

The Impact of Working Capital on Firms' Profitability: Evidence from Food Manufacture Companies in Ethiopia.

*Niman Ibrahim Arab

**Dr. Rajinder Kaur

* (Lecturer, Accounting and Finance, College of Business and Economics, Jigjiga University, Jigjiga, Ethiopia and Ph.D. Candidate, School of Management Studies, Department of Commerce, Punjabi University, Patiala India)

** Professor, (Lecturer, Department of Commerce, Punjabi University, Patiala, India)

ABSTRACT

The purpose of this study is to examine the impact of working capital management on firms' profitability. The study aim to examine the statistical significance between food companies' working capital management and profitability. Based on this objective the study adopted quantitative method of research approaches to check a series research hypothesis. Accordingly, the study selected a sample of sixteen (16) food manufacture companies in Ethiopia for the period of ten years (2007-2016) with the total of 160 observations. Data was analysed on quantitative basis using Pearson's correlation and panel data regression analysis. The outcomes showed that there is statistical significance negative relationship between profitability and working capital management. It means that, firm's managers can create profits or value for their companies and shareholders by keeping average collection period and inventory conversion period of working capital to a possible optimum level. The researchers found that there is a significant negative relationship between liquidity and profitability. Furthermore the study finds that there is strongly significance positive relationship between size and firm profitability. Unlike, the study found that there is no statistically significance negative relationship between debt used and firms profitability.

Keywords: working capital, working capital management, firm size, debt ratio, and profitability.

I. INTRODUCTION

Working capital management is portion of the financing considerations that a finance director of a corporation needs to determine, besides capital structure and capital budgeting (Ross, Westerfield and Jordan, 2010). Working capital management (WCM) refers to all management decisions and activities that usually influence the size and effectiveness of the working capital (Kaur, 2010). One area of accounting and finance that impacts the efficient operations of business organization in general is working capital management (WCM), among other things (Shin & Soenen, (1998) ; Eljielly, (2004) Tauringana & Afrifa, (2013) .WCM has been defined as the management of current assets and current liabilities. (Deloof, 2003; Eljelly, 2004; Raheman and Nasr, 2007). The concept of Working capital management addresses WCM is a very essential component of

corporate finance because it directly affects firms' liquidity and profitability. Therefore, efficient management of working capital is a fundamental portion of the overall corporate strategy to create shareholder value. In general, business organisations try to keep an optimal level of working capital that maximizes their value (Deloof, 2003; Afza & Nazir, 2007).

Meanwhile, in determining the company's profitability, the finance director also need to take account the company's working capital management, which fundamentally means managing the firm's current assets and current liabilities at satisfactory level (Dong and Su, 2010; Gill, Biger and Mathur, 2010) Generally, in a balance sheet, current assets consist of raw materials, working progress, finished goods or inventories, cash and bank balances ,account receivables, which are short term in nature that are used for production and sales ,which are able to be converted to cash within the year. Further, current liabilities refer to obligations that need to be paid within the year or not beyond the business operating cycle, whichever is earlier (Ross, Westerfield and Jaffe, 2010). Commonly, current liabilities comprise of accounts payable, accrued wages, taxes and other expenses payable and short-term debt. Hence, it is vital in managing the working capital efficiently as it is able to increase the firm's profitability and shareholder value (Smith, 1980; Deloof, 2003, Dong and Su, 2010),

Effective working capital management involves planning and controlling current assets and current liabilities to avoid the risk of a firm's inability to meet due short term obligations on the one hand, and to Prevent excessive investment in these assets on the other hand (Eljelly, 2004). Many studies have indicated that directors spend considerable time on day-to-day problems that involve working capital decisions (Raheman and Nasr, 2007). One aim for this is that current assets are short-lived investments that are continually being converted into other types (RAO, 1989). With regard to current liabilities, the firm is

Accountable for paying these obligations on a timely basis. Thus, decisions on the level of different working capital components become frequent, repetitive, and time consuming (Raheman and Nasr, 2007).

