



CURRENT ASSETS, CURRENT LIABILITIES AND PROFITABILITY: A CROSS INDUSTRY ANALYSIS



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ABSTRACT

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Keywords

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This study investigates the relationship between net profit after tax and total assets, total equities, total turnover, current assets and current liabilities. Unbalanced panel Data of 49 Companies from 5 industries listed in Dhaka Stock Exchanges from 2010-2019 were collected from the website of that companies. Ordinary Least Square (OLS), Pooled Ordinary Least Square (POLS), Driscoll-Kraay (DK), Second Stage Least square (2SLS), Generalized Methods of Moments (GMM) models are used in this study. This research found that total assets (TA) had significant positive relationship with net profit after tax (NPAT) in all models except POLS and GMM models, total turnover (TT) had significant positive relationship with net profit after tax in all models and current assets (CA) had significant negative relationship with net profit after tax in OLS and 2SLS model in food and allied sector. In Fuel and power sector, it is found that NPAT and TA had significant negative relationship in all models except GMM. In this sector, TE, TT, CA had significant positive relationship in different models but CL had insignificant relationship. In Pharmaceuticals and Chemical industry and Engineering sector, TE, TT, CA and CL had significant positive relationship in different models but in textile industry there is no significant relationship among these variables though the overall model is significant at 10% level.

Contribution/ Originality: This study investigates the impact of total asset, total equities, total turnover, current assets and current liabilities on net profit after tax of 49 companies from different industries listed in DSE based on data from year 2010 to 2019.

1. INTRODUCTION

Al-Qudah and Al-Afeef (2015) investigated the connection between current asset investment, profitability, and liquidity for industrial businesses listed on the Amman Stock Exchange. The researchers conducted considerable study to determine how to assess current asset investment using the ratio of current assets to total assets (C.A\T.A). The return on assets ratio (ROA) is used to determine profitability, whereas the current ratio is used to determine liquidity (C.R). The researchers discovered a link between current asset investment and profitability, as well as liquidity, among businesses listed on the Amman stock market in the industrial sector. The researchers discovered that the change in investment in current assets accounts for 44.1 percent of the variations in the Return on Assets (ROA) and Current Ratio (C.R). As a result, experts advise industrial enterprises to pursue a moderate

current asset investment program and a low current asset to fixed asset ratio. This might result in a tolerable amount of risk and acceptable profitability. This is most likely due to a balanced risk-reward ratio.

Raheman and Nasr (2007) investigated working capital management and profitability in 94 firms listed on the Karachi Stock Exchange in Pakistan. They studied data for six years and identified a relationship between working capital management, liquidity, and firm success. The average collection period, inventory turnovers (in days), average payment period, cash conversion cycle, and current ratio on net profitability are all used as measurement instruments. Debt ratio, firm size, and financial assets to total assets were all included as control variables. Pearson's correlation and regression analysis were used to analyze the data (pooled least square and general least square with cross section weight models). Working capital management factors were found to have a substantial negative relationship with firm profitability. It demonstrates that the firm's profitability suffers when the cash conversion process takes longer. They also identified a negative relationship between liquidity and profitability. On the other hand, firm size has a positive correlation with profitability.

Ali, A., and Ali, S. A. compiled a working capital management research (Ali & Ali, 2012). They showed how working capital management is utilized to make decisions about current asset investment and financing. Cash and cash equivalents, accounts receivable, and inventory items are all examples of current assets. The research showed a favorable working capital relationship with the company's profitability using certain hypotheses.

Singh and Pandey (2008) performed study on the impact of working capital management on the profitability of Hindalco Industries Limited, a specific industry. The study looks at how Hindalco's liquidity, profitability, and profit before taxes are related (PBT). They primarily relied on secondary data in the form of industry annual reports between 1990 and 2007. They used the ratio, percentage method, and coefficient of correlation to analyze the data. Multiple regressions were used to evaluate if there was a significant impact on profitability.

Talha, Christopher, and Kamalavalli (2010) studied the impact of working capital management on the profitability of selected Indian corporate hospitals using ten years of data. Using regression analysis, they revealed that the current ratio, cash turnover ratio, percentage of current assets to operational income, and leverage all had a negative influence on profit. They found seven factors that have a significant influence on profitability. The fast ratio, they find, is the most significant, whereas the current ratio has the least direct influence on profitability.

Afeef (2011) looked at the impact of working capital on the profitability of a group of Pakistani small and medium-sized enterprises. He compiled 240 observations from a six-year study of 40 small and medium companies (SME) registered on the Karachi Stock Exchange. Working capital has a significant impact on a company's profitability, according to his research.

