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INFLUENCE OF WORKING CAPITAL MANAGEMENT ON ORGANIZATION PERFORMANCE: A CASE OF MANUFACTURING INDUSTRY OF PAKISTAN

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ABSTRACT

Purpose: Working Capital Management largely was one of the critical component of financial planning. The financial managers have to put extra effort to gain the benefits from short term financial planning. Therefore in this study the researcher explore the influence or working capital management on organization's performance.

Design/Methodology/Approach: To investigate, data for this purpose collected from the companies' listed in Pakistan Stock Exchange from 2015-219.

Findings: Results of this study shows CCC and APP has positively influence on financial performance of the companies. On the other hand ACP and ITO have negative impression to firm's performance. As CCC and APP has inverse relation with ACP and ITO.

Implications/Originality/Value: The results of this study helps management to lineup their financial strategies regarding improvement of working capital management.

Keywords

Working Capital, Manufacturing Industry, Performance, Pakistan

1. Introduction

It's very important to achieve tactical position to manage companies' uncertainty of occurrence and productivity and it is possible from working capital management (WCM). This is why WCM is considered to be the important element for financial management of firm. (Uguru, Chukwu & Elom, 2018). WCM is significant and delicate issue for financial management that has careful considerations for companies in spite of their basics (Dinku, 2013). Size, nature of businesses all organization might be different whether profit-oriented or not need working capital management.

Liquidity, survival and solvency can only be maintained through this working capital management (Atta, Javed, Khalil, Ahmad & Nadeem, 2017). WCM has valuable worth for firms'. Management of working capital is the choice of current assets and liabilities for any business (Mansoori and Muhammad, 2012).

SMEs has not been fully revealed in Africa, in sub-Saharan Africa SMEs are drivers in growth across the economies figures show 90% of businesses in markets (Biggs & Shah, 2006). A study conducted in 2014 revealed that working capital management provide a cleared indication that how companies well organized and its reliability of proper management. (Windaus, 2014). WCM effects the management decision and planning influence the size and impact of it. (Kaur, 2014). WCM thus took valuable part in financial management and play important part in firm's wealth creation and leave impacts on profitability and liquidity of the company (Raheman & Nasr, 2007; Naser et al, 2013). Day to day operation of the company or capability of the firm to meet short term debt, stocks of raw materials, spare parts and consumables. This WCM plays vital role to in operating of business cycle (Rawat & Dave, 2017). Working capital management is essential by any company to it allows it to negotiate between creditors and debtors and how much stock they have to keep it with itself (Kosgey & Njiru, 2016). These are the reason why firms monitor their working capital which make sure that how much resources are needed to operate their daily operation and financial needs (Runyora, 2012). This is very important to reveal why of argued that effectiveness in working capital management is necessary to overcome or fullfil the companies objectives and it maximize shareholders' value enhancement. WCM is considered to be the area of interest widely covered by firms which all about its profitability (Mbawuni, Mbawuni & Nimako, 2016). Studies show that working capital management basics of developed economies of large organizations one of it (Tauringana & Afrifa, 2013). WCM considered to be the significant and too much intergrated part of firm's performance (Banos-Caballero, Garcia-Terel & Martinez-Solano, 2014; Tauringana and Afrifa 2013).

So lapses in research finding on working capital management and profitability of the organization are not compatible and leaves incompetence. This is way this study is conducted to completely examine the profitability of the manufacturing companies in Pakistan affected by working capital management in the period of 2015-2019. Financial reports are used as data resource in this study.

2. Literature Review and Theoretical Model

Working capital management is considered to be the most important matter within the organization, where financial supervisors strive very hard to identify it hard to how they can achieve and as well the exact valuation of working capital management (Lambers, 2005). WCM is also very essential element in corporate finance sector reason is, it effects directly companies liquidity and profitability as it is the management of current assets and current liabilities. In manufacturing concerns assets by characteristics founded half of the total assets. Study also shows concerns that small size of current assets may founded in difficulties in operating and maintaining the smoothly operation (Horne & Wachowicz, 2010).

Incompetent working capital management will reduce the profitability and create financial crises as well. Study of Padachi (2016) reveals that management of working capital management leaves good result on financial health of the company notwithstanding the size and nature of the business.

It understood, all manufacturing concern especially large size of its invested more on inventory and w-i-p from key components of the working capital and so management of these resources are supreme if firm to become successful in financial grounds.