The inefficient management of working capital harms profitability and interrupts normal operations of a business as well (Kaur, 2010). This may ultimately lead to a financial disaster and bankruptcy. On the other hand, appropriate management of working capital leads to material savings and confirms financial return at the optimum level even on the minimum level of capital employed (Kaur, 2010). Both excessive and insufficient working capital is harmful for a business. Working capital and its significance is unquestionable (Filbeck & Krueger, 2005). It directly effects the liquidity and profitability of companies (Raheman & Nasr, 2007). Just as circulation of blood is very crucial in the human body to maintain life, the flow of funds is very

essential to maintain business (Padachi, 2006). If it becomes feeble, the business can hardly survive. Therefore, overlook proper management of working capital at your own peril.

In view that working capital management decision is essential factor as it determines the company's values maximization and Shareholders wealth many scholars had conducted numerous studies to examine on the association between working capital management and firm's performance over the last decades. However, the results are inconsistent for different studies carried out by numerous. Researchers and are performed separately. Besides, there is also lack of study being conducted on the effect of working capital management on the profitability of food manufacture firms in Ethiopia.

In this study, effectiveness of working capital management (WCM) is represented by cash conversion cycle (CCC), composed with WCM components such as Average collection period.

(ACP), Inventories Conversion period (INV) are analysed on their effect towards firm's profitability, measured by return on asset (ROA). Control variables such as current ratio (CR), debt (DEBT) ratio, firm size (SIZE), sales growth (GROWTH).are also being examined in order to determine their effect towards the profitability of the food manufacture firms. This study attempts to fill up the gap of working capital management studies by concentrating specifically in the food manufacturing sector evidence from Ethiopia. Based on the problem statement mention above the result of this study is to find out answer for the following identified research questions:-

- ✓ How Average Collection Period (ACP) does affects the profitability of the food manufacturing firms in Ethiopia?
- ✓ How Inventories Conversion period (ICP) does affects the profitability of the food manufacturing firms in Ethiopia?

LITERATURE REVIEW

Falope and Ajilore (2009) studied on the impacts of working capital management on profitability of a sample of 50 Nigerian non-financial firms listed on the Nigerian Stock Exchange from 1996 to 2005. Based on the panel data econometrics for pooled regression, they found that there is a significant negative association between net operating profit and the average collection period, inventory turnover, average payment period and cash conversion cycle. Besides that, they also found that there is no substantial difference between large and small firms on the impacts of WCM. Based on the results obtained, it is suggested that shareholders value can be enhanced if the WCM is efficiently being employed via minimizing the days of accounts receivable and inventories.

Mathuva (2010) studied the impact of working capital management components upon company profitability by using a sample of 30 companies listed on the Nairobi Stock Exchange (NSE) from 1993 to 2008. He used

statical tools like Pearson and Spearman's correlations, the Pooled Ordinary Least Square (OLS), and the fixed effects regression models to conduct data analysis. The findings of his study were that there is a highly significant negative relationship between accounts collection period and profitability. In respect to the association between profitability and the inventory conversion period or the average payment period, the results were positive and significant.

Nobanee, Abdullatif and AlHajjar (2011) studied on the relationship between firm's cash conversion cycle and its profitability for 34,771 Japanese non-financial firms listed on the Tokyo Stock Exchange from the period of 1990 to 2004. By using dynamic panel data analysis, they conclude that there is a strong negative association between the firm's cash conversion cycle and its profitability in all the samples studied apart from consumer goods and services firms. Based on the outcomes obtained, it is recommended that the profitability of a Japanese corporation can be enhanced by reducing the CCC via reduction in the inventory conversion period or by minimising the receivable collection period or by deferring the payment period to suppliers. Thus, reduction in the Cash Conversion Cycle (CCC) brings improvement on firm's profitability as higher CCC incurs costly external financing.