According to T. Knauer and A. Wöhrmann, working capital and firm performance are inextricably linked (Knauer & Wöhrmann, 2013). They observed that inventory management and accounts receivables had a positive influence on profitability. On the other side, the relationship between accounts payable and profitability is diametrically opposed. Their research critically reviewed a few prior studies and makes recommendations for future research.

There are five chapters in the paper. The introduction is the first chapter. The second chapter is devoted to a review of the relevant literature. In the third chapter, the model and data are defined. The methods of research is also covered in the third chapter. The fourth chapter is about locating and analyzing various models. The last chapter contains a conclusion as well as some recommendations.

2. LITERATURE REVIEW

Pouraghajan and Emamgholipourarchi (2012) used listed businesses on the Tehran stock exchange to investigate the impact of working capital on profitability. Data was collected for this study from 2006 to 2010. The return on asset ratio and the return on invested capital ratio were used to assess the businesses' profitability. They also used cash conversion ratios, current ratios, current assets to total assets ratios, and current liabilities to total

assets ratios to evaluate working capital. They found a strong relationship between working capital management and profitability, but none between the company's market value and profitability.

From 2002 to 2006, [Oladipupo and Okafor \(2013\)](#) Okafor reviewed financial data from twelve industrial firms that were listed on the Nigerian Stock Exchange. The study's goal was to investigate the relationship between working capital management and corporate profitability and dividend payout ratio. Using the Pearson product moment correlation method and the ordinary least square (OLS) regression technique, they showed that a shorter net trade cycle and a lower debt ratio promote high firm profitability. They found no significant relationship between working capital management and firm profitability at a 5% confidence level. Whereas, they found positive relationship among dividend payout ratio, profitability and net trade cycle.

From 2005 to 2009, [Alavinasab and Davoudi \(2013\)](#) studied 147 Tehran Stock Exchange listed companies to show the relationship between working capital management and profitability. Variables such as the cash conversion ratio (CCC), current ratio, current asset to total asset ratio (CATAR), current liabilities to total asset ratio (CLTAR), and debt to asset ratio (DTAR) were studied in relation to return on assets and return on equity. The hypothesis was tested using multivariate regression and Pearson correlation. They observed that the cash conversion cycle and return on assets have a negative relationship. They also point out that CCC and return on equity have the same connection. They added that, the relationship between current ratio and return on equity is insignificant.

From 2004 through 2010, [Arshad and Gondal \(2013\)](#) conducted research on 21 cement companies listed on the Karachi Stock Exchange. Working capital management has little effect on a company's profitability, they observed. The outcome of a quantitative research approach used to evaluate a hypothesis.

Between 2001 and 2006, Muhammad, M., Jan, W.U., and K. performed a research based on secondary textile industry data acquired from listed companies on the Karachi Stock Exchange. The study's objective was to investigate the relationship between profitability and working capital management. According to correlation and regression studies, profitability, cash, accounts receivables, and inventory all have a strong relationship. Profitability, on the other hand, has a negative relationship with accounts payable. This basically means that increased cash, inventory, and credit sales will result in more earnings.

[Ul Haq, Sohail, Zaman, and Alam \(2011\)](#) selected fourteen firms from the cement sector listed on the Karachi Stock Exchange in Pakistan's Khyber Pakhtonkhuwa Province to determine if there is any significant relationship between working capital management and profitability (KPK). The secondary data was obtained from annual reports between 2004 and 2009, spanning a six-year period. Correlation coefficients and various regression techniques were used to examine the data. At a significance threshold of 0.01 to 0.05, all of the results were examined. They identified a small link between working capital and profitability in Pakistan's cement industry.

For three years, from 2006 to 2008, [Chatterjee \(2010\)](#) looked examined the relationship between working capital and profitability for 30 companies listed on the London Stock Exchange. He used parameters like average collection length, cash conversion cycle, current ratio, and quick ratio to calculate net operational profitability of UK businesses. The debt ratio and the size of the firm (measured in terms of natural logarithm of sales) have also been used as a full measure of working capital management. Pearson's correlation is used in this investigation. According to their report, working capital management difficulties have a significant negative impact on business profitability. As a result, raising the cash conversion ratio reduces the profitability of the company. The research also indicates a negative relationship between liquidity and profitability in UK firms. There is, however, a relationship between a company's size and its profitability. In addition, the study showed that less profitable firms put off paying their bills.

