moreover, [Qureshi \(2014\)](#) found that WCM positively related to the firms' returns among Saudi listed manufacturing firms. With the swelling of CCC, profitability takes a dip. Finally, [Alavinasab and Davoudi \(2013\)](#) focused on the WCM-profitability relationship among 147 listed firms in the Tehran stock exchange for the years 2005 to 2009. The findings of the study supported a negative WCM-profitability (ROA and ROE) relationship. The Pearson correlation was applied to test the relationship.

3. Research gap

Literature abounds with studies dedicated to the profitability determinants in the majority of the industries, with the exception of the cement industry in the Saudi context. Therefore, this study attempts to minimize the gap in the literature by determining profitability among listed cement firms in Saudi Arabia throughout a span of five years (2015-2020), as the economic development of the country largely depends on it.

In any economic activity, working capital is the source of operations, and thus, management is considered among the most significant of corporate management functions. Regardless of its size and business, every organization requires the right amount of working capital, and in the manufacturing sector, being the economic core and the function for goods generation, the sector largely depends on working capital management. In fact, efficient WCM is crucial for manufacturing firms that generate half of its assets, and in the context of Saudi Arabia, the manufacturing sector has always had a key role in economic development.

The sector constitutes 60% of the overall private sector credit and has attracted focus within the five-year plans of Saudi Arabia's economic growth. Over 75% of Saudi exports depend on manufacturing goods, and as such, the sector has to be reinforced. Also, the sector is vital in light of generating tax revenues and creating jobs for employment. With regards to tax collection, the Saudi manufacturing sector contributed around 63% of the total taxes, while its service counterpart contributed only 26%, and the agriculture sector contributed 1% for the financial year 2009-2010.

In the same line of argument, the manufacturing sector has increased in significance owing to their intemperate poverty stemming from the population

growth and the costs of imported manufactured goods. It is noteworthy as the Saudi manufacturing sector has remained stagnant throughout the past several years, having in mind that the Kingdom is one of the developing nations having a real gross domestic product of 3.8% for the period 2011-2012 (the lowest in comparison to other developing nations). Despite the Saudi's economic growth, the manufacturing growth has yet to produce sufficient employment, and the performance decline in the sector firms can be attributed to the low productivity level and stagnant growth of firms. Other related problems are issues of working capital, failed credit markets, lack of and high cost of energy, unstable macro-economy, limited infrastructure, and insufficient business management and strategy that halted and prevented the firms' growth.

4. Research variables

4.1. Firm profitability (dependent variable)

Nastiti et al. (2019) defined firm profitability as the investment to make a return from its use. The profitability ratio calculates the firm's ability to create income and central assets to safety. This variable refers to the company's ability to make use of its resources for profit generation in excess of expenses. It is the capability of the company to generate profits from its business operations and a performance measure utilized for the evaluation of investment efficiency or for the comparison of the efficiency of several investments. It also provides a direct measurement of the amount of return obtained from a specific investment in relation to the cost of such investment. In order to obtain the value of benefit/return of investment, it is divided by the investment cost, and the result comes in the form of ratio or percentage.

4.2. Independent variables

The independent variables are as follows:

1. Inventory Management (IM): Inventory management has turned into one of the major essentials of supply chain management and can deeply influence the performance of an industry. In a related study, Afrifa (2016) focused on the firm's working capital management practice implications on its profitability and dividend payout ratio. The study laid stress on the level to which the working capital management affected profitability and dividend payout ratio, and data were gathered from 12 Nigerian manufacturing firms listed in the Nigerian Stock Exchange for a 5-year span (2002-2006). Gathered data was analyzed with the help of Pearson Product Moment Correlation Technique and Ordinary Least Squares (OLS) regression. The study findings showed a negative relationship between the inventory conversion period and profitability.
2. Liquidity Management (LM): This refers to the fundamental access to readily available cash to invest in short-term investments, pay debts and goods and services. It is the firm's ability to trade an asset (e.g., stock or bond) at the current price. Liquidity management reflects the investors'/managers' efforts towards mitigating the exposure to liquidity risk, Liquidity Management telling a firm's capability to convene financial obligation via money flow, financial support actions, and capital management. Liquidity management can be demanding as it is impacted via income and cost generates actions, capital and dividend tactics, and income tax strategies (Gomez and Vo, 2019).
3. Working Capital Turnover (WCT): This ratio reflects the measurement of the company's ability to efficiently utilize working capital to reinforce a specific sales level. It is described as net sales to working capital and indicates the relationship between the used funds for financing the operations and the revenues generated by such financing. It is the way the working capital is effectively used and is represented by the relationship between sales and working capital. Moreover, Gross Working Capital Turnover refers to the frequency of working capital turned in a year (Amanda, 2019).
4. Receivables Collection Period (RCP): This variable measures cash flow obtained by dividing average receivables by credit sales per day. From the above independent variables, WCM was gauged through the Receivables Collection period that corresponded to the frequency (number of days) of accounts receivable, while the latter refers to the customers who have delayed their goods/services payment following their delivery. Debtor management mitigates the time for collecting payment from customers and in this regard, the Receivables Collection Period is considered as the proxy for collection policy obtained by calculating accounts receivable/sales Accounts receivable is the cash allocated to the firm as an outcome of having sold its goods to clients on credit (Wafula et al., 2019).