Ching, Novazzi and Gerab (2011), who examined the association between working capital management and profitability in Brazilian listed firms, noted that effective management of working capital was vital in achieving profitability. It was further noted that return on sales as a profitability measure increased with effective management of inventory and cash conversion cycle to optimal levels in working capital intensive firms. Increase in the return on assets was associated with effective management of inventory in the firms. The study concluded that profitability could be achieved through proper management of working capital.

Charitou, Lois and Halim (2012) studied on the association between working capital management and company's profitability for an emerging Asian country by focusing on 718 firms listed on the Indonesia stock exchange for 13 year period, 1998-2010. Based on multivariate regression analysis, their findings revealed that CCC and net trade cycle (NTC) have positive relationship with the firm's profitability, while debt ratio measuring firm's riskiness have negative relationship with companies profitability, which is determined by Return on Assets (ROA).

Kruti A. Patel (2015) examine on influence of working capital management on profitability of Indian Oil Corporation. The study were used secondary data and study period was 2009-10 to 2013-14. Pearson correlation, descriptive statistic and INM SPSS were applied as research methodology. The outcomes show that there is significant negative correlation between working capital management and net profit and it also indicates that there is negative relationship between liquidity and profitability.

Haftu Arefe Abreha (2017) had studied the effect of working capital management on company performance by using audited financial statements of a sample of 9 E.F.F.O.R.T manufacturing companies for the period of 2011 to 2015. Non-probability sampling technique called purposive sampling was adopted. Data were collected from the audited financial statement of the sample companies. Analysis was conducted using descriptive statistics and the econometric model of random effect estimates to test literature-driven hypothesis. The performance was measured in terms of profitability by return on total assets, return on equity, and operating profit margin as dependent variables. The data was analysed using STATA version 14, estimation equation by Random effect panel data regression models. Outcomes shows that longer accounts receivable and inventory holding periods are associated with lower profitability. The outcomes conclude that cash conversion cycle has significant negative relationship with return on asset. In general paying suppliers lately and collecting payments from customers earlier, and keeping product in stock less time, are all associated with an increase in the firms.

Rakibul Islam, et al (2018) Working capital management plays centric role in enhancing operational efficiency and their ultimate profitability. Globally financial managers have been searching the proper way on how to utilize working capital components which prolong profitability. The aim of this study is to assess the influence of working capital components on profitability indicators of selected pharmaceutical firms in Bangladesh. The study used financial data of 9 pharmaceutical companies listed in Dhaka stock exchange (DSE) covered 2011-2015. Two methods were used in this paper for analysis data set. Firstly, to measure.

The relationship between selected variables Pearson Correlation matrix was used. Secondly, multiple regression analysis was used to examine the effect working capital components on profitability of selected pharmaceutical firms. The study also showed Durbin Watson test to assess autocorrelation of selected variables. In this study the correlation matrix recognised a negative correlation between working capital components and profitability, whereas regression analysis found number of days account receivable (AR) had significant positive relation and current ratio (CR) and debt ratio (DR) had appeared a significant negative

1.2 Research Objectives

The objectives of this study are as follow

- To investigate the impact of Average Collection Period (ACP) towards the profitability of the food manufacturing firms in Ethiopia.
- To investigate the impact of Inventories Conversion period (ICP) towards the profitability of the food manufacturing firms in Ethiopia.

1.3 Hypotheses

In order to accomplish the objective of the study mention above, the following research hypotheses (HP) were developed:-

Ho 1: - There is significance negative relationship between Average Collection Period (ACP) and firm's profitability.

Ho 2:-There is significance negative relationship between Inventories Conversion period (ICP) and firm's profitability.

