



THE IMPACT OF EXCHANGE RATE FLUCTUATIONS ON FIRMS FINANCIAL PERFORMANCE: A CASE STUDY OF SOME SELECTED MANUFACTURING FIRMS IN GHANA.

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DECLARATION

I, hereby declare that, this Long essay presented is my own original and any other work has been duly acknowledged. I also declare that this work has never been submitted partially or wholly to any institution for award of certificate.

.....
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.....
DATE

CERTIFICATION

I declare that this Long essay was supervised in accordance with the procedures and guidelines laid down by the University.

.....
Prof. Godfred A. Bokpin.
(SUPERVISOR)

.....
DATE

DEDICATION

I dedicate this project work to my grandma Margaret Amoah (Late) for her enormous support and love.

ACKNOWLEDGEMENT

I am extremely grateful to God for His guidance and divine protection during this academic exercise. I sincerely acknowledge individuals who have been of great support. I would like to express my sincere appreciation to my supervisor, Prof. Godfred Bopkin for the guidance, support and advice provided throughout this research. He was so apt with providing responses to my write-ups and provided timely comments to ensure this piece met all the academic requirements and standards. I would also appreciate the effort of friends and colleagues who supported me in diverse ways.

To you all, I say God richly bless you.

Table of Contents

DECLARATION	i
CERTIFICATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
CHAPTER ONE	1
Introduction.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	3
1.3 Research Objectives.....	5
1.4 Research Questions.....	5
1.5 Significance of the Study.....	6
1.6 Scope of the study.....	6
1.7 Limitations of the Study.....	6
1.8 Organisation of the study	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction.....	8
2.2 Theoretical Review	8
2.2.1 Purchasing Power Parity Theory	8

2.2.2 The International Fischer Effect	10
2.3 Determinants of Financial Performance	11
2.3.1 Capital Structure	11
2.3.2 Firm Size	12
2.3.3 Growth	12
2.4 Measures of Firm Performance.....	13
2.4.1 Liquidity	15
2.5 Empirical Studies	15
Chapter three	18
METHODOLOGY	18
3.1 Introduction.....	18
3.2 Research Design.....	18
3.3 Population for the study	19
3.4 Data Collection	19
3.5 Variables Definition and Justification	20
3.5.1 Profitability:	20
3.5.2 Ownership structure:	20
3.5.3 Firm Size:	21
3.5.4 Interest Rate:	21
3.5.5 Real GDP growth:	21

3.5.6 Inflation	22
3.5.7 Real Effective Exchange rate:	22
3.6 The Study Variables and Research Model.....	23
CHAPTER 4	25
ANALYSIS AND DISCUSSION.....	25
4.1 Introduction.....	25
4.2 Data description and Discussion of results	25
4.3 CORRELATION MATRIX	26
4.4.1 Regression Results and Discussions	28
CHAPTER FIVE	38
SUMMARY, CONCLUSIONS AND RECOMMENDATION.....	38
5.1 Introduction.....	38
5.2 Summary of the Study	38
5.3 Main Findings	39
5.4 Conclusions.....	40
5.5 Recommendations.....	41
5.5.1 Manufacturing firms	41
5.5.2 Researchers	42
References.....	43

ABSTRACT

The Ghanaian economy has for some time witnessed a seemingly unstable exchange rate. The strength of the cedi against the dollar has been fluctuating for the past decades. Analysts established that the instability in the exchange rate stems from the massive importation of goods and services which could be produced in the country. The worsening and unstable strength of the cedi against major currencies like the US dollar has contributed immensely to the rise in the cost of goods and services in Ghana. Firms that engage in international trade are hard hit with this occurrence. Manufacturing firms whose inputs are mostly imported from other countries are mostly at the receiving end. This study therefore found it expedient to employ panel data analysis to examine how fluctuations in the exchange rate has had impact on the financial performance of some selected firms and the manufacturing industry in general. The study observed that apart from Real Exchange Rate which is the variable of interest in this study, GDP and Interest Rate are the variables which have significant impact on both ROA and ROE of the manufacturing firm

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Exchange rate is described as how much of one currency that is needed to exchange for a unit of another currency (Dornbusch, 1976). Countries that soft currencies are always bedevilled with exchange rate fluctuations as compared to countries with hard currencies (Fischer, 2001). It is established that countries with soft currencies are characterised by the more importation than exportation (Calvo & Mishkin, 2003). This is evidenced in how ‘jerky’ the exchange rate of many developing countries that imports almost all the basic needs (Calvo & Reinhart, 2002). Ghana, just like most developing countries, has over the years witnesses serious fluctuation of the cedi against the dollar (USD) and other major currencies. Exchange rate fluctuation refers to the erratic changes in exchange rate and could be described as a period of domestic currency appreciation or depreciation (Okereke, 2017). In many developing countries, of which Ghana is no exception, the currencies barely appreciate against other hard currencies like USD, Euros and the GBP. The seasonality of Ghanaian economic activities such as agriculture, consumption, money supply among others which affect exchange rate, gives the impression that, the Cedi – US Dollar rate also follows a particular pattern within the year (Barnes & Griffith, 2015). Ghana, like many other countries was using fixed or pegged exchange rate system under the Bretton Wood agreement till 1986. Between 1987 and 1992, the country opted for the auction system also known as the managed flexible system. The start of constitutional government in the country saw the adoption of freely floating exchange rate system in 1992. The floating system caused almost 1500% depreciation of the Cedi over a 10-year period. The Cedi fell several hundred

folds from 520 Cedi in 1992 to 8000 Cedi in 2002 against the US Dollar (Barnes & Griffith, 2015).

The Ghanaian economy is made up the industrial sector, agricultural sector and the service sector. One of the major players of the industrial sector is the area of manufacturing (Abor & Quartey, 2010). The manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products,” as well as those engaged in “assembling of component parts of manufactured products” for purposes other than construction (Levinson, 2017). In terms of importance, Ghana’s manufacturing sector, though not strong as it should be, continues to play a respectable role in the economy (UNESCO, 2009), contributing an average of 7% between 2006 and 2016 to GDP (Ghana Statistical Service, 2017). Ghana’s most important manufacturing industries include aluminium smelting, agro-food processing, oil refining and cement. Other industries include the production of beverages, textiles, apparel, glass, paints, plastics, chemicals and pharmaceuticals, and the processing of metals and wood products (UNESCO, 2009).

Ghana as a developing and import led country is much affected by exchange rates. The import-led feature of Ghana economy means that any fluctuation in exchange rate does not only affect the country’s currency on the international market but almost the macro economic variables such as inflation and interest rates (Barnes & Griffith, 2015). This consequently affects the performance of manufacturing companies in Ghana. Most manufacturing companies depend on imported raw materials which they acquire at consistently higher costs due to the persistent weakness of the cedi against the major currencies. Fluctuations in the exchange rates distort their

budget and returns, mostly woefully. The impact on inflation and interest rates also affects sales and debt financing.