5. Research hypotheses

The hypotheses of this research are as follows:

1. There is no significant relationship between Inventory Management and the profitability of the firm
2. There is no significant relationship between Liquidity Management and the profitability of the firm.
3. There is no significant relationship between Working Capital Turnover and profitability of the firm.
4. There is no significant relationship between the Receivables Collection Period and the profitability of the firm.

6. Research method

The researcher used in this research the descriptive to describe the phenomenon of the study, as it is concerned with providing accurate descriptions of the phenomenon to be studied by collecting data and describing the method used in the study, as it is used in organizing the data and describing its interpretation in clear and specific terms to reach accurate facts about the current situation in order to develop appropriate solutions.

The study population comprised of Saudi listed cement companies, and for the study sample, the Random sample method was used in choosing 13 firms. Data was collected for the years from 2015-2020, and the study used secondary resources for data collection in the form of the companies' financial statements. Statistical calculations and computations for the required data were made using SPSS. The names of cement companies chosen for the study are tabulated in Table 1, along with their years of establishment.

Table 1: List of companies (cement industry)

Company Name	Year of Establishment
City Cement Co	2005
Northern Region Cement Company	2006
Arabian Cement Co	1955
Yamamah Saudi Cement Co. Ltd	1961
Saudi Cement Company	1955
The Qassim Cement Co	1976
Southern Province Cement Co	1978
Yanbu Cement Co	1976
Eastern Province Cement Co	1983
Tabuk Cement Co	1994
Najran Cement Company	2005
Jouf Cement Company	2006
Hail Cement Company	2010

7. Data analysis

To verify the validity of its hypotheses, the study data were analyzed using the appropriate statistical

methods, including the ready-made statistical package (SPSS) descriptive statistics (Percentage, mean, Standard deviation) and Analytical Statistics (T-test, Anova, Significance level (α :0.05))

7.1. Descriptive analysis

Descriptive analysis displays the average and standard deviation of the diverse variables that importance in the research Table 2 presents descriptive statistics for 13 Saudi cement firms for a period of five years from 2015 to 2020.

Using Table 2, we should answer the hypothesis, to answer the H₁ There is no significant relationship between Inventory Management and profitability of the firm, From Table 2, it is clear that the value of the statistic (T) was 2.154 and Beta value 0.232 that means the inventory management has a positive impact on the firm profitability, H₂ There is no significant relationship between Liquidity Management and profitability of the firm, the value of the statistic (T) was 2.417 and Beta value 0.270 that means the inventory management has a positive impact on the firm profitability. About the H₃ There is no significant relationship between Working Capital Turnover and profitability of the firm, the value of the statistic (T) was 1.040 and Beta value 0.152 that means the inventory management has no significant impact on the firm profitability. H₄ There is a significant relationship between Receivables Collection Period and profitability of the firm, the value of the statistic (T) was 0.401 and Beta value 0.152 that means the inventory management has a positive impact on the firm profitability, Then H₁, H₂, and H₄ have a positive impact on the firm profitability expect the H₃ has no significant relationship between Working Capital Turnover and profitability of the firm.