[Vahid, Mohsen, and Mohammadreza \(2012\)](#) investigated the impact of working capital on profitability in 28 Iranian companies listed on the Tehran stock exchange between 2005 and 2009.

They observed that both conservative and aggressive investment plans had a negative impact on a company's profitability and value. They also identified a relationship between the size and expansion of a firm, as well as its profitability and worth.

Tufail and Khan (2013) used ROA, current assets to total assets ratio, current liabilities to total assets ratio, quick ratio, debt to equity ratio, and business size to analyze financial policy and the impact of working capital on profitability. They gathered data from 117 textile businesses listed on the Karachi Stock Exchange during a six-year period. Based on regression analysis results, they identified a negative relationship between aggressive investment policy and profitability. They are linked by the profitability-to-debt-to-equity ratio. On the other side, profitability has a positive impact on liquidity and firm size. The research gives a true inside for continuously spreading textile industries in Pakistan.

Iqbal, Ahmad, and Riaz considered working capital as an independent variable, whereas net operating profit was handled as a dependent variable (Iqbal, Ahmad, & Riaz, 2014). They studied the net operating profitability of several of the Karachi Stock Exchange's listed firms and concluded that net operating profitability, inventory turnover in days, average payment period, and cash conversion cycle have significant adverse relationships. They uncovered something else, despite the regression model's prediction of a negative connection between cash conversion and firm success. The account receivables coefficient is negative, according to the results. As a result, a change in the average collection time will have a significant influence on the profitability of the company. Accounts receivables, payables, and inventories all show a positive association with profitability, according to the inter-item correlation matrix.

According to the same research methods, the cash conversion cycle, financial debt, and financial assets all have a negative association with profitability. From 2008 to 2013, Iqbal and Zhuquan (2015) investigated the relationship between working capital management and profitability of Pakistani companies registered on the Karachi Stock Exchange. On panel data, the panel least square approach and correlation analysis are employed. In the study, variables including Average Payment Period, Average Collection Period, Inventory Turnover in Days, Cash Conversion Cycle, and Debt were found to have a negative relationship with profitability. In Pakistani firms, they discover a positive relationship between ROA and company size, GDPGR, and sales growth. The study concludes that lowering accounts receivables days, accounts payable days, inventory turnover in days, and maintaining an efficient cash conversion cycle will enhance a company's profitability and value.

Al Dalayeen (2017) conducted to evaluate the effect of working capital management on some selected real estate companies in Jordan. ROCE has been used as dependent variable for profitability and CR, DTR, ITR are used as independent variable. He finds significant impact of profitability on working capital management for the selected real estate.

Korankye and Adarquah (2013) conducted study utilizing secondary data from Ghanaian listed industrial firms' financial statements from 2004 to 2011. The working capital cycle and gross operating profit margin are used as proxies for working capital in the article. On the other side, control factors such as leverage, interest cover, and the current assets to total assets ratio are used. The study, which was based on descriptive statistics, used Pearson correlation and ordinary least square methods. According to the report, the working capital cycle has a negative influence on profitability. As a result, companies with a longer working capital cycle generate less money. Inventory turnover duration, account receivables collection period, and account payables payment term all have negative correlations with profitability, according to the study. Interest cover and the current assets to total assets ratio, on the other hand, have a favorable correlation with profitability.

Dong and Su (2010) used secondary data obtained from listed firms on the Vietnam Stock Exchange from 2006 to 2008 to study the relationship between profitability, cash conversion cycle, and its components. When they looked at gross operating profit, they identified a substantial negative relationship between profitability and the

cash conversion cycle. Profitability decreases as the cash conversion cycle lengthens. Management should try to have enough funds on hand to make the most of the circumstance.

From 2004 to 2009, [Qazi, Shah, Abbas, and Nadeem \(2011\)](#) examined Africa's automobile and oil and gas industries. To discover if there was a relationship between working capital management and profitability, researchers looked at a variety of parameters. Networking capital, inventory turnover in days, average account receivable, and financial assets to total assets were utilized as independent variables in this study. Working capital has a positive influence on a company's profitability, according to the findings.

From 2003 to 2007, [Toby \(2014\)](#) examined 107 publicly listed companies in Nigeria across 23 industries to determine if there was a connection between working capital management policy and company profitability. The averages and product-moment correlation coefficients were calculated using the net current assets ratio (NCAR), return on assets (ROA), and net profit margin (NPM). Using sector-by-sector data points, the likelihood test was used to estimate the minimal value for the correlation. According to the experts, the majority of companies with aggressive working capital strategies rely heavily on current liabilities to meet their working capital needs. This has a negative impact on profitability. NCAR has a favorable connection with some profitability metrics, according to the study. It is suggested that businesses spend more in current assets by following a conservative working capital strategy, which is more likely to optimize profits.