The aim of most corporations is to form a sustainable business with profitable growth both now and in future. Most manufacturing firms in Ghana rely on the importation of their inputs (i.e. raw materials, machinery, spare components, and specialized labour). This suggests that these firms rely heavily on the fluctuation of exchange rate, interest rates, and inflation within the country. These companies cannot avoid the impact of unsteady exchange rates as most of their inputs are imported. The value of production is affected since the cost of raw material may go up once the exchange rates goes up which results in high cost of sales resulting in low profits. Further, when the manufacturing firm's import, they must borrow in order for them to acquire their imports and in conditions of unsteady interest rates the profitability of their businesses is affected.

1.2 STATEMENT OF THE PROBLEM

Literature abound on how uncertainty and volatility in certain macroeconomic factors impact on the performance of firms over the world. However, literature has not delved into the how fluctuations in exchange rate have rippling effects on the profitability of firms in Ghana. In other jurisdictions, various empirical studies have tried to establish how exchange rate fluctuations affect the performance of firms within those countries. In a study done by Dhasmana (2013), the research established that firms in India performances are significantly influenced by the rate at which exchange rate fluctuates. This is through the cost and revenue that firms incur and earn respectively. In a related study by Helhel (2015), it was found that Turkish companies which had short foreign exchange position in the present period had higher liquidity and asset efficiency

and lower overall profitability than companies with long foreign exchange position in the previous period. This buttress the assertion that although the real depreciation of a home currency may promote better performance by more productive firms, it may be less beneficial for more capital-intensive firms, as they will feel the effects of increases in the price of imported machinery and equipment to a greater degree in Taiwan (Fung & Liu, 2009); in Ghana as the exchange rate appreciates, the manufacturing sector performance improves and as it depreciates, the sector is adversely affected (Abdul-Mumuni, 2016); the depreciation of the Ghanaian currency against US Dollar significantly slows the rate of employment at the manufacturing sector in Ghana (Mensah, Awunyo-Vitor, & Asare-menako, 2013); exchange rate has no impact on the export of goods and services in Ghana (Nyeadi, Atiga, & Atogenzoya, 2014). Other Ghana related studies on the effects of foreign exchange fluctuations looked at the impact of foreign exchange volatility on economic growth (Adu-Gyamfi, 2011; Buabin, 2016); others looked at the banking sector (Amponsah Addae, Nyarko-Baasi, & Tetteh, 2014; Mumuni & Owusu-Afriyie, 2004).

The empirical evidence shows that few studies have been conducted in Ghana; and most of studies have not touched on the financial performance of manufacturing firms. Abdul-Mmuni (2016) examined the effect of exchange rate variability on manufacturing sector performance in Ghana. Using time series data from the period 1986-2013 and employing the autoregressive distributed lag (ARDL) approach, the empirical results show that there exists both a short as well as long run relationship between exchange rate and manufacturing sector performance. Given the important role foreign exchange plays in the performance of manufacturing companies and the economy as a whole it is important that more exchange rate effects studies are conducted

using different methods and periods to enrich literature and provide more information on the exchange rate fluctuation effect. This current study will therefore investigate the effect on financial performance of manufacturing companies from 2009 to 2017 using multiple regression techniques.

1.3 RESEARCH OBJECTIVES

Broadly, this study seeks to establish the impact of exchange rate fluctuations on the financial performance of some manufacturing firms in Ghana. In order to find solution to the research problem, the study specifically takes into consideration the following research objectives;

1. To determine the effect of exchange rate fluctuations on the financial performance of manufacturing firms in Ghana.
2. To examine the trend of financial performance of manufacturing firms taking into consideration the profitability and liquidity of the firms in the years under review.

1.4 RESEARCH QUESTIONS

This research work intends to find answers to the following research questions;

1. What is the impact of exchange rate fluctuation on the profitability of manufacturing firms in Ghana?
2. What has been the trend of profitability and liquidity of manufacturing firms in the years under review?

1.5 SIGNIFICANCE OF THE STUDY

This study seeks to add up to knowledge in numerous ways including research and policy. The findings of this study will inform managers of manufacturing firms to know where to direct their efforts on strengthening their financial performance. The findings of this research work will go a long way to inform shareholders and investors to be clear on whether exchange rate fluctuations have been a cause of the woeful financial performance of the manufacturing sector or not.

This study also aims at contributing and addressing the research gap on exchange rate fluctuations and the financial performance of manufacturing firms. In essence, this study is expected to increase the pool of knowledge by providing information on the financials factors affecting financial performance of manufacturing companies. This research will therefore add to existing knowledge in academia and industry by serving as a reference for future research into the subject.

1.6 SCOPE OF THE STUDY

This study is based on Ghanaian listed manufacturing firms over an 8 year from 2009 to 2017.

1.7 LIMITATIONS OF THE STUDY

It is foreseen that management of manufacturing firms might not be readily forthright with the relevant information for the research. These shall be overcome by promising the management of the confidentiality of whatever is information provided in support of this study when certain pertinent information is needed for the successful completion of this project work. The study also anticipates time as the number one limitation of the study. Again, this study is limited to only some selected number of manufacturing firms in Ghana. This may make it quite inaccurate to

make a generalisation for the entire manufacturing firms in Ghana based on the findings of the study.

1.8 ORGANISATION OF THE STUDY

The study was partitioned into five (5) distinct chapters so as to facilitate reading and understanding.

Chapter One

Introduces the study by looking at the background to the study, statement of the problem, objectives of the study, research questions, significance of the study, scope of the study, limitations of the study and organizations of the study.

Chapter Two

It consists of the review of related literature from various books, articles, related research works and internet resources which helped the researcher in extracting the relevant literature on combating money laundry.

Chapter Three

It focused on the outline and the details of the research methodology.

Chapter Four

It initially presents the analyzed data together with its interpretation of the findings as well as discussion on the research findings.

Chapter Five

It featured recommendations based on the significant findings, summarize the study and draw useful conclusions.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents literature reviewed in order to provide a basis for the study and the concepts. In addition, the chapter highlights theories guiding the study, determinants of financial performance, empirical studies thereby illustrating the research gap after which it presents the summary of empirical literature.

2.2 THEORETICAL REVIEW

This study is founded on two key theories including Purchasing Power Parity Theory and the International Fischer Theory. These theories are discussed in details below.

2.2.1 Purchasing Power Parity Theory

The purchasing power parity (PPP) theory originated from the writings of the Swedish economist Gustav (Menon & Viswanathan, 2005). The theory states that homogeneous goods in different countries cost the same in the very same countries when measured in terms of the same currency. This implies that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. The willingness to pay a certain amount for foreign money must ultimately and essentially be due to the fact that this money possesses a purchasing power against goods and services in that country (Reid & Joshua, 2004). Any variance from this statement implies that a country's currency is incorrectly valued. According to Yin-Wong and Kon (1994) "PPP theory suggest that currencies are valued for the goods they can purchase and, in arbitrage equilibrium, the exchange rate between two countries' currencies

should equal the ratio of their price levels, of which a testable implication is that real exchange rate should display mean reversion, at least in the long-run.