Researcher in 2017 observed the impacts of working capital management planning on Small scale enterprises' performance in Osun stat (Ayo-Oyebiyi and Folajin 2017).

By applying purposive sampling technique 100 samples were collected of small business from Osogbo, Ife, Iwo and Ilesa and Ede. Evocative and inferential statistics were employed on data collected from structured questionnaire and interviews to analyze.

Findings of the tests ae suggesting that cash management planning and credit management planning has positively impact on concerns' value creation. Inventory management of these small size business are was founded in inverse relation to performance of these small scale business.

Practices involved in working capital management are pathetic interpreters of small scale businesses in Osun state, Nigeria. Another study conducted in years of 2006-2014 to find the impacts of working capital management on profitability with this objective Nigeria country was selected and sample of Nigerian Breweries Plc and Guinness Nigeria Plc was taken.

In this research least square regression techniques were used to analyze the data collected. Result of this exam interpreted that number of days account receivables are outstanding on the other hand inventory management and cash conversion cycle proved to be the best variable for firm's profitability objectives of brewery firms in Nigeria.

Research suggested brewery concerns to overcome their investment portion on current assets with reason to cost cut and increase its accounts receivables and current cash.

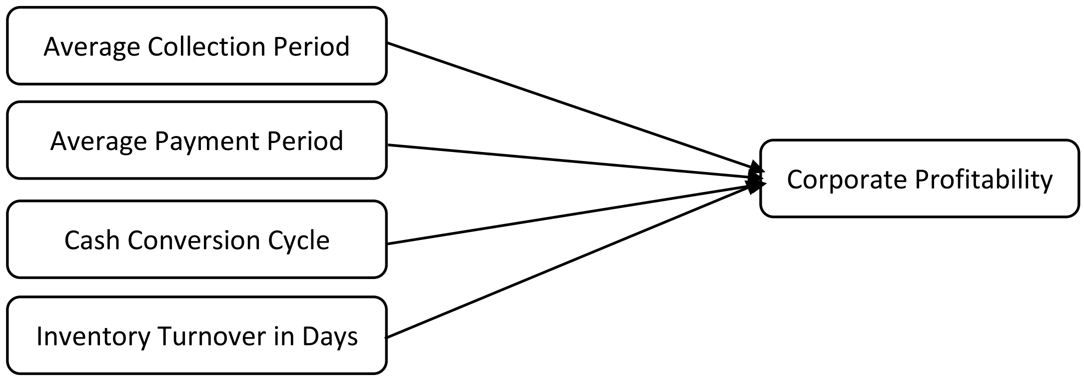
Research on effects on WCM conducted in 2001-2010 with two models Return on Assets and Gross Working Capital in Nigeria. Here in this study a panel data approach was used conduction of this research on corporate performance of selected firm. Results shows that working capital management can be used as analytical for examining of ROA and GWC. Gross Working Capital has positively effects on concerns' performance (Kolapo, Oke & Ajaye, 2015).

Research conducted with title of WCM and firms profitability performed on Nigerian Quoted Companies examined the associations among working capital management and firm's profitability on 25 companies in the period of 2005-2011; discussion of Oladimeji and Aladejebi (2020) on SMEs from Nigeria revealed that there is no association between working capital management and organizations' performance. Fill beck and Krueger (2005) investigated WCM policies of 32 non-financial concerns in United States. Study showed that difference lie among concerns' in Working capital over the time. Related investigation also reached to a point that self-adjusts considerably inside industries over time. Relevant study also conducted Gamboled & Katz in 1983, Long et al. (2011), Soenen (2011).

Companies can overcome uncertainty of occurrence and enhance its performance if they can comprehend the functions and variables of working capital.

In Pakistan researcher examined the impacts of working capital management on the profitability with 94 Pakistani national companies listed in ISE in the duration of 2009 till 2014. He took variables of working capital management (Average Collection Period, Inventory Turnover in Days, Average Payment Period and Cash Conversion Cycle) on net operating profit of the firms. Findings showed there is negative relationships between working capital management and profitability. Trade-off between WC and profitability is not consistent (Jose, Lancaster & Stevens 2006).

These examines investigate a linear relationships between working capital and profitability and their results shows companies can enhance their profitability by overcoming the working capital levels. Management of WC is essential to the financial health of the firms included all sizes of the businesses. Amount of working capital has high in proportion to the total assets as took and so this amount can be used in an efficient and effective ways (Padachi, 2006).