1.4 Research Methodology

This study, explanatory research type along with quantitative research design was used to obtain the required quantity of data to run quantitative analysis, and enhancing the generalization of the results. The quantitative research approaches is also important for summarizing vast sources of information that is collected from panel data and to facilitate comparisons across categories and over time Hsiao, (2003)

The secondary data for the purpose of this study were collected from different documents such as income statement and balance sheet from the selected manufacture firms. Data were mainly collected from audited financial statements of food manufacturing companies for 10 years (2007-2016) Most of the required data was obtained from the financial statements submitted to the Ethiopian Revenues and Customs Authority (ERCA) for income tax purpose. The data used in this study are obtained from a sample of 16 food manufacture companies in Ethiopia with total observations of 160. This study is analysed using panel data regression, which is a combination of cross-sectional and time-series analysis, in order to determine the

Effects of WCM towards firms' profitability in the food manufacturing sectors in Ethiopia. The analyses of the sample of firms are examined by applying the statistical package of STATA version 12 The dependent Variable for the study refers to the firm's profitability that is represented by return on assets (ROA), while the independent variables refer to working capital management components that are represented by Average Collection Period (ACP) and Inventories Conversion period (ICP) Meanwhile, the control variables for this framework refer to current ratio (CR), firm size (SIZE), sales growth (GROWTH) and debt ratio (DEBT). The following table summarizes the dependant variables, the independent variables and the control variables of the study with their respective formulas.

Table1: Summary of the Variables used in the Analysis

NO	Variables	Abbreviations	Type	Measurements	Source
1	Return On Assets	ROA	Dependent	Net Income/Total Assets	(Weston and Brigham (1977, P. 101).
2	Average Collection Period	ACP	In dependent	(Average Accounts Receivable/Sales)x365	Deloof (2003) Falope and Ajilore (2009)
3	Inventory Conversion Period	ACP	In dependent	(Average Inventory/Cost of Sales) x365	Sharma and Kumar, (2011)
6	Liquidity	CR	Control	Current Assets /Current Liabilities	(Charitou, Lois and Halim, 2012).
7	Debt ratio	DR	Control	Total Debt / Total Asset	(Fabozzi and Peterson, 2003 p. 586).
8	Sales growth	SG	Control	(Sales ₁ – Sales ₀)/Sales ₀	Nazir and Afza (2009)
9	Firm Size	Size	Control	ln (Sales)	Afza, Qayyum and Bodla (2010)

The variables are then analysed to determine if there is any significant relationship between the dependent and independent variables through Pearson Correlation matrix with the purpose of identification of multicollinearity. In this study, panel data regression analysis has been adopted due to its assumptions that firms are heterogeneous, fewer multicollinearity problems between variables and higher degree of freedom, which resulted in higher efficiency of the estimator (Wooldridge, J.M. (2003) Balanced panel data has been used in this study in view of the characteristic of data used, which involves both cross sections and time series. Fixed effects method is selected as compared to the random effects estimation in view that based on Hausman test result, as reflected by the Chi-Square statistic revealed mostly significant at 0.01 levels in the

Both models. In both the regression models, the standard errors are computed by applying White's correction for heteroskedasticity, as adopted in the study by Deloof (2003) and Padachi (2006). Two panel data regression models developed in order to test on the hypotheses developed on the effect of WCM components towards firm's profitability measured by return on assets (ROA). In this paper, the regression models are derived based on model developed by Sharma and Kumar (2011).

The model is further supported by researchers which have analysed the effect of individual WCM components separately towards the profitability of firms, such as Deloof (2003), Padachi (2006), Falope and Ajilore (2009), Gill, Biger and Mathur (2010), Akinlo (2012). Thus, there are two panel data regression models formed for this study to test on the hypotheses developed.

Model 1: The effect of ACP on profitability of firms $ROA_{it} = \beta_0 + \beta_1 ACP_{it} + \beta_2 CR_{it} + \beta_3 SIZE_{it} + \beta_4 GROWTH_{it} + \beta_5 DR_{it} + \eta_i + \lambda_t + \epsilon_{it}$

Model 2: The effect of ICP on profitability of firms $ROA_{it} = \beta_0 + \beta_1 ICP_{it} + \beta_2 CR_{it} + \beta_3 SIZE_{it} + \beta_4 GROWTH_{it} + \beta_5 DR_{it} + \eta_i + \lambda_t + \epsilon_{it}$

Where profitability of the companies refer to ROA, while *i* stands for the *i*th firm, *t* stands for year *t*, and the variables are