The theory is linked to the arbitrage hypothesis that states that if two homogeneous goods are traded at different prices in different countries, this arbitrage opportunity would be utilized, which leads to convergence of the deviations from Purchasing Power Parity towards equilibrium in the absence of arbitrage costs. There are two forms of PPP, absolute and relative. The absolute PPP, also known as the Law of One Price, states that a commodity costs the same regardless of what currency is used to purchase it or where it is selling (Reid & Joshua, 2004). This theory is based on the assumptions that there are no transactional costs, no barriers to trade and the commodities being traded are homogeneous. If the trading currency is exchanged at the spot exchange rate, the price of a homogenous commodity should be identical across borders. The theory suggested use of price indexes to determine the exact price of a homogenous commodity between countries. The main challenge of this belief is in measuring Purchasing Power Parity constructed from price indexes given that different countries use different goods to determine their price level (Reid, 2005).

Due to these limitations in the absolute PPP, another form of PPP has evolved, the relative PPP which acknowledges market imperfections such as transport costs, tariffs and quotas. Relative PPP defines what determines change in exchange rate over time, rather than what determines absolute level of the exchange rate. It states that the exchange rate change is determined by the difference in the inflation rates of the two countries (Ross, 2008). According to relative PPP, any differential exchange rate to the one propounded by the theory is the real appreciation or real

depreciation of one currency over the other (Reid & Joshua, 2004). This theory is relevant for this study as it explains the value of one currency in terms of another country's currency in terms of the basket of goods and services it can purchase with reference to the demand and supply. This theory argues that the equilibrium exchange rate is one that ensures that the value exchanged can purchase the same basket of goods and services from either of the countries involved.

2.2.2 The International Fischer Effect

The international Fisher Effect states that the difference in returns between two countries is just equal to the difference in inflation rates (Shapiro, 2007). According to International Fisher Effect, nominal risk-free interest rates contain a real rate of return and anticipated inflation. This means if all investors of all countries require the same real return, interest rate differentials between countries may be the result of differential in the expected inflation. The theory suggests that foreign currencies with relative high interest rates would depreciate because the high nominal interest rates reflect expected inflation. The nominal interest rate would also incorporate the default risk of an investment (Staikouras and Wood, 2004).

If the theory holds, a strategy to borrow from one country and invest in another country should not provide any positive return on average, since exchange rates would adjust to offset interest rate differentials on the average. However, this theory is limited by the sense that there are other factors other than inflation that affect exchange rate, thus the exchange rates do not adjust in accordance with the inflation differential (Ubindi, 2006). Empirically, it has been demonstrated that there is a long-run tendency for interest rates differentials to offset exchange rate changes.

This theory is relevant for this study as it explains the purchasing power of each currency which captures the inflation across countries to ensure that at equilibrium exchange rates, the basket of goods and services purchased by one unit of a country's currency equals to those purchased in the second country.

2.3 DETERMINANTS OF FINANCIAL PERFORMANCE

A firm's financial performance is affected by different factors and may be viewed from factors related to the firm specific and macro-economic determinants.

2.3.1 Capital Structure

Abor (2005) described capital structure as a precise combination of equity and debt that determines firm's funding profile. Abor (2005) further added that a firm can select among several alternative sources of capital with different mix of securities. This definition provides its' self for review to firms considering the fact that it emphasizes on specific proportion of debt and equity used for financing organizations.

Ross, Westerfield, Jaffe, & Kakani, (2009) presented the pie model which gives the relationship between value of a firm and various providers of funds, they also pointed out that the amount of debt a firm chooses relative to equity defines its capital structure. Ross et al (2009) indicated that such a choice is a strategic one which has many implications on the firm, therefore, it should be well managed to ensure that the ultimate interest of the shareholder and other stakeholders of the company are served.

The capital structure decision is of great importance to managers since it has impact on profitability and ultimately on the shareholders returns and risks, which also affects the firm's market share. This is due to the fact that the mix can have effect on general cost of obtaining capital for a business and hence its value. Therefore, the firm managers must plan its capital structure and by making critical analysis since these decisions will influence performance.

2.3.2 Firm Size

Firm's size determines the level of economics of scale enjoyed by a firm. When a firm becomes larger it enjoys economics of scale and the average production cost is lower and operational activities are more efficient. Hence, larger firms generate larger returns on assets. However, larger firms can be less efficient if the top management lose their control over strategic and operational activities within the firm (Chandrapala & Knápková, 2013). Large firms are also more diversified than small ones and have greater market power and during good times may have relatively more organizational slack. The size of the firm or enterprise also determines the cash flow sensibility to investments (Predescu, 2008). In measuring the size of the firm size, total number of employees of the firm, volume of sales and amount of property are the main factors that are usually measured (Salman & Yazdanfar, 2012).

2.3.3 Growth

The firm's future financial performance is influenced by growth (Rajan, 2008). Higher growth also means an increase in future prospect for investors. Economic growth helps a firm to better position itself on the markets, hence a good competitive advantage against its competitors. Growth prospect may be considered as an asset that adds firm's value, but cannot be

collateralized and are not subject to taxable income. According to pecking order theory, firms may utilize internal funds as its initial financing instead of borrowing externally to fund its operations (Watson and Head, 2010). It therefore suggests that firms with highgrowth prospects will prefer using internally generated funds which is not risky as compared to debt and equity. Rising of external finance is costly due to information asymmetry which might hamper future growth prospect and also reduce future earnings.

2.4 MEASURES OF FIRM PERFORMANCE

Profitability refers to money that a firm can produce with the resources it has. The goal of most organization is profit maximization (Niresh & Velnampy, 2014). Profitability involves the capacity to make benefits from all the business operations of an organization, firm or company (Muya & Gathogo, 2016). Profit usually acts as the entrepreneur's reward for his/her investment. As a matter of fact, profit is the main motivator of an entrepreneur for doing business. Profit is also used as an index for performance measuring of a business (Ogbadu, 2009). Profit is the difference between revenue received from sales and total costs which includes material costs, labor and so on (Stierwald, 2010).

Profitability can be expressed either accounting profits or economic profits and it is the main goal of a business venture (Anene, 2014). Profitability portrays the efficiency of the management in converting the firm's resources to profits (Muya & Gathogo, 2016). Thus, firms are likely to gain a lot of benefits related increased profitability (Niresh & Velnampy, 2014). One important precondition for any long-term survival and success of a firm is profitability. It is profitability that attracts investors and the business is likely to survive for a long period of time (Farah &

Nina, 2016). Many firms strive to improve their profitability and they do spend countless hours on meetings trying to come up with a way of reducing operating costs as well as on how to increase their sales (Schreibfeder, 2006).