[Arunkumar and Radharamanan \(2011\)](#) examined the impact of working capital on corporate profitability of selected manufacturing firms in India. The following metrics were used: debtors' days, inventory days, creditor's days, cash velocity, working capital policy, net working capital leverage, firm size, and current ratio. The researcher utilizes correlation and regression analysis of the aforementioned criteria to determine profitability. According to correlation research, profitability has a negative association with debtor's days, inventory days, and creditor's days. In this investigation, fixed effects models and traditional least square regression were used. Cash velocity, firm size, and net working capital leverage have all been found to be relevant in two ways. The number of days in accounts receivable and the number of days in inventory have a connection with profitability.

According to the study, when current assets match current liabilities, a shorter cash conversion cycle enhances profitability. In 2006, [Guimaraes and Nossa \(2010\)](#) performed a survey of 621 healthcare insurance companies. The main objective of the research is to see if the working capital management normative model is sufficient in terms of profitability, liquidity, and solvency. In this study, the analysis of variance (ANOVA) was used. A capital structure in which current assets outweigh current liabilities and cyclical current assets surpass cyclical current liabilities is more likely to provide higher levels of profitability, liquidity, and solvency, according to the study.

[Mohamad and Saad \(2010\)](#) investigated the results of secondary data obtained from Bloomberg's database of 172 Malaysian listed firms from 2003 to 2007. The goal of this study is to fill a gap in the literature by evaluating the performance of publicly listed Malaysian companies in terms of market value and profitability. Cash conversion cycles (CCC), current ratio (CR), current asset to total asset ratio (CATAR), current liabilities to total asset ratio (CLTAR), and debt to asset ratio (DTAR) are working capital components to the firm's performance when looking at the firm's value (Tobin Q) and profitability (ROA and ROIC) (ROIC). Using multiple regression and correlations, researchers revealed a substantial negative relationship between working capital variables and firm success. As a result, they advocate for organizational strategic and operational dominance in order to increase the firm's value and profitability.

The influence of working capital on the profitability of Latvian firms was investigated by [Arbidane and Ignatjeva \(2012\)](#). The majority of Latvian companies plan their present asset management strategies with a short-term aim in mind. As a result, no comprehensive attempt had been made prior to this study to illustrate potentialities in the context of successful working capital operations. A regression model is used to forecast profitability in Latvian firms that use working capital management in this study. Business managers, according to researchers, should be able to anticipate profit indices and manage the working capital component optimally.

Alipour (2011) looked at 1063 top-rated companies on the Tehran stock exchange for six years (2001-2006) to see if there was a relationship between working capital management and profitability. The hypothesis was tested using multiple regression and Pearson's correlation. The statistical test indicates that the number of days accounts receivables are outstanding has a negative connection with profitability.

The correlation between inventory turnover in days and profitability, as well as the link between cash conversion cycle and profitability, yields the same findings. The overall findings of the research work states that working capital management has great impact on profitability and might create value for shareholders by decreasing receivable accounts and inventory.

Effective working capital management, item correlations, and profitability were found to be linked by Hoque, Mia, and Anwar (2015). The relative positions of profitability and working capital were determined using ratio analysis. Correlation analysis is used to assess the degree of relationship between working capital and profitability. Regression analysis is used to calculate the impact of working capital on profitability. The study relies heavily on secondary data. The overall relationship between working capital and profitability is poor. Though the relationship of working capital with profitability is positive, the relation of working capital components with day sales outstanding (DSO) is negative. They recommends that profitability will increase as the day sales outstanding decreases.

Sharma and Kumar (2011) evaluated the influence of working capital on profitability of 263 non-financial BSE 500 businesses listed on the Bombay Stock Exchange (BSE) from 2000 to 2008 using a sample of 263 non-financial BSE 500 firms. They used a multivariate regression model and came up with something that isn't currently accessible on the market. They realized that working capital and profitability are inextricably linked. The number of days inventory and the number of days accounts payable are found to have a significant negative relationship with the profitability of the company. On the other hand, number of days accounts receivables and cash conversion period reflects positive relationship with corporate profitability.