Defined as follows: -

ROA_{it}: Return on asset of firm *i* at time *t*

ACP_{it}: Average collection period of firm *i* at Time *t*

ICP_{it}: Inventories Conversion period of firm *i* at time *t*

CR_{it}: Current Ratio of firm *i* at time *t*

SIZE_{it}: Firm Size of firm *i* at time *t*

GROWTH_{it}: Sales Growth of firm *i* at time *t*

DR_{it}: Debt ratio of firm *i* at time *t*

β₀: Intercept coefficient

η_i: Individual company impact assumed constant for firm *i* over *t*

λ_t: Time specific impact assumed constant for given *t* over *i*

ε_{it}: Time varying disturbance term serially uncorrelated with mean zero and variance 1. Random error term for firm *i* at time *t*.

1.5 Research Results and Analysis

This part presents the result based on the descriptive statistics of both the dependent and independent variables which are described under the following sections. Table 4.1. Below which presents descriptive statistics for 16 food manufacturing firms in Ethiopian for a period of 10 years from 2007 to 2016, this has a total of 160 firm-year observations.

Table2. Descriptive statistics of sample companies

Descriptive Statistics of Sample Companies						
Variables	N	Mean	Medium	Maximum	Minimum	Std. Dev.
ROA	160	0.1699	0.1700	0.3600	-0.0500	0.0823
ACP	160	93.8333	93.0000	134.0000	62.0000	12.2340
ICP	160	49.1067	50.0000	74.0000	26.0000	9.2947
CR	160	2.6498	2.6550	5.5600	0.3400	1.0236
DR	160	0.2361	0.2300	0.4300	0.0600	0.0881
SG	160	11.8797	0.1100	1.3800	-1.4500	0.5366
Size	160	0.1096	11.7850	15.1800	7.5800	1.5369

Source: STATA output from financial statements of sample companies, 2007-2016

Based on, Table2. The average profit of the food manufacturing firms as indicated by return on assets (ROA) is 16.99% (median 17. %). The minimum value for return on assets (ROA) is reported as negative 5% with maximum value of 36%, whereby the standard deviation of return on assets (ROA) is indicated as 8.23%, which means that ROA value can deviate from mean of both sides by 8.23%. For WCM components, noted that Average collection period (ACP) has reported the highest mean value of 94 days, followed inventory collection period (ICP) recorded an average of 49 days, These reflect that food manufacturing firms receive payment from sales proceeds on average of 94 days with standard deviation of 12 days, which the minimum collection period from receivables proceeds is 62 days with maximum period of 134 days. Furthermore, firms take an average of 49 days to sell inventory with standard deviation of 9 days, which the median for inventory conversion to sales is 50 days. The average current ratio of food manufacturing firms is reported as 2.6498, while the mean size of the firms is 11.8797. Meanwhile, the average sales growth and debt ratio are reported as 10.96% and 23.61% respectively.

To test the liquidity of the firms, a traditional measure of liquidity (current ratio) is used. The average current ratio for food manufacturing firm in Ethiopia is 2.6498. With a standard deviation of 1.0236. The highest current ratio for a company in a particular year is 5.5600 and in the same way the minimum ratio for a company in a year is 0.3400.

In the same way to check the debt financing and its relationship with the profitability the debt ratio (obtained by dividing the total debt of the company by the total assets) is used as a control variable. The results of descriptive statistics show that the average debt ratio for the sample of food manufacturing companies is 23.61 percent with a standard deviation of 8.81 percent. The maximum debt financing used by a company is 0.4300 percent while the minimum level of the debt ratio is 0.06 percent,

The size of the company and its relationship with profitability, natural logarithm of sales is used as a control variable. From table 2. Above one can see that the mean value of log of sales is 11.8797 and standard

Deviation of 1.5369 the maximum value of log of sales for a company in a year is 15.1800 while the minimum value is 7.5800 respectively.