In, accounting theory profitability shows the surplus of profit over expense for a specified duration that represent earning of the manufacturing firms from the various activities they perform in a growing economy (Tariq et al., 2014). The profitability of a manufacturing firm can thus be defined as net profit of the firm (San and Heng, 2013). A manufacturing firm is profitable if it has accrued more gains in financial perspective from invested capital. Thus, the firm's success is determined from the profits it has made in a given financial year (Adeusi, Kolapo and Aluko, 2014).

Profitability is one of main aspects of financial reporting for many firms (Farah & Nina, 2016). Profitability is vital to the firm's manager as well as the owners and other stakeholders that are involved or associated to the firm since profitability gives a clear indication of business performance. Profitability ratios are normally used to measure earnings generated by a firm for a certain period of time based on the firm's sales level, capital employed, assets and earnings per share (EPS). Profitability ratios are also used to measure the firm's earning capacity and considered as a firm's growth and success indicator (Majed, Said & Firas, 2012).

Profitability is generally measured using accounting ratios with the commonly used profitability ratio being ROA. ROA determines the amount of the profit earned per shilling of assets. This reflects the efficiency with which the firm's managers use investment resources or assets in generation of income (Sehrish, Irshad and Khalid, 2010). ROA simply connotes the management

efficiency and depicts how effective and efficiently the firm's management operate as they employ the organization's assets into the earnings. A high ROA ratio is a clear indicator a good performance or profitability of a manufacturing firm (Bentum, 2012).

2.4.1 Liquidity

Liquidity defines how a firm is at a better position to quickly repay its obligation. This will enable a firm to run its operations smoothly without any funding constraints, besides, this will also reduce the costs associated with borrowing hence improve performance by cutting cost. However, there are conflicting views when it comes to relating liquidity and leverage. According to trade off theory, firms that have proper liquidity prefer using external financing since they have the ability to repay the debt and also benefit from tax shields, hence resulting in a positive relation between liquidity and leverage. Conversely, pecking order theory suggests that when financing new investments, the more liquid firms prefer to use the internal funds as compared to external funds, resulting in negative relationship between liquidity and leverage. However, there isn't many studies have tested effect of liquidity on choice of capital structure. Mazur (2007) and Ahmad et al (2011) current assets to current liabilities ratio as the liquidity measure.

2.5 EMPIRICAL STUDIES

Inyiama, (2014) evaluated the nature and magnitude of the interactions between foreign exchange rate and selected financial performance indicators in Nigeria's beer industry from 2000 to 2013. Granger Causality procedure, 2-step cointegration and error correction model of Engle and Granger and correlation approach was adopted in the analysis. The Augmented Dickey Fuller (ADF), Phillips-Perron (PP) and the Kwiatkowski-Phillips-Schmidt-Shin (KPSS)

procedures were applied to test for series stationary. All the series were found non stationary but achieved stationary at second difference. The findings revealed that foreign exchange fluctuations has a short term negative and insignificant effect on earnings per share; and a positively and insignificant effect on prices of equity shares, net asset value per share and price-earnings ratio in the short run. The effect on all the variables was negative and insignificant in the long run.

Based on the prediction that exchange rate movements affect a firm's productivity by changing its scale of production (Fung, 2004), Fung and Liu, (2009) empirically examined this theoretical prediction, using balanced panel data on 188 firms listed on the Taiwan Stock Exchange merged with customs trade data covering the period from 1992 to 2000. Their findings indicated that the real depreciation of the NT dollar led to an increase in exports, domestic sales, total sales and value-added. They also found that this real depreciation also led to an increase in productivity, suggesting that this may be a result of the expansion of firms' sales (i.e., production). They further investigated whether the degree of productivity, and the capital-labour ratio of firms prior to depreciation, can influence the effects that real depreciation has on their performance. The results indicated that the favourable effects of the real depreciation on firms' domestic sales, total sales, value-added and productivity were more pronounced on those firms with higher productivity, but that the effects on total sales were less pronounced on those firms with higher capital-labour ratios. The results suggest that although the real depreciation of a home currency may promote better performance by more productive firms, it may be less beneficial for more capital-intensive firms, as they will feel the effects of increases in the price of imported machinery and equipment to a greater degree.

Mensah et al., (2013) investigated how employment growth in the Ghanaian manufacturing sector is affected by the fluctuating exchange rate. They employed data from World Bank development indicators and the Ghana Statistical Service as well as the state of the Ghanaian economy. The study employed Ordinary Least Squares (OLS) regression technique to examine the effect of exchange rate volatility on employment growth. The study revealed that exchange rate volatility has effect on employment growth in manufacturing sector firms in Ghana. That is the depreciation of the Ghanaian currency against US Dollar significantly slows the rate of employment within the manufacturing sector in Ghana.

Nyeadi et al., (2014) investigated the impact of exchange rate movement on export growth in Ghana. The data, made up of secondary sources was extracted from International Monetary Fund (IMF), United Nations Conference of Trade and Development (UNCTAD) and Bank of Ghana websites spanning 22 years from 1990 to 2012. In addition to other controlled variables, exchange rate is used as an independent variable while export growth is the dependent variable. Using the OLS estimator, the study found that exchange rate has no impact on the export of goods and services in Ghana. The study however finds that Gross Domestic Product, Gross National Saving, Import Growth and Total Investment have significant impact on export.

The empirical evidence shows that few studies have been conducted in Ghana in line with the effect of exchange rate fluctuations on manufacturing firms' financial performance This current study will therefore investigate the effect on financial performance of manufacturing companies from 2007 to 2016 using multiple regression techniques.

CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

This chapter, Research Methods, provides an overview of the methods that was employed in addressing the research problem and finding answers to the research questions. Thus, this chapter of the research is devoted to philosophy supporting the study, the research approach, research design, strategy, population and sampling technique, data collection and data analysis techniques.

3.2 RESEARCH DESIGN

Generally, there are two major approaches to every research, which include the deductive and inductive approaches (Saunders et al., 2009). Induction, as explained by Malhotra and Birks (2006), is a form of reasoning that draws from an instance or repeated combination of events in order to conclude or may be make universally accepted generalizations. According to Saunders et al. (2009), the inductive research approach allows researchers to appreciate how humans interpret their social environment; while the deductive approach allows the researcher to appreciate the cause–effect relationship and link to be made between certain variables without understanding humans and the context within which they find themselves.