Hypothesis

H_1: Average Collection Period has significant impact on corporate profitability

H_2: Inventory turnover has significant relationship with corporate profitability.

H_3: Average collection period has positive impact on corporate profitability.

H_4: Cash Conversion Cycle (CCC) has positive relationship with corporate profitability.

3. Methodology

The researcher adopted quantitative methods to test the postulate of this study. Secondary data used here in this research to test hypothesis. Annual reports were used here to collect data of 15 manufacturing concerns registered in Pakistan stock exchange. The period was extended to 5 years (2015-2019). This obstacle was implemented because the latest data for examining was available.

3.1 Model Specification

Dependent Variables: Gross Operating Profit (GOP)

Independent Variables: ACP, ITID, APP and CCC.

Regression model OLS Ordinary Least Square is used here:

This model investigate the impact of working capital management on profitability listed in Pakistan stock exchange.

Gross Operating Profit=f (ACP, ITID, APP, CCC)………….. (01)

This stated equation 01 translates new equation 02

$GOP = \beta o + \beta 1ACP + \beta 2ITID + \beta 3APP + \beta 4CCC + \mu t$……… (02)

Here GOP is dependent variable which will used to measure the profitability with effective management of WC, ACP, ITID, APP and CCC (independent variables).

Here $\beta 0$ is used as for the interception of equation like $\beta 1$, $\beta 2$,…

Coefficient and ε= Error term.

To investigate the degree of association between variables Pearson correlation is used inside the consideration and to check the magnitude and direction of relationship between dependent and independent variables, the regress analysis was employed in this study.

4. Result and Discussion

Descriptive stats of this study along with means and standard deviation described in Table-1

Table-1 Descriptive Statistics

	ACP	ITD	APP	CCC
ACP	1			
ITD	0.059	1		
APP	0.336	0.329	1	
CCC	-0.071	0.419	-0.657	1

Table-1 depicting that value for organization performance mean value stand around sixty percent (60%) of the total revenue and standard deviation is coming fourteen percent (14%). It's showing that profitability deviate from means on both sides by 14%. Gross operating profitability is showing maximum 90% and minimum 35% of figures. This table shows that mean of CCC can be used as measurement tool to gage managing of working capital is 60% and S.D is 28days. Maximum level of CCC as given in this table is 101 days and likewise 24 days are minimum level of CCC. Investigated firms receive payments in average figure of 21 days and standard deviation is 7 days. Companies take 11 days to recover/collect cash from the receivables and it's the minimum time limit, while 40 days are the maximum time limit. A company after took 151 days, and it's not said to be the large span of time to convert inventory into sales.

4.1 Correlation Analysis:

Table: 2 shows the Pearson correlation in regression model among the variables. This correlation model used here to examine the association between WCM and gross operating profit. In this table relationships of variables will be shown for to understand the participation of these variables for making the profitability. As shown in this table independent variables ACP has direct relation to ITD and APP shows that if ACP increase the ITD also increases.Also founded that CCC and ACP has inverse relation it means if ACP increases the CCC decreases.Similar that APP has the negative relation to CCC in reverse direction of ACP. While ITD have the same positive relation with APP, it means if the ITD increases, the CCC, APP, also increases in the same direction. APP also having the negative relation with CCC.

Table-2 Correlation Analysis

	ACP	ITD	APP	CCC	GOP
N	75	75	75	75	75
Mean	20.87	112.54	73.60	59.30	.060
Std. Dev	7.44	16.78	29.06	28.33	0.34
Min	10.72	79.29	50	-23.98	0.35
Max	39.64	150.52	184.11	100.97	0.92

4.2 Regression Analysis

Table-3 is showing the regression results. In this all variables will be show how they leave impacts on companies' profitability. The adjusted R2 of this model is 26 percent and R2 in the model is .47. This figure shows 47% discrepancy in dependent variables in this model. In this study of independent variables 53 percent variation remain unexplained in dependent variables. The results show that coefficient of ACP has the negative value of -0.04 and p-Value is 0.016. It depicts that positive or negative movement of ACP having the significant impact on firm's profitability. Regression shows APP has positive coefficient of 0.042 with p-value of 0.004 it means increase or decrease in APP will leave significant impact on the firm's profitability. We came to know that a positive relationships among APP and Profitability of the firms may leads to more profit with sense of longer to pay their bills. CCC will used here for the measurement of efficiency of the WCM. CCC has also positive relationship with firm's profitability and so on it 0.041 relationship with operating profitability it also have the same meanings as previous increase or decrease in CCC will reflect on firm's profitability.ITID have the inverse relationship with profitability as it depicts that increase in ITID will leads to the discouragement of profitability and vice versa. Negativity of ITID is -0.039.