To check the sales growth and its impact on profitability, sales growth is measured by (this year's sales – previous year's sales) / previous year's sales) is used as control variable. Looking at the above table2, we can see that the average value of sales growth is 10.96 percent with standard deviation of 53.66 percent. The maximum and minimum values of sales growth are 1.3800 and -1.4500 respectively.

1.5.1. Pearson's Correlation Analysis

Pearson's Correlation Analysis has been performed in order to determine and identify if there is any significant strong relationship between the independent and dependent variables such as the WCM components and control variables towards the profitability of firms measured by ROA under food manufacturing firms in Ethiopia. Furthermore, a high correlation between variables may indicate the presence of multicollinearity (Saunders et al. 2003; Anderson et al. 2007). The purpose of checking for Multicollinearity is because it leads to misspecification of test results of the regression. Based on the Pearson's correlation table3, it also allows detection of any potential of multicollinearity problem (Falope and Ajilore, 2009). The summary of the Pearson's correlation matrix for firms under study from year 2007 to 2016 is summarized in Table3 below.

Table 3 .Pearson's Correlation Matrix of food manufacturing firms.

Pearson's Correlation Matrix of food Manufacturing firms in Ethiopia.							
VARIABLES	ROA	ACP	ICP	CR	SIZE	SG	DR
ROA	1						
ACP	-0.3592	1					
ICP	-0.4422	.137	1				
CR	-0.3362	.310	.560	1			
SIZE	-0.3238	-.145	-.089	-.280	1		
SG	0.6342	-.475	-.035	-.150	.520	1	
DR	-0.0428	-.023	-.026	-.018	.156	.460	1

Source: STATA output from financial statements of sample companies, 2007-2016

Table3, the shows negative correlation coefficient between Average collection period and profitability measures, i.e. return on asset. From the table3, one can notice that correlation coefficient of average collection period with ROA is -35.92%. It indicates that the shorter Average collection period associated with high profitability and/or longer average collection period is associated with lower profitability.

In addition, as it can be clearly seen in Table 3. There is a negative correlation coefficient between firm size and profitability measure (i.e. Return on asset) of the study is -32.38%. Moreover, the above correlation table3, shows that firm growth rate is positive related with a Return on asset correlation coefficient of 63.42 percent. Likewise, debt ratio has negative correlations with Return on asset, In this particular case, the largest observed positive correlation for the independent variables of Return on asset is .560 between CR and ICP thus, this is sufficiently small as compared to the tolerable correlation according Field (2005) suggest that multicollinearity becomes a problem only when the correlation coefficient exceeds 0.80.

Table4: Panel Data Regression Analysis of food manufacturing firms

Dependent Variable :-Return on asset (ROA) Regression Method : Panel Least Squares (Fixed Effects Estimation) Period : 2007 to 2016		
Model	1	2
C	-0.823 (0.0004**)	-1.077 (0.0007**)
ACP	-0.00235 (0.0093**)	
ICP		-0.000672 (0.0062**)
CR	-0.032 (0.0291*)	-0.043 (0.0302*)
DR	-0.033 0.0683*	-0.045 0.0281*
GROWTH	0.032 0.0025**	0.023 0.0023**
SIZE	0.034 0.0023**	0.025 0.0000**
R-squared	0.597	0.612
Adjusted R-squared	0.481	0.479
F-statistic	23.542**	18.345**
Hausman Test(Chi-Sq. Statistic)	38.497 **	51.031**

Note: * $p < .05$, ** $p < .01$

Source: Researcher's Calculations, 2018

Based on Model 1 in Table4, there is a significant negative relationship between average collection period (ACP) and Return on Asset (ROA) at significance level of 0.01%. This result revealed that an increase in the average collection period (ACP) by a day has reduced the Return On Asset (ROA) of the firms by - 0.00235%, which the result is consistent with the majority of the findings from past literature review conducted that had also revealed a significant negative relationship between profitability and average collection period (ACP). (Deloof, 2003; Lazaridis and Tryfonidis, 2006; Falope and Ajilore, 2009; Gill, Biger and Mathur, 2010; Dong and Su, 2010). Thus, based on the result obtained in Model 1 above, the null hypothesis of H1o is accepted. Therefore, there is a significant negative relationship between average collection period (ACP) and Return on Asset (ROA) of firms under food manufacturing sector, which is consistent with the results obtained by previous researcher.