The use of quantitative data allows the testing of cause-effect relationships, using structured research methodology to facilitate replication of the result (Gill & Johnson, 2010). Indeed, the main aim of this study is to explore the impact of exchange fluctuations on the financial performance of some selected manufacturing firms in Ghana. This therefore requires that the

study employed the quantitative (deductive) research approach. The study used deductive research reasoning because this research reasoning is more suitable to use where a large number of respondents are involved in the study. Again, this study opts for the use of quantitative design is most appropriate for this study due to the fact that the dependent variable and the main explanatory variables were all continuous in nature.

3.3 POPULATION FOR THE STUDY

A population is a complete group of persons or individuals, objects, or units from which sample is taken for measurement (Saunders et al., 2009). Target population is the total group of individuals about whom information are gathered. To design a useful research project, there is the need to be specific about the size and location of your target population.

The study population was 10 firms which are listed under the manufacturing sector of the Ghana Stock Exchange. The research considered a five-year period from 2014 to 2018. Listed companies were preferred because financial statements were readily available from www.annualreportsghana.com. The firms are African PIO, Ayrton, Benso, Starwin Aluworks Ghana Limited (ALW), Camelot (CAM), Fan Milk (FML), Guinness Ghana Breweries Limited (GGBL), PZ Cussons (PZC), and Unilever (UNIL).

3.4 DATA COLLECTION

Numerical data (i.e. financial data) of 10 manufacturing firms were collated in line with the objective of the study and analysed using statistical techniques for inferences to be drawn

3.5 VARIABLES DEFINITION AND JUSTIFICATION

Strong association between exchange rate and performance of manufacturing firms is evidenced in literature. The variables include size, profitability, and ownership structure, operational efficiency and net interest spread, real GDP, Inflation and Real Effective exchange rate. This is evidenced in the study of Klein (2013)

3.5.1 Profitability:

As noted by Hu et al. (2004), manufacturing firms are more likely to engage in risky activities as there exist the possibility of pressure being exerted on them by investors to make profits. In view of this, firms with lower profitability are likely to engage in risky activities in order to close variance gaps and thus are exposed to profitability risk. In the work of Jimenez and Saurina (2006), they found a negative relationship between profitability and exchange rate fluctuations. Thus, an indirect relationship is expected between profitability in this study. There are several measures of profitability, but this study will use Return on asset (ROA).

3.5.2 Ownership structure:

Most existing literature focused on segregating manufacturing firms into state-owned and privately-owned firms in their studies. Empirically, Salas and Saurina (2002), Hu et al. (2004), and Swamy (2012) suggested a positive association between state ownership of firms and losses. This suggests that state-owned firms are mostly associated with higher losses probably attributed to suppressions and manipulations from government in their activities. In this study, manufacturing firms will be segregated into publicly owned and privately owned. Thus, dummy variables will be employed as (1=publicly owned and 0 =privately owned).

3.5.3 Firm Size:

Several studies reveal that relatively larger firms are often more affected by exchange rate fluctuations than smaller firms (Salas & Saurina, 2002; Hu et al, 2006). This is because of the gravity of international transactions larger firms pursue. Other studies, on the contrary, postulate that bigger firms are less affected by exchange rate fluctuations because such firms have better corporate governance ethics, risk management strategies that help them to mitigate the negative impact of exchange rate fluctuation. This study, a priori, expects larger manufacturing firms to be highly and negatively affected by exchange rate fluctuations.

3.5.4 Interest Rate:

Apart from exchange rate, one crucial factor that influence financial performance of manufacturing firms is prevailing interest rate on loans. The interest rate variable used in this study is used to assess the effect the cost of lending on manufacturing firms. Basically, as interest rates rise, the debt burden on firms rise and if not matched by increase in their revenues, manufacturing firms are likely to default. In a study in Sub-saharan African countries, Fofack (2005) found an insignificant indirect relationship between interest rate and firms' financial performance. This is measured by the ratio of net interest income to total income on loans.

3.5.5 Real GDP growth:

Empirically, studies have shown a direct relationship between the growth in real GDP and financial performance of financial institutions in Ghana (Salas and Suarina, 2002; Fofack, 2005; and Jimenez and Saurina, 2005). This is largely explained by the increase in income levels

brought about by strong positive growth in real GDP which cascades into positive and significant performance in the various sectors of an economy. A positive and a significant relationship between real GDP growth and good performance of firms is expected in this study. Real GDP growth will be measured by the annual percentage change in real GDP in Ghana during the period under study.

3.5.6 Inflation

Inflation is one of the most significant determinants of how well firms perform in an economy. This study deems it vital to consider inflation for the period under consideration since studies have established that the rate of change in inflation has a direct consequence on the profitability of manufacturing firms. This is plausible because the cost of input for product will increase as inflation rises. This consequently leads to a high price of products produced. This makes the cost of products produced by the manufacturing firm more expensive. Fofack (2005) found a negative relationship between inflation and profitability in a number of Sub-Saharan African countries with flexible exchange rate regimes. On the contrary, Smadi (2010) found a positive association between inflation and profitability of firms in Jordanian commercial manufacturing sector. This study will be indifferent in its expectation of the relationship between inflation and firms' performance.

3.5.7 Real Effective Exchange rate:

Businesses are exposed to exchange rate movements especially those involved in international business. Like inflation a change in effective exchange rate can also affect firms' performance.

Thus, the relationship between exchange rate and firms profitability is indeterminate in this study. The annual effective Exchange rate of the Ghana cedi in terms of US dollar.

3.6 THE STUDY VARIABLES AND RESEARCH MODEL

This section of the chapter presents the main models used in arriving at the research findings in the subsequent chapter.

The general form of the model for arriving at the first and second research objective is given as:

$$\mathbf{FinPerf}_{it} = \beta_0 + \beta_1(\mathbf{ExchRate})_{it} + \beta_2(\mathbf{Infl})_{it} + \beta_3(\mathbf{OWN})_{it} + \beta_4(\mathbf{SIZ})_{it} + \beta_5(\mathbf{IntRate})_{it} + \beta_6(\mathbf{GDP})_t + \beta_7(\mathbf{Leverage})_t + \beta_8(\mathbf{RER})_t + \varepsilon_{it} \dots \dots \dots (1)$$

Where;

- i) β_0 is an intercept of the banks.
- ii) $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6,$ and $\beta_7, \beta_8,$ represent estimated coefficient for specific variables for bank i at year t .
- iii) ExchRate, Infl, OWN, SIZ, IntRate, GDP, Leverage and RER represent exchange rate, Inflation, Ownership, Size of the firm, Interest Rate, Gross Domestic Product, Leverage and Real Exchange Rate respectively at year t .
- iii) ε_{it} represents error terms unobserved variables.
- iv) FinPerform, which is a proxy for Profitability is measured by the return on equity (ROA) is the return made by the firms from their assets. The return on equity as used in the study, and as applied in many scholarly works, is mathematically expressed as $\frac{\text{Profit after Tax}}{\text{Total Assets}}$.