To investigate if there is a relationship between working capital management and profitability, Salman, Folajin, and Oriowo (2014) conducted a research on 20 manufacturing firms listed on the Nigerian Stock Exchange (NSE). Between 2005 and 2013, the data was obtained from audited financial accounts of NSE firms. Panel data method was applied with time series and sectional data. The study employed Pearson correlation moment coefficient and multiple regressions, with estimates made using Ordinary Least Squares (OLS). According to the findings, working capital shows a negative relationship with ROA and ROE at a 5% level of significance. The overall study recommends that short cash conversion cycle combined with short in days inventory enhance firm's performance.

Working capital management and profitability were examined by Akoto, Awunyo-Vitor, and Angmor (2013). Using panel data, researchers identified a negative relationship between profitability and accounts receivables in days. When indicators like cash conversion cycle, current asset ratio, size, and current asset turnover are good, they identify profitability. According to the study, a company's success is enhanced by having accounts receivable days within 30 days. They also suggest that local rules be implemented, as well as the protection of local industry's interests, in order to encourage locally manufactured goods in Ghana in the long and short term.

Akindele and Odusina (2015) studied the relationship between working capital management and profitability of 25 publicly listed companies in Nigeria over seven years (2005-2011). The businesses' audited financial statements provided secondary data. A multiple regression model was used by the researchers to represent the inverse relationship between working capital (Cash conversion ratio) and firm profitability (ROA). According to this analysis, the firm's working capital management strategy should be aggressive.

Ponsian, Chrispina, Tago, and Mkiibi (2014) explored if a company's working capital management and profitability had a statistical connection. A quantitative approach was employed to investigate a set of research hypotheses. With a total of 30 observations, data from three manufacturing firms registered on the Dar es Salaam Stock Exchange (DSE) during a ten-year period (2002-2012). For statistical analysis, Pearson's correlation and the

Regression analysis (Ordinary Least Square) method were used. Profitability and shareholder value grow as the cash conversion cycle lengthens, according to the statistics. They realized that liquidity and profitability were mutually exclusive. They further stated that postponing payment allows them to boost earnings. In other words, a decrease in liquidity enhances the profitability of the company. They also noted that cutting the average collection time shortens the profit margin. Finally, they identified an inverse relationship between inventory and profitability. When a result, as the cost of inventory upkeep falls, the profit level rises.

Sharma and Kaur (2016) used ratio analysis to evaluate the effectiveness of working capital in generating profit. Statistical and economic techniques were utilized to examine the behavior of selected ratios. Quick ratios, inventory turnover ratios, debtor turnover ratios, gross profit ratios, and operational profit ratios were all excellent. On the other side, the present ratio did not do well. The working capital turnover ratio is negative except in 2012 and 2014. The liquidity and profitability of the chosen firm have a correlation value of 0.08. A Motaals test was also performed, revealing a significant improvement in liquidity performance. The researchers also found significant negative relationship between liquidity and profitability which indicates that the company reserves post optimal level of liquidity.

Kaddumi and Ramadan (2012) used five distinct metrics to assess working capital management and two separate metrics to measure profitability. Two regression models were used to estimate twenty models panel cross-sectional time series data. They found several similarities with traditional working capital theory. They identified a connection between profitability and performance in businesses. They arrive to the conclusion that industrial firms should have a less aggressive working capital financing policy and should be managed effectively in order to maximize the wealth of their owners.

A six-year research based on secondary data of electronic equipment firms listed on the Karachi Stock Exchange was done by Khalid, Saif, Gondal, and Sarfraz (2018). (2007- 2012). As a substitute for profitability, the return on investment (ROI) is employed. This research also looked at the firms' current ratio, debt to equity ratio, operating profit to debt ratio, and inventory turnover ratios. In this investigation, regression analysis was used. The normality and linearity tests were also employed. According to the data, working capital management has a significant positive relationship with profitability. Their study uses secondary data from five industries: textiles, pharmaceuticals, food and allied firms, fuel and power, and engineering to determine whether there is a substantial link between working capital management and profitability.

3. METHODOLOGY

Explorative analysis was carried out according to the following data and methods:

Data: Secondary dynamic unbalanced panel data had been collected for 49 companies (5 industries) listed in Dhaka Stock Exchange of the world for the years 2010-2019. Data is about 6 variables. It has first been log normalized for analyzing different model.

3.1. Methods

The following models are conducted by using STATA 15, to analyze the data:

- i) *Ordinary Least Squares (OLS):*
- ii) *Pooled Ordinary Least Squares (POLS):*
- iii) *Drisc/Kraay (DK):*
- iv) *Two stage least square model (2SLS):*
- v) *Generalized Method of Moments (GMM):*

3.2. Variables and Description

Table-1. Variables.