Table-3: OLS Regression

Variable	Coefficients	Std. Error	t-test /Stats	P-Value
Constant	0.714	0.272	2.603	0.016
ACP	-0.040	0.013	-3.108	0.005
ITD	-0.039	0.013	-3.043	0.006
APP	0.042	0.013	3.177	0.004
CCC	0.041	0.013	3.134	0.005
R^2	0.470			
Adjusted R^2	0.260			
F-Value	2.300			

4.4 Discussions

Concerns about Average days of Accounts Receivables preceding studies of Mathuva,2010 founded inverse associations among ACP and profitability of the firms. Here researcher founded similar negative relationship in these two variables (ACP and profitability). As the number of days increase for the incoming cash from receivables from sales put negative impact on firms' profitability. So negative relationship among ACP and profitability also decrease profitability it depicts that as number of days decrease by 1 day can become the reason of increase in profitability. Result of the study also suggest that increasing number of days of account receivables turned into opportunity costs and risk of bad debts risk arise and profitability of the firm; these all leave negative impacts on firm's profitability for the long-run. These finds shows that firms must have to strive for the collection of debts as soon as possible to overcoming the risks of bad debts. As the collection period of payment of sales in the business increase it become the reason of bad debts and ultimately in a result profitability of the firms get downwards likewise whenever collection period of debts decreases profitability can be enhanced because there would be less chances of bad debts.

Inventory turnover in Days has inverse association with gross operating profit therefor profitability and ITID has negative relationship founded by a reach (Ruicho, 2013 and Dong, 2010) conducted in 2010. Another study (Gill, Biger and Mathur, 2012; Naimulbari, 2012) founded direct relationship between ITID and profitability of the firms. It depicts that when there is increase in time for the conversion of inventory to finish goods and selling decreases it enhances profitability. In manufacturing concerns there is always bulk size of inventories converted into raw material and finish goods this is why it needs to process it as quickly as it can to earn profit. Conclusion of this finding is if the inventory requires more time to conversion, it will bring profitability down. Likely both variables has adverse effect to each other.

Research founded positive association among average APP and Profitability opposite to the relation of the ACP and Profitability (Naimulbari, 2012; Muthuva, 2010). This paper propose as the number of day of account payable increase by 1 day leads to the profitability increase. It makes the sense if the firms delays the payment of creditors in a results working capital reserves increases and profitability enhance. This study suggested for the enhancement of working capital management performance firms must have to delay the payments of creditors as much as it can.

Finding by (Azam and Haider, 2011 and Naimulbari, 2012) reached to know there is an inverse correlation between CCC and Profitability. Another study showed direct relationship between CCC and firm's profitability. These results can be taken to mean that if the CCC increases it leads to increase in profitability too. This direct relationship among CCC and profitability can be explained by the nature of the firm its market supremacy. Firms strive to invest more on inventory maintenance as more inventory enhance the production and it caters the increasing seasonal demand and it overcome the price fluctuations by avoiding stock out. The positive relationships of CCC and profitability can also be justified as keeping the more current assets become helpful for the boosting in profits.

5. Conclusion

Management of working capital is considered to be the most significant financial decision of the firm. Adequate availability of working capital run the company in a very smooth way regardless of the nature of the business. Value for shareholder can also be created by reducing the number of days' account receivables, as ACP have negative relationship with firm's profitability and vise versa. This study also concluded that as the ACP increases the profitability decreases. As ACP increases it leads to the level of bad debts in the long run it will result into decline in profitability. Inventory turnover days if increases it maximize the storage cost in order to keep it. Firms are suggest to keep creditors on awaiting for payables and as for as firm can, APP increase profitability of the firm. If the firm increase Cash Conversion Cycle it leads to attainment of sustainable competitive edge this thus the correct and efficient use of organization's resources. Management of WC is the reasonable amount of current assets and current liabilities that a company has and also how firm can finance these current assets. All variables (Account Receivables, Inventories etc.) examined here in this study should also have to maintain properly for the attainment of the profitability of the firm. This research can also be conduct on more working capital variables and profitability measures that are not included here in this study like cash, marketable securities and ROA, ROE etc. on service provided firm.