The specific forms are represented as follows

$$ROA_{it} = \beta_0 + \beta_1(\text{ExchRate})_{it} + \beta_2(\text{Infl})_{it} + \beta_3(\text{OWN})_{it} + \beta_4(\text{SIZ})_{it} + \beta_6(\text{IntRate})_{it} + \beta_5(\text{GDP})_t + \beta_7(\text{Leverage})_{it} + \beta_8(\text{RER})_t + \varepsilon_{it} \dots \dots \dots (2)$$

$$CR_{it} = \beta_0 + \beta_1(\text{ExchRate})_{it} + \beta_2(\text{Infl})_{it} + \beta_3(\text{OWN})_{it} + \beta_4(\text{SIZ})_{it} + \beta_6(\text{IntRate})_{it} + \beta_5(\text{GDP})_t + \beta_7(\text{Leverage})_{it} + \beta_8(\text{RER})_t + \varepsilon_{it} \dots \dots \dots (3)$$

CHAPTER 4

ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

This chapter of the study presents the findings of the study based on scientific methods and processes. The results of the study are presented in appropriate forms using tables for simplicity and to enhance clarity. This chapter therefore presents answers to all research questions. For all results, discussions are made based on theoretical and empirical views.

4.2 DATA DESCRIPTION AND DISCUSSION OF RESULTS

This section presents an initial summary of the variables being studied. Summary statistics comprising frequencies and the percentages of the variables used in the model are presented. It analyses and discusses the findings in the study. The chapter acts on the research questions as provided in chapter one and provides detailed discussions and empirical findings in the form of tables to show how certain variables interact with exchange rate fluctuation influence performance of some selected manufacturing firms in Ghana.

Table 4.1 DESCRIPTIVE STATISTICS

Variables	Obs	Mean	Std. Dev.	Min	Max
roa	56	3.70735	6.041521	-3.7	53
gdp	56	5.538	2.36313	3.49	9.3
inf	56	13.3564	3.641048	7.072	17.15
rer	56	17.72	7.32394	9.6	31.3
lgr	56	34.8825	41.8672	-10	258.47
own	56	0.4375	0.499208	0	1
Siz	56	9.29975	0.2619159	8.75	9.86

Source: STATA 15 Data Analysis Results (2019)

Table 4.1 presents the observation, the mean, standard deviation, maximum and minimum values of each of the variables in the data used. In essence, it provides a summary of the entire data used in this research.

4.3 CORRELATION MATRIX

The linear dependency of the explanatory variables is determined using the correlation matrix. The Pearson Product Movement Coefficient of correlation for pairs of independent variables measures the degree of linear relationship between two or more variables. Table 4.2 below shows the correlation matrix for the variables used in the study.

Table 4.2: Showing the Correlation Matrix of the Variables

	gdp	inf	roa	rer	lgr	own	siz
gdp	1						
inf	-0.216	1					
roa	0.1786	-0.9798	1				
rer	-0.0624	-0.008	0.0383	1			
lgr	-0.2192	-0.0879	0.0876	0.0496	1		
own	-0.1305	0.381	-0.3917	0.0389	0.1649	1	
siz	0.2113	0	0	0.2104	0	-0.0006	1

Source: STATA 15 Data Analysis Results (2019)

Generally, there is supposed to be a weak correlation among the independent variables. The correlation between the independent variables ranges from -0.9798 to 0.3810. It is observed that inflation and the ownership of the manufacturing firm records the highest level of correlation while the independent variables with the weakest level of correlation from Table 4.2 is Return on Assets and inflation which recorded a correlation of -0.9798.

4.4 Objective 1: The impact of Exchange Rate on Profitability of Manufacturing Firms

In line with the first objective of this study, the researcher runs a regression to be able to identify how exchange rate interacts with certain economic variables to impact performance of manufacturing firms in Ghana.

4.4.1 Regression Results and Discussions

According to Sayrs (1989), panel data has two main leading models that can be used to estimate the regression variables. The two models are the fixed and random effect models. In instances where researchers decide to control variables that are absent and vary between cases but are fixed over time, they use the fixed effect model. The fixed effect model provides the opportunity to track the changes in the variables over time to estimate the effect of the independent variables on the dependent variables. Between the two models, the fixed effect is the most extensively used procedure for panel data analysis. Statistically speaking, this model provides the researcher with results that are more consistent but could be the less effective model to run in certain situations.

The random effect is used where some omitted variables may be constant over time but vary between cases, others may be fixed between cases but vary over time. In order to determine between fixed effect and random effect, the Hausman test is used. This test compares fixed effect with random effect in STATA. Running a Hausman specification test at five (5) percent level enables the researcher to choose between fixed and random models.

The Hausman test evaluates the Null hypothesis that the coefficient estimated by the random effect estimator is the same as the ones estimated by the constant fixed effects estimator. If the Hausman test is insignificant (Prob>chi2 greater than .05), then the fixed effect model will be used (Torres-Reyna,2007).

The results of the regression are presented in tables. This is to enhance clarity. The Hausman test results, which aims at helping the researcher choose between the random and fixed effect model is also presented for justification.

Lastly, the study presents the adjusted R^2 and the R^2 figures. Chin (1998) posits that the adjusted R^2 measures the appropriateness of the regression model. Chin (1998) further recommended adjusted R^2 values for endogenous latent variables based on 0.67 (substantial), 0.33 (moderate) and 0.19 (weak).

Table 4.3.1 showing how variables interact with exchange rate to influence ROA on manufacturing firms

	RE	FE
GDP	3.63** (2.53)	6.48** (2.65)
INF	-1.49* (1.44)	-2.26 (1.52)
RER	-0.26** (0.17)	-0.48*** (0.18)
INT.	-0.037 (0.053)	-0.52 (0.89)
OWN	7.27 (4.60)	0.056* (0.031)
SIZ	-11.3 (9.89)	-22.6* (13.5)
Constant	160.0 (110.3)	298.8** (142.4)
Observations	40	40
R^2	0.28	0.56
Adjusted R^2	0.079	0.23
F-Statistics	10.8950 [0.004]	31.328 [0.000]
Hausman Test	10.46	
P-Value	[0.0015]	

Standard errors in parentheses

* $p < [0.10]$, ** $p < [0.05]$, *** $p < [0.01]$

Table 4.3.1 presents the impact of exchange rate on the performance of some selected manufacturing firms in Ghana.

The result of the random effect model from table 4.3 is used for analysis. This is because the

Hausman test is significant ($\text{Prob} > \chi^2 = 0.0150$). From the results, it is observed that GDP, inflation and real effect exchange have a significant impact on ROA of the manufacturing firms under consideration within the years under review.

4.4.2 Discussion of the Results

From table 4.3, there is a positive correlation between GDP and performance of manufacturing firms. This indicates that as GDP of a country increases, the potential for firms to make profit also increases accordingly. People are highly likely to make more returns on their assets as and when the GDP of countries rises. This is evidenced in the study of Mun (2015) who observed that GDP growth has a cascading impact on the overall performance of manufacturing firms. It is therefore not surprising that per the findings, manufacturing firms recorded profits in instances when the GDP of Ghana recorded a rise.