Based on Model 2 in Table4, that analyse on the effect of inventory conversion period (ICP) towards the firms' Return On Asset (ROA), it is revealed that inventory conversion period (ICP) has a negative

relationship with Return On Asset (ROA), at 0.01 significance level or 99% confidence interval This indicates that an increase of the inventories Conversion Period (ICP) by a day has decreased the Return

On Asset (ROA) of the firms by -0.06%. It can be translate that if the inventory takes more time to sell, it will adversely affect profitability. Again the finding is consistence with the previous studies, Garcia and Martinez (2007) and Raheman and Nasr (2007)

However, the result obtained is found to be contrary with previous literature review, which mostly revealed a positive relationship by Zcapkun, Hameri and Weiss (2009), Thus, based on the result obtained in Model 2 above, the null hypothesis of H_0 is accepted. Therefore, there is a significant negative relationship between inventory conversion period (ICP) and Return on Asset (ROA) of firms under food manufacturing sector, which is consistent with the results obtained by previous researchers.

On the same table4, the regression shows current ration have a significant negative relationship with return on Assets in all the models at 0.05 level of significance or 95% confidence interval. In light analysis Arnold (2008) mentioned that liquidity and firms' profitability has a negative relationship. Hence the regression output for debt ratio as a measure of firms leverage shows that, Debt ration have a negative relationship with return on Assets in all the models at 0.01, level of significance whenever firm's debt increases profitability will decrease.

Even if the regression indicates the result is not significant. However, Deloof (2003) mentioned that when leverage of the firm increases it will adversely affect its profitability while financial debt ratio used as a proxy for leverage. Similarly, the regression shows that the larger firms (measured through the natural logarithm of sales) have a significant positive relationship with return on Assets in all the models at 0.01. Level of significance. This is consistence with the theoretical views of large firms higher economic of scale and good will in the market. Using these market diversifications is the right avenue which increase sales and there by maximize profitability. At the same time, on table4, sales growths is statistically significant where Return on Asset increases as sales increase. Means sale growth have a significant positive relationship with return on Assets In general the result makes economic sense.

1.6 Conclusion

The purpose of this study is to investigate the impact of working capital on firms' profitability. Evidence from food manufacture companies.in Ethiopia The study aims to examine the statistical significance between firms 'working capital and profitability.

The study have found a significant negative relationship between firms profitability which is measured by Return on Asset and the average collection period, inventory conversion period , for a sample of food manufacturing firms in Ethiopia . And also negative relationship between Current ratio and Debt ration while positive relationship between sale growth and firm size on firms profitability.

REFERENCE

- [1]. Smith, K. (1980) Profitability versus liquidity trade-offs in working capital management. *Readings on the management of working capital*, 42, 549-562
- [2]. Shin HH, Soenen L (1998) Efficiency of working capital management and corporate profitability. *Financial Practice and Education*. 8(2):37-45
- [3]. Deloof M. (2003) Does working capital management affect profitability of Belgian firms, *Journal of Business Finance and Accounting* 30 (3)4-573-588
- [4]. Wooldridge JM. (2003) *Introductory Econometrics: A modern approach*, 2nd edition, USA: Thomson, South-Western.
- [5]. Wooldridge, J. M. (2003). Cluster-sample methods in applied econometrics. *American Economic Review*, 93(2), 133-138.
- [6]. Hsiao, C. (2003). *Analysis of panel data*, 2nd. Cambridge: Cambridge University Press. Kose, Ma, Es Prasad, & Me Terrones (2003), Financial integration and macroeconomic volatility, *Imf Staff Papers*, 50, 119-142.
- [7]. Eljelly A. (2004) Liquidity-profitability Trade-off: An empirical investigation in an Emerging Market, *International Journal of Commerce & Management*. 14(2):48-61
- [8]. Filbeck, G., & Krueger, T. M. (2005). An analysis of working capital management results across industries. *American Journal of Business*, 20(2), 11-20.
- [9]. Tibshirani, R., Saunders, M, Rosset, S., Zhu, J., & Knight, K. (2005). Sparsity and smoothness via the fused lasso. *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, 67(1), 91-108.
- [10]. Padachi, K. (2006). Trends in working capital management and its impact on firms' performance: an analysis of Mauritian small manufacturing firms. *International Review of business research papers*, 2(2), 45-58.
- [11]. Lazaridis, I., & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens stock exchange.
- [12]. Raheman, A., & Nasr, M. (2007). Working capital management and profitability—case of Pakistani firms. *International review of business research papers*, 3(1), 279-300.