References

Afza T. & Nazir M. (2009). "Impact of aggressive working capital management policy on firms' profitability". *The IUP Journal of Applied Finance* 15(8):20-30.

Appuhami B. A. R. (2008). "The impact of firms' capital expenditure on working capital management": An empirical study. *Int. Manage. Rev.* 4:1.

Ahmadi, M., Arasi, I.S. and Branch, M.G.,(2012). "Studying the Relationship between Working Capital Management and Profitability at Tehran Stock Exchange: A Case Study of Food Industry",*Research Journal of Applied Sciences, Engineering and Technology* 4(13): 1868-1874, 2012

Ayur A. (2009). "The relationship of cash conversion cycle with firm's size and profitability: an empirical investigation in Turkey". *International Business Research Journal Of finance & Economics*. ISSN 1450-2887 Issue 24 2009.

Arnold, G. (2008). "*Corporate financial management 4th edition"*. Pearson education limited; New York

Arunkumar O.N & Ramanan T.R (2013), "*Working Capital Management and profitability: A Sensitivity Analysis". International Journal of Research and Development:A Management review.* Vol 2, pp 52 – 58

Brigham, F. and Houston, F. (2003), *'Fundamentals of financial management'*, 10th ed. McGraw-Hill Inc: New York

Chen H., Frank M. & Wu O. (2005). "What actually happened to the inventories of American companies between 1981 and 2000? *Manag. Sci.* 51:1015-1031.

Chen H., Frank M. & Wu O. (2007). "US retail and wholesale inventory performance from 1981 to 2003". *Forthcoming, Manufacturing and Service Operations Management.*

Dash M. & Ravipati R. A. (2009). "Liquidity-profitability trade-off model for working capital management". Working paper, Alliance Business School.

Deloof M. (2003). "Does working capital management affect profitability of Belgian firms? *J. Bus. Financ. Account. 30*(3-4):573-588.

Dr. Azam, M and 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*, Vol 3, No 5,pp. 481 - 492.

Dr Ray, S. (2012) "Evaluating the Impact of Working Capital Management Components on Corporate Profitability: Evidence from Indian Manufacturing Firms" *International Journal of Economic Practices and Theories*, Vol. 2, No. 3, pp. 2247 – 7225

Deloof M (2003), 'Does working capital management affect profitability of Belgian firms', *Journal of Business Finance and Accounting, Vol 30, No. 3 &4,* pp. 573-588.

Dong H. P. (2010), "The Relationship between Working Capital Management and Profitability". *International Research Journal of Finance and Economic*. Issue-49.

DALOOF M. (2003),"Does working capital management affects profitability of Belgian firms?", *Journal of business finance and accounting* .Vol.30. N 3 & 4 pp.573-587.

Eljelly, A. (2004), "Liquidity-Profitability Tradeoff: An empirical investigation in an emerging market". *International Journal of Commerce & Management*, Vol 14 No 2, pp 48-61.

Eljelly A. (2004), "Liquidity-profitability trade-off: an empirical investigation in an emerging market". *International Journal of Commerce and Management, Vol 14, No. 2,* pp. 48-61

Falope, O. I, Ajilore O. T (2009), "Working capital management and corporate profitability: evidence from panel data analysis of selected quoted companies in Nigeria", *Research Journal of Business Management*, vol.3: pp. 73-84.

Fama, E.F. and K.R. French, (2008), "Taxes, financing decisions and firm value". *J. Finance*, 53(3): 819-843.

Filbeck, G., & Krueger, T. (2005). "Industry related differences in working capitalmanagement". *Journal of Business, 20*(2), 11-18.

Gill, A., Biger, N., Mathur, N. (2010), "The relationship between working capital management and profitability: Evidence from the USA", *Business and Economics Journal,* 10, 1-9.

KESSEVEN PADACHI. (2006),"Trends in working capital management and its Impact on firm's performance: an analysis of Mauritian small manufacturing firms". International Business Review of Business Research Study: .vol.2 No 2 pp.45-48.