Sl.no.	Variable	Description	Unit
1	lnNPAT	Log normal of Net Profit After Tax	BDT
2	lnTA	Log normal of Total Assets	BDT
3	lnTE	Log normal of Total Equity	BDT
4	lnTT	Log normal of Total Turnover	BDT
5	lnCA	Log normal of Current Assets	BDT
6	lnCL	Log normal of Current Liabilities	BDT

In Table 1, LnNPAT denotes log normal of net profit after tax which is the dependent variable of the study. The independent variables of the study are LnTA, LnTE, LnTT, LnCA and LnCL. LnTA denotes log normal of total assets, LnTE denotes log normal of total equity, LnTT denotes log normal of total turnover, LnCA denotes log normal of current assets, LnCL denotes log normal of current liabilities. All these variables (both dependent and independent) are expressed in Bangladeshi Taka (BDT).

3.3. Hypotheses

Table-2. Hypothesis.

No.	Hypotheses
H ₁	There is significant positive relationship between total assets and net profit after tax
H ₂	There is significant positive relationship between total equities and net profit after tax
H ₃	There is significant positive relationship between total turnover and net profit after tax
H ₄	There is significant positive relationship between current assets and net profit after tax
H ₅	There is significant negative relationship between current liabilities and net profit after tax

In Table 2, it is assumed that there is significant positive relationship between net profit after tax and total assets, total equities, total turnover and current assets. On the other hand, it is also assumed that there is significant negative relationship between net profit after tax and current liabilities.

4. FINDINGS AND RESULTS

4.1. Econometric Models

Multiple regression models have been run with the same dependent (NPAT) and independent variables (TA, TE, TT, CA, CL). In the following section the results of those models are presented and interpreted below.

Table-3. OLS model.

Industry	Food & Allied Sector		Fuel and Power Sector		Pharmaceuticals and Chemical industry		Textiles Industry		Engineering Sector	
	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value
LnTA	1.696	0.003	-2.086	0	-0.114	0.587	-2.02	0.508	0.07	0.549
LnTE	0.209	0.356	2.125	0	0.31	0.199	2.423	0.319	0.198	0.014
LnTT	1.125	0	0.233	0.191	0.77	0	2.639	0.235	0.805	0
LnCA	-1.19	0.039	1.317	0.001	0.23	0.068	-1.867	0.501	0.627	0
LnCL	-0.361	0.151	-0.187	0.465	0.153	0.137	-0.188	0.482	-0.659	0
Constant	-7.656	0	-4.137	0.001	-8.976	0	-5.444	0.838	-3.44	0

Table 3 shows the relationship between net profit after tax and total assets, total equity, total turnover, current assets and current liabilities of food & allied sector, fuel and power sector, pharmaceuticals and chemical industry,

textiles industry and engineering sector under ordinary least square model. It is found that total assets had significant positive relationship with net profit after tax in food & allied sector and significant negative relationship in fuel & power sector. Total equities had significant positive relationship with net profit after tax in fuel & power sector and engineering sector. Total turnover had significant positive relationship with net profit after tax in food & allied sector, pharmaceuticals and chemical industry and engineering sector. Current assets had significant positive relationship with net profit after tax in pharmaceuticals and chemical industry and engineering sector and significant negative relationship with net profit after tax in food & allied sector. Current liabilities had significant negative relationship with net profit after tax in engineering sector.

Table-4. Pooled OLS model.

Industry	Food & Allied Sector		Fuel and Power Sector		Pharmaceuticals and Chemical industry		Textiles Industry		Engineering Sector	
	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value
LnTA	0.396	0.571	-1.415	0.035	-0.024	0.841	-2.304	0.481	0.097	0.45
LnTE	0.208	0.39	1.324	0.048	0.29	0.105	2.59	0.341	0.123	0.117
LnTT	1.417	0	0.24	0.225	0.738	0	0.307	0.917	0.916	0
LnCA	-0.52	0.362	1.508	0.001	-0.001	0.996	-0.354	0.906	0.566	0.001
LnCL	-0.283	0.376	-0.411	0.152	0.18	0.008	-0.135	0.753	-0.715	0
Constant	-5.167	0.001	-3.394	0.037	-5.524	0.032	14.224	0.722	-3.098	0

Table 4 shows the relationship between net profit after tax and total assets, total equity, total turnover, current assets and current liabilities of food & allied sector, fuel and power sector, pharmaceuticals and chemical industry, textiles industry and engineering sector under pooled ordinary least square model. It is found that total assets had significant negative relationship with net profit after tax in fuel & power sector. Total equities had significant positive relationship with net profit after tax in fuel & power sector. Total turnover had significant positive relationship with net profit after tax in food & allied sector, pharmaceuticals and chemical industry and engineering sector. Current assets had significant positive relationship with net profit after tax in fuel and power sector and current liabilities had significant negative relationship with net profit after tax in pharmaceuticals and chemical industry and engineering sector.