Inflation is negatively correlation with ROA. This makes a lot of sense in that as inflation increase, interest rate increases as well. Again, cost of production increases as a result thereby leading to higher prices of goods and services produced by the manufacturing firms. An increase in interest rate consequently leads to an increase in cost of borrowing. In situations where there is no corresponding patronage of goods and services produced by customers after the rise in the prices of goods, there is the high tendency that manufacturing will run at a loss. This is justified in the negative relationship that is observed in the regression results in Table 4.3.

Real effect exchange rate, which is the variable of interest in this study, is observed to have a significant but a negative impact on financial performance of manufacturing firms in Ghana.

This supports the earlier findings of Salas and Saurina (2002) and Hu et. Al (2006). A rise in exchange rate is seen to reduce ROA of manufacturing firms. This is because many firms in Ghana engage in international trade. Most of them deal in import and export of raw materials and finished goods. Their returns largely depend on how well the Ghana Cedi performs against the dollar (Engel, 2016). The implication of the finding is that when the cedi appreciate against the U.S dollar, manufacturing firms make more profit since the cost of production, which is mostly import dependent, falls. The ripple effect is that, all other things being equal, the cost of doing business reduces and hence a positive impact on the ROA. This finding can be practically proven since a rise in exchange rate leads to higher cost of doing international business and hence chances are that firms that engage in international trade, mostly firms that are import dependents, may encounter some financial losses.

Table 4.3.2 showing how certain variables interact with exchange rate to influence ROE of manufacturing firms.

	FE	RE
GDP	8.83*** (2.76)	0.36** (0.16)
INF	-2.79 (1.47)	-0.13 (0.13)
RER	-0.56*** (0.18)	0.028* (0.052)
INT	-0.053* (0.031)	-13.9 (12.0)
OWN	0 (.)	0 (.) -8.83***
SIZ	-49.5 (17.4)	-8.83*** (2.76)
Constant	574.4** * (181.2)	-0.56*** (0.18)
Observations	40	40
R^2	0.56	0.40
Adjusted R^2	0.30	0.17
F-Statistics	4.6276 [0.000]	5.985 [0.000]
Hausman Test	5.95 [0.428]	

Standard errors in parentheses

* $p < [0.10]$, ** $p < [0.05]$, *** $p < [0.01]$

Table 4.3.2 shows how some carefully selected variables interact with exchange rate to influence financial performance of manufacturing firms in Ghana. This section takes into consideration return on equity as the dependent variable and run a separate regression to identify the impact of

exchange rate movement and other economic variables on financial performance of firms. This aims at providing robustness check for the finding in Table 4.3.1.

4.4.3 Discussion of the Results

The results of the Fixed effect model from table 4.4 is used for analysis. This is because the Hausman test is significant ($\text{Prob} > \chi^2 = 0.4286$). From the results GDP, real effect exchange rate, Interest Rate are the variables which have impact on ROE of the manufacturing firms under consideration. Louzis, Vouldis and Metaxas (2012) in a similar study to examine the impact of exchange rate fluctuations and other economic variables that impact ROE of manufacturing firms in Greece also found a positive correlation between GDP and ROE. The results in table 4.3.2, just like what was observed in table 4.3.1, found a positive but significant relation between GDP and ROE. The positive correlation between GDP and ROE imply that as GDP of Ghana increases, there is a high tendency that ROE of manufacturing firms in Ghana will also increase accordingly.

The study again found a negative relationship between ROE and interest rate. This is in conformity with the findings from Keeton (1999), Salas and Saurina (2002). The implication of the results is that when interest on loans increase, cost of borrowing becomes more expensive. Manufacturing firms that seek loan facilities from financial institutions will find it difficult to service the loans as a result of the interest rate increment. This can therefore affect the return on equity of the manufacturing firms under consideration. It is therefore not surprising that interest rate positively relates to ROE.

Lastly, just as observed in Table 4.3.1, the study observes a negative correlation between ROE and exchange rate. This is the case because many firms in Ghana engage in international trade. Most of them deal in import and export of raw materials and finished goods. Their returns largely depend on how well the Ghana Cedi performs against the dollar (Engel, 2016). The implication of the finding is that when the cedi appreciate against the U.S dollar, manufacturing firms make more profit since the cost of production, which is mostly import dependent, falls. The ripple effect is that, all other things being equal, the cost of doing business reduces and hence a positive impact on the ROA. This finding can be practically proven since a rise in exchange rate leads to higher cost of doing international business and hence chances are that firms that engage in international trade, mostly firms that are import dependents, may encounter some financial losses.

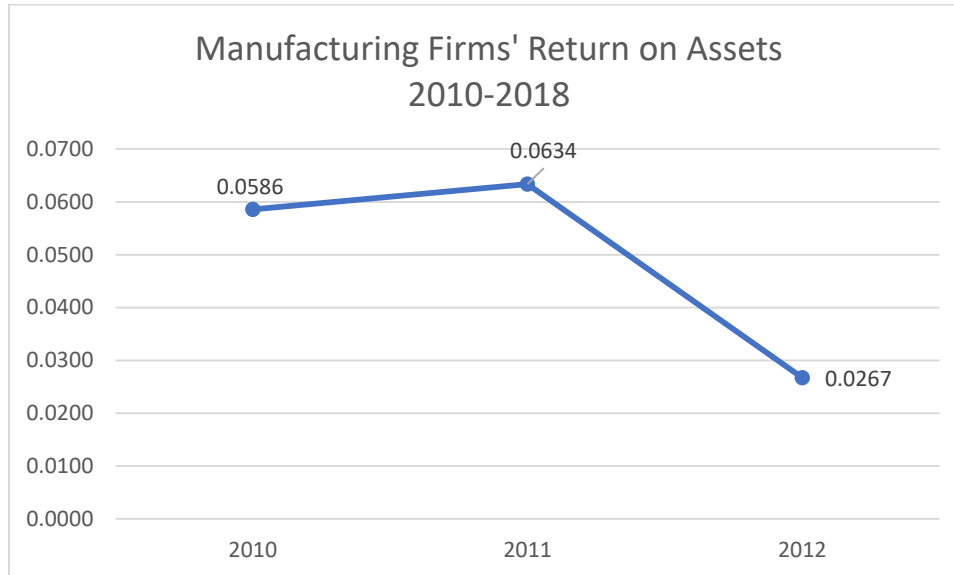
Objective 2: Trend of Manufacturing Firms' Financial Performance

This was done in terms of profitability (Return on Assets) and liquidity (Current Assets to Current Liabilities).