Table 2: Descriptive statistics

Variable	Mean	SD	N	T	B	Std. Error	Sig
Inventory Management	2.96	1.04	151	2.154	0.232	0.200	0.033
Liquidity Management	2.78	0.95	151	2.417	0.270	0.075	0.017
Working Capital Turnover	3.00	0.99	151	1.040	0.152	0.086	0.300
Receivables Collection Period	2.74	1.13	151	2.723	0.401	0.108	0.007

8. Conclusion and recommendations

In Saudi Arabia, the cement industry is among the main contributing industries to the economy of the state. The government of Saudi Arabia aggressively promotes the diversification of the segment and its widespread downstream growth in order to maximize the industrialized products and to improve the local manufacturers' profitability. The determining factor of the speed and level of long-term business growth is its profitability; thus, in the present study, the author examined financial ratios and their effects on the profitability of Saudi cement firms. This will help monetary managers in measuring prime variables that cooperate with the

main position on maximizing profitability. In financial management, working capital management (WCM) is of a significant subject and is very important to managing trade-off with profitability, which is why this research examined the impact of WCM on the cement firm's profitability in the Saudi circumstance. The results of this research are predictable to help the understanding of nature and extend of the effect of WCM components on profitability for heightened firm value. The study findings indicated significant relationships between the components of WCM and profitability.

On the basis of the conducted analysis of the secondary data collected, Saudi cement firms can learn a thing or two about managing working capital efficiently, managing cash, accounts receivables and

inventories, so that their profitability will eventually increase. In the Saudi cement industry, much work has to be done in the future, and it is recommended that future studies focus on the topic and extend the sample years examined. Future studies may also extend the research scope to include cash, marketable securities, and other additional variables.

Furthermore, future studies may also examine other WCM components, including payables, cash conversion cycle, and receivables. Through the study findings, managers of Saudi cement manufacturing firms can effectively practice WCM to ultimately achieve increased and enhanced profitability.

Compliance with ethical standards

Conflict of interest

The authors declare that they have no conflict of interest.