Table-5. Driscoll-Kraay pooled OLS model.

Industry	Food & Allied Sector		Fuel and Power Sector		Pharmaceuticals and Chemical industry		Textiles Industry		Engineering Sector	
	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value
LnTA	1.696	0	-2.086	0.024	-0.114	0.521	-2.02	0.393	0.07	0.147
LnTE	0.209	0.299	2.125	0	0.31	0.434	2.423	0.578	0.198	0.02
LnTT	1.125	0	0.233	0.129	0.77	0.031	2.639	0.123	0.805	0
LnCA	-1.19	0.161	1.317	0.006	0.23	0.066	-1.867	0.456	0.627	0
LnCL	-0.361	0.259	-0.187	0.019	0.153	0.269	-0.188	0.382	-0.659	0.001
Constant	-7.656	0	-4.137	0.034	-8.976	0	-5.444	0.859	-3.44	0

Table 5 shows the relationship between net profit after tax and total assets, total equity, total turnover, current assets and current liabilities of food & allied sector, fuel and power sector, pharmaceuticals and chemical industry, textiles industry and engineering sector under Driscoll-Kraay pooled OLS model. It is found that total assets had significant positive relationship with net profit after tax in food & allied sector and significant negative relationship in fuel & power sector. Total equities had significant positive relationship with net profit after tax in fuel & power sector and engineering sector. Total turnover had significant positive relationship with net profit after tax in food & allied sector, pharmaceuticals and chemical industry and engineering sector. Current assets had significant positive relationship with net profit after tax in fuel and power sector, pharmaceuticals and chemical industry and

engineering sector and significant negative relationship with net profit after tax in food & allied sector. Current liabilities had significant negative relationship with net profit after tax in fuel and power sector and engineering sector.

Table-6. Two stage least square model.

Industry	Food & Allied Sector		Fuel and Power Sector		Pharmaceuticals and Chemical Industry		Textiles Industry		Engineering Sector	
	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value
LnTA	1.696	0.003	-2.086	0	-0.114	0.587	-2.02	0.508	0.07	0.549
LnTE	0.209	0.356	2.125	0	0.31	0.199	2.423	0.319	0.198	0.014
LnTT	1.125	0	0.233	0.191	0.77	0	2.639	0.235	0.805	0
LnCA	-1.19	0.039	1.317	0.001	0.23	0.068	-1.867	0.501	0.627	0
LnCL	-0.361	0.151	-0.187	0.465	0.153	0.137	-0.188	0.482	-0.659	0
Constant	-7.656	0	-4.137	0.001	-8.976	0	-5.444	0.838	-3.44	0

Table 6 shows the relationship between net profit after tax and total assets, total equity, total turnover, current assets and current liabilities of food & allied sector, fuel and power sector, pharmaceuticals and chemical industry, textiles industry and engineering sector under two stage least square model. It is found that total assets had significant positive relationship with net profit after tax in food & allied sector and significant negative relationship in fuel & power sector. Total equities had significant positive relationship with net profit after tax in fuel & power sector and engineering sector. Total turnover had significant positive relationship with net profit after tax in food & allied sector, pharmaceuticals and chemical industry and engineering sector. Current assets had significant positive relationship with net profit after tax in fuel and power sector, pharmaceuticals and chemical industry and engineering sector and significant negative relationship with net profit after tax in food & allied sector. Current liabilities had negative relationship with net profit after tax in all five industries but relationship is insignificant at the 10% level.

Table-7. Generalized method of moments (GMM) model.