Profitability

As indicated in the descriptive statistics section, the mean ROA for the period was -0.1521 (-15.21%), standard deviation was 0.98, lowest value was -5.65 and highest value was 0.28. The mean value implies that on the average, manufacturing firms made a loss of 15% over the 8-year period. Figure 4.1 below shows how ROA of manufacturing firms trended over the 8-year period.

Figure 0.1: Trend of Manufacturing Firms' ROA



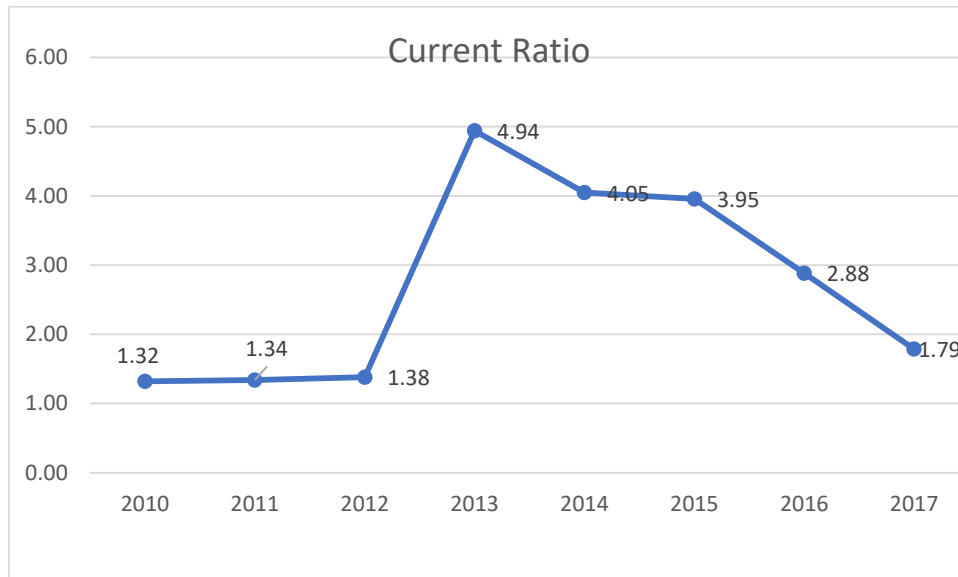
Source: Data Analysis (2019)

The trend of manufacturing firms' ROA shows ROA increased by 8.2% from 2010 to 2011; fell by 57.8% in 2012; fell by over 2000% in 2013; fell by 27% in 2014; increased by 1005 in 2015; and then by 197% and 39% in 2016 and 2017 respectively. The average year on year change was -3.3%.

Liquidity

As indicated in the descriptive statistics section, the mean current ratio for the period was 2.7, standard deviation was 5.4, lowest value was 0.38 and highest value was 27.9. This means that current assets covered current assets by an excess of 170%. Figure 4.2 below shows how CR of manufacturing firms trended over the 8-year period.

Figure 0.2: Trend of Manufacturing Firms' Current Ratio



Source: Data Analysis (2019)

The trend of manufacturing firms' Current Ratio (CR) shows CR increased by 1% from 2010 to 2011; increased further by 3% in 2012; increased by 254% in 2013; fell by 18% in 2014; fell by 2% in 2015; and then by 27% and 38% in 2016 and 2017 respectively. The average year on year change was an increase of 25%. 2010 to 2013 saw an average year-on-year increase of 88%, while the remaining of the period has seen a falling trend of 21% year on year.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 INTRODUCTION

This chapter, the chapter five, takes into consideration the summary of the study, provides reasonable conclusion based on the objectives and the findings of the study and lastly suggests recommendations for policy makers and scholars on the extent to which exchange rate fluctuations have ripple effects on financial performance of firms, specifically manufacturing firms, in Ghana. The recommendation section of this chapter informs research on the potential areas to conduct future research in this area of study. In essence, the final section of this study that is the recommendation provides the gaps that needs to be filled in future studies by researchers.

5.2 SUMMARY OF THE STUDY

The Ghanaian economy has for some time witnessed a seemingly unstable exchange rate. The strength of the cedi against the dollar has been up and down. Analysts established that the instability in the exchange rate stems from the massive importation of goods and services which could be produced in the country. The worsening and unstable strength of the cedi against major currencies like the US dollar has contributed immensely to the rise in the cost of goods and services in Ghana. Firms that engage in international trade are hard hit with this occurrence. Manufacturing firms whose inputs are mostly imported from other countries are mostly at the receiving end.

This study therefore found it expedient to employ panel data analysis to examine how fluctuations in the exchange rate has had impact on the financial performance of some selected firms and the manufacturing industry in general. This study was motivated against the backdrop of conflicting reports on the performance of manufacturing firms as a result of the unstable exchange rate in Ghana.

5.3 MAIN FINDINGS

Objective 1: Analysis of exchange rate fluctuations on firms' financial performance

The first objective of this study was to assess the impact of exchange rate movement on the financial performance of manufacturing firms taking into consideration both ROA and ROE of the firms under consideration. From the results, the study noted that GDP, real effect exchange rate, Interest Rate are the variables which have significant impact on both ROA and ROE of the manufacturing firms under consideration. The study found a positive correlation between GDP and performance of manufacturing firms. This indicates that as GDP of a country increases, the potential for firms to make profit also increases accordingly. Again, Inflation was found to be negatively correlation with ROA and ROE. This makes a lot of sense in that as inflation increase, interest rate increases as well. Again, cost of production increases as a result thereby leading to higher prices of goods and services produced by the manufacturing firms. Lastly, Real effect exchange rate, which is the variable of interest in this study, is observed to have a significant but a negative impact on financial performance of manufacturing firms in Ghana.

Objective 2: To examine the trend of financial performance of manufacturing firms taking into consideration the profitability and liquidity of the firms in the years under review.

The second objective of the study which sought to examine the profitability and liquidity of the manufacturing firms under consideration observed that the trend of manufacturing firms' ROA increased by 8.2% from 2010 to 2011; fell by 57.8% in 2012; fell by over 2000% in 2013; fell by 27% in 2014; increased by 1005 in 2015; and then by 197% and 39% in 2016 and 2017 respectively. The average year on year change was -3.3%.

Again, the trend of manufacturing firms' Current Ratio (CR) increased by 1% from 2010 to 2011; increased further by 3% in 2012; increased by 254% in 2013; fell by 18% in 2014; fell by 2% in 2015; and then by 27% and 38% in 2016 and 2017 respectively. The average year on year change was an increase of 25%. 2010 to 2013 saw an average year-on-year increase of 88%, while the remaining of the period has seen a falling trend of 21% year on year.

5.4 CONCLUSIONS

The Ghanaian economy is deemed as one of the fastest growing economies in Africa. Its industrial production is said to rise, averagely, by 7.8% per annum making Ghana the 38th ranked fastest growing industrial economy in the world. This is further buttressed