References

- Abbas B, Iqbal S, and Malik IR (2018). FDI, external debt and their impact on economic growth of Pakistan: Empirical evidence using larger sample size. *Journal of Contemporary Management Sciences*, 4(1): 50-65.
<https://doi.org/10.2139/ssrn.3121113>
- Abdullah S and Siddiqui DA (2019). Working capital financing and corporate profitability of Pakistan manufacturing firms: Evidence from FMCG, cement and chemical sector. *Asian Journal of Economic Modelling*, 7(2): 82-94.
<https://doi.org/10.18488/journal.8.2019.72.82.94>
- Afrifa GA (2016). Net working capital, cash flow and performance of UK SMEs. *Review of Accounting and Finance*, 15(1): 21-44.
<https://doi.org/10.1108/RAF-02-2015-0031>
- Agarwal P and Varma Sk (2013). Working capital management and corporate. *International Journal of Indian Culture and Business Management*, 7(4): 552-571.
<https://doi.org/10.1504/IJICBM.2013.056662>
- Ajanthan A (2013). The relationship between dividend payout and firm profitability: A study of listed hotels and restaurant companies in Sri Lanka. *International Journal of Scientific and Research Publications*, 3(6): 1-6.
- Akinlo O and Olufisayo O (2011). The effect of working capital on profitability of firms in Nigeria: Evidence from general method of moments (GMM). *Asian Journal of Business and Management Sciences*, 1(2): 130-135.
- Aktas N, Croci E, and Petmezas D (2015). Is working capital management value-enhancing? Evidence from firm performance and investments. *Journal of Corporate Finance*, 30: 98-113.
<https://doi.org/10.1016/j.jcorpfin.2014.12.008>
- Alavinasab SM and Davoudi E (2013). Studying the relationship between working capital management and profitability of listed companies in Tehran stock exchange. *Business Management Dynamics*, 2(7): 1-8.
- Amanda RI (2019). The impact of cash turnover, receivable turnover, inventory turnover, current ratio and debt to equity ratio on profitability. *Journal of Research in Management*, 2: 14-22.
<https://doi.org/10.32424/jorim.v2i2.66>
- Ben-Nasr H (2016). State and foreign ownership and the value of working capital management. *Journal of Corporate Finance*, 41: 217-240.
<https://doi.org/10.1016/j.jcorpfin.2016.09.002>
- Çakir HM (2013). Nakit döngüsünün firma kâ rlılığına etkisinin sektörel analizi. *Journal of Yaşar University*, 8(30): 4948-4965.
- Enqvist J, Graham M, and Nikkinen J (2014). The impact of working capital management on firm profitability in different business cycles: Evidence from Finland. *Research in International Business and Finance*, 32: 36-49.
<https://doi.org/10.1016/j.ribaf.2014.03.005>
- Etiennot H, Preve LA, and Sarria-Allende V (2012). Working capital management: An exploratory study. *Journal of Applied Finance (Formerly Financial Practice and Education)*, 22: 1.
- Forghani M, Shirazipour M, and Hosseini A (2013). Impact of working capital management on firms performance. *Journal of Basic and Applied Scientific Research*, 3(7): 943-947.
- Gill A, Biger N, and Mathur N (2010). The relationship between working capital management and profitability: Evidence from the United States. *Business and Economics Journal*, 10(1): 1-9.
- Gomez F and Vo QA (2019). Liquidity management, fire sales and liquidity crises in banking: The role of leverage.
<https://doi.org/10.2139/ssrn.2696126>
- Innocent EC, Mary OI, and Matthew OM (2013). Financial ratio analysis as a determinant of profitability in Nigerian pharmaceutical industry. *International Journal of Business and Management*, 8(8): 107-117.
<https://doi.org/10.5539/ijbm.v8n8p107>
- Malik MS and Bukhari M (2014). The impact of working capital management on corporate performance: A study of firms in cement, chemical and engineering sectors of Pakistan. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 8(1): 134-148.
- Mobeen AH, Ali L, Abdu R, and Akram M (2011). Impact of working capital management on profitability and market valuation of Saudi Arabian firms. *European Journal of Economics, Finance and Administrative Sciences*, 32: 48-54.
- Mohammadzadeh M, Rahimi F, Rahimi F, Aarabi SM, and Salamzadeh J (2013). The effect of capital structure on the profitability of pharmaceutical companies the case of Iran. *Iranian Journal of Pharmaceutical Research*, 12(3): 573-577.
- Nastiti PKY, Atahau ADR, and Supramono S (2019). Working capital management and its influence on profitability and sustainable growth. *Business: Theory and Practice*, 20: 61-68.
<https://doi.org/10.3846/btp.2019.06>
- Olaoye FO, Adekanbi JA, and Oluwadare OE (2019). Working capital management and firms' profitability: evidence from quoted firms on the Nigerian stock exchange. *Intelligent Information Management*, 11(3): 43-60.
<https://doi.org/10.4236/iim.2019.113005>
- Qureshi MA (2014). Relationship of operating cycle and firm's returns: Cases from manufacturing firms listed in KSE Pakistan. *International Journal of Advance Research, IJOAR*, 2(2): 1-10.
- Sharma AK and Kumar S (2011). Effect of working capital management on firm profitability: Empirical evidence from India. *Global Business Review*, 12(1): 159-173.
<https://doi.org/10.1177/097215091001200110>
- Siraj M, Mubeen M, and Sarwat S (2019). Working capital management and firm performance: Evidence from non-financial firms in Pakistan. *Asian Journal of Empirical Research*, 9(2): 27-37.
- Taani K (2011). The effect of financial ratios, firm size and cash flows from operating activities on earnings per share (An applied study: On Jordanian industrial sector). *International Journal of Social Sciences and Humanity Studies*, 3(1): 197-205.

Ukaegbu B (2014). The significance of working capital management in determining firm profitability: Evidence from developing economies in Africa. *Research in International Business and Finance*, 31: 1-16.
<https://doi.org/10.1016/j.ribaf.2013.11.005>

Vural G, Sökmen AG, and Çetenak EH (2012). Affects of working capital management on firm's performance: Evidence from

Turkey. *International Journal of Economics and Financial Issues*, 2(4): 488-495.

Wafula WM, Tibbs CY, and Ondiek AB (2019). Average collection period and financial performance of Nzoia water services company. *International Journal of Multidisciplinary and Current Research*, 7: 273-279.
<https://doi.org/10.14741/ijmcr/v.7.3.5>