- [13]. Afza, T., & Nazir, M. S. (2007). Is it better to be aggressive or conservative in managing working capital Journal of quality and technology management, 3(2), 11-21
- [14]. Garcia-Teruel, PJ and Martinez-Solano, PM, 2007, 'Effects of working capital management on SME profitability'. International Journal of Managerial Finance, 3: 164-177.
- [15]. Arnold, Glen. (2008).Corporate financial management. Pearson Education,
- [16]. 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, 3(3), 73-84.
- [17]. Zcapkun V, Hameri AP, Weiss LA(2009) On the relationship between inventory and financial performance in manufacturing companies, International Journal of Operations & Production Management.29(8):789-806.
- [18]. Ross SA, Westerfield RW, Jordan BD (2010) Fundamentals of Corporate Finance, Ninth Edition (Alternate Edition).McGraw-Hill/Irwin,
- [19]. Kaur J. (2010) Working Capital Management in Indian Tire Industry. International Journal of Finance and Economics. 46:7-15. 3. Shin HH, Soenen L. Efficiency of working capital
- [20]. Dong, H., & Su, J. T. (2010). The relationship between working capital management and profitability: a Vietnam case.
- [21]. Gill, A., Biger, N., & Mathur, N. (2010). The relationship between working capital management and profitability: Evidence from the United States. Business and economics journal, 10(1), 1-9.
- [22]. Ching, H. Y., Novazzi, A., & Gerab, F. (2011). Relationship between working capital management and profitability in Brazilian listed companies. Journal of global business and economics, 3(1), 74-86.
- [23]. Nobanee, H., Abdullatif, M., & AlHajjar, M. (2011). Cash conversion cycle and firm's performance of Japanese firms. *Asian Review of Accounting*, 19(2), 147-156.
- [24]. Charitou, Melita, Petros Lois, and Halim Budi Santoso (2012). "The Relationship between Working Capital Management and Firm's Profitability: An Empirical Investigation for an Emerging Asian Country." *The International Business & Economics Research Journal (Online)* 839.
- [25]. Akinlo, Olayinka, and Taiwo Asaolu. (2012) "Profitability and leverage: evidence from Nigerian firms

[26]. Tauringana V, Afrifa A (2013) the relative importance of working capital management and its components to SMEs profitability. *Journal of Small Business and Enterprise Development*. 20(3):453-469.

[27]. Mathuva, D. (2015). The Influence of working capital management components on corporate profitability.

[28]. Kruti A. Patel (2015) studied on impact of working capital management on profitability of Indian Oil Corporation. *International Multidisciplinary Research Journal (RHIMRJ)* Volume-2, Issue-5, May-2015.

[29]. Haftu Arefe Abreha (2017) The impact of working capital management on firm`s performance (A Case Study on Endowment Fund for Rehabilitation of Tigray (E.F.F.O.R.T) Manufacturing Companies) *International Journal of Commerce and Management Research*. Volume 3; Issue 9; September 2017; Page No. 29-39

[30]. Rakibul Islam, et.al (2018) Impact of Working Capital Management on Corporate Profitability Empirical Evidence from Pharmaceutical Industry of Bangladesh. *International Journal of Economics and Finance*; Vol. 10, No. 9; 2018