Industry	Food & Allied Sector		Fuel and Power Sector		Pharmaceuticals and Chemical Industry		Textiles Industry		Engineering Sector	
	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value	Coef.	p-value
LnNPAT	0.146	0.202	-0.13	0.224	0.059	0.632	0.306	0.039	0.412	0
LnTA	0.734	0.354	-1.32	0.264	-0.008	0.952	-7.015	0.373	0.016	0.881
LnTE	-0.02	0.925	0.547	0.602	0.397	0.273	-5.967	0.424	0.09	0.188
LnTT	1.71	0	1.673	0.001	0.511	0.019	-1.959	0.665	1.013	0
LnCA	-0.97	0.17	0.907	0.286	0.07	0.82	4.817	0.299	-0.69	0.024
LnCL	-0.23	0.553	-0.59	0.112	0.138	0.088	3.575	0.16	-0.1	0.486
Constant	-6.02	0.002	-2.22	0.673	-5.035	0.22	167.87	0.142	0.235	0.794

Table 7 shows the relationship between net profit after tax and total assets, total equity, total turnover, current assets and current liabilities of food & allied sector, fuel and power sector, pharmaceuticals and chemical industry, textiles industry and engineering sector under generalized method of moments (GMM) model. It is found that total turnover had significant positive relationship with net profit after tax in food & allied sector, fuel and power sector, pharmaceuticals and chemical industry and engineering sector. Current assets had significant positive relationship with net profit after tax in engineering sector. Total assets, total equities and current liabilities had mixed relationship with net profit after tax in all five industries but insignificant nature of relationship with NPAT though the overall model is significant at 10% level.

4.2. Hypothesis Results and Interpretation

Based on the findings of the study all the hypotheses proved to be right and supported in some regression models and in some industries. In this study, TA and NPAT is supported by OLS, DK and 2SLS model only food and allied sector. TE and NPAT hypothesis is supported by OLS, POLS, DK and 2SLS model in fuel and power and engineering sector. TT and NPAT hypothesis is supported by different model in different industries except food and allied sector and textile industry. CA and NPAT hypothesis is supported by different model in fuel and power sector, pharmaceuticals and chemicals industry and engineering sector. CL and NPAT hypothesis is supported by different model in fuel & power sector and engineering sector.

Table-8. Hypotheses Testing

No.	Hypotheses	Results
H ₁	There is significant positive relationship between total assets and net profit after tax	Food and Allied Sector: Result is positive and significant (p>000) and supported by OLS, DK, 2SLS models. Note: rejected the null hypothesis
H ₂	There is significant positive relationship between total equities and net profit after tax	Fuel and Power Sector: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS models. Engineering Sector: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS models. Note: rejected the null hypothesis
H ₃	There is significant positive relationship between total turnover and net profit after tax	Food and Allied Sector: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS and GMM models. Fuel and Power Sector: Result is positive and significant (p>000) and supported by GMM models. Pharmaceuticals and Chemical industry: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS and GMM models. Engineering Sector: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS and GMM models. Note: rejected the null hypothesis
H ₄	There is significant positive relationship between current assets and net profit after tax	Fuel and Power Sector: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS models. Pharmaceuticals and Chemical industry: Result is positive and significant (p>000) and supported by OLS, DK, 2SLS models. Engineering Sector: Result is positive and significant (p>000) and supported by OLS, DK, 2SLS and GMM models. Note: rejected the null hypothesis
H ₅	There is significant negative relationship between current liabilities and net profit after tax	Fuel and Power Sector: Result is positive and significant (p>000) and supported by DK model. Engineering Sector: Result is positive and significant (p>000) and supported by OLS, POLS, DK, 2SLS models. Note: rejected the null hypothesis

5. CONCLUSION

Based on the findings of the study, it can be recommended that for earn profit more; total assets are not factor in all the industries. Total assets (TA) had significant positive relationship with net profit after tax (NPAT) in all models except POLS and GMM models, total turnover (TT) had significant positive relationship with net profit

after tax in all models and current assets (CA) had significant negative relationship with net profit after tax in OLS and 2SLS model in food and allied sector. In Fuel and power sector, it is found that NPAT and TA had significant negative relationship in all models except GMM. In this sector, TE, TT, CA had significant positive relationship in different models but CL had insignificant relationship. In Pharmaceuticals and Chemical industry and Engineering sector, TE, TT, CA and CL had significant positive relationship in different models but in textile industry there is no significant relationship among these variables though the overall model is significant at 10% level.

5.1. Contribution of the Paper

The broad finding that net profit after tax does not depend always total assets, total equities, total turnover, current assets and current liabilities. The dependence of net profit after tax is different on the different types of industries. On the basis of different models used in the study, the results are different from one another.

5.2. Limitations and Further Research Opportunities

Data were obtained for only five Bangladeshi industries. Furthermore, statistics spanning more than ten years would have been more definitive. For analysis, data had to be translated, which might result in inconsistencies. Furthermore, several factors were left out of this study. A future study might be undertaken to determine the most essential factors of NPAT in addition to the variables mentioned above.

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