Kazi Naimulbari MD. (2012) "The Impact of Working Capital Management on Profitability" of pharmaceuticals sector in Bangladesh. Unpublished undergraduate, research work: independent university, Bangladesh

Lazaridis, I. and Tryfonidis, D. (2006), 'Relationship between working capital management and profitability of listed companies in the Athens stock exchange', *Journal of Financial Management and Analysis, Vol 19*(1)

Lamberson, M. (2005)."Changes in working capital of small firms in relation to changes in economic activity." *Journal of Business, 10*(2), 45-50.

Mansoori, E. and Dr. Muhammad (2012), "The Effect of Working Capital Management on Firm's Profitability: Evidence from Singapore" *Interdisciplinary Journal of Contemporary Research in Business,* Vol 4, No 5, pp 472 – 486

Mathuva, D. M. (2010) "The Influence of Working Capital Management Components on Corporate Profitability: A Survey on Kenyan Listed Firms", *Research Journal of Business Management*, 4(1): 1-11.

Mekonnen, Mulualem(2011) "The Impact Of Working Capital Management On Firms' Profitability" Unpublished Master Thesis, Addis Ababa University: Ethiopia

Nazir, M.S. and T. Afza, (2008). "On the factor determining working capital requirements". Proc. of ASBBS, 15(1): 293-301.

Nobanee H., Modar A. & Maryam A. (2010). "Cash conversion cycle and firm's performance of Japanese firms. Available online at: https://www.ssrn.com.

Raheman A. & Nasr M. (2007). "Working capital management and profitability. A case study of Pakistani firms". *Int. Rev. Bus. Res.* 3(2):275-296.

Rao R. K. S. (1989). "Fundamentals of financial management", 3rd Ed. Macmillan Publishers, pp. 550-644.

Rezazade J. & Heidarian J. (2010). "*Accounting and Auditing Research Journal* 2(7):20-34.

Roumiantsev S. & Netessine S. (2007). "Inventory and its relationship with profitability: Evidence for an international sample of countries. Working paper, University of Pennsylvania.

Shin H. H., & Soenen L. (1998). Efficiency of working capital management and corporate profitability. *Financ. Pract. Educ.* 8(2):37-45.

Soenen L. A. (1993). "Cash conversion cycle and corporate profitability". *J. Cash Manage.* 13:53-57.

Raheman, A. and M. Nasr, (2007). "Working capital management and profitability-case of Pakistani firms". *Int. Rev. Bus. Res. Studies*, 3(1): 279-300.

Raheman et al (2010) "Working Capital Management and Corporate Performance of Manufacturing Sector in Pakistan", *International Research Journal of Finance and Economics*, 47: 151-163.

Raheman, A. and Nasr M., (2007), 'Working capital management and profitability – case of Pakistani firms', *International Review of Business Research Papers*

Ruichao, Lu (2013). Impact of Working Capital Management on Profitability: The Case of Canadian Firms: Unpublished Master Thesis, Saint Mary's University: Canada.

Saghir, A., Hashmi, F, M., and Hussain, M, N (2011), "Working Capital Management and Profitability: Evidence from Pakistan Firms", *Interdisciplinary Journal of Contemporary Research in Business*, Vol 3, No 8, pp. 1092 – 1105

Samiloglu, F. and K. Demirgunes, (2008), "The effect of working capital management on firm profitability: Evidence from Turkey". *Int. J. Appl. Econ. Finance*, 2(1): 44-50.

Teruel P and Solan P. (2005). "Effects of Working Capital Management on SME Profitability", Working Paper series: Spain

Teruel PJG and Solano PM. (2007). "Effects of Working Capital Management on SME Profitability", *International Journal of Managerial Finance*, Vol. 3, No. 2, pp. 164-177,2007.

Velnampy, T. and Niresh, J.A. (2012). "The Relationship between Capital Structure and Profitability", *Global Journal of Management and Business Research*,Vol. 12 (13).

Vural, G. Sökmen, A.G and Çetenak, E. H (2012). “Affects of Working Capital Management on Firm’s Performance: Evidence from Turkey”, *International Journal of Economics and Financial Issues* Vol. 2, No. 4, 2012, pp.488-495

Zariawari M.A., Annuar M.N., Tuufiq H.,Rehman A.S. (2009), “Working capital management and corporate performance case of Malaysia”. *Journal of Modern Accounting & Auditing*: Vol.5 No.11 (Serial No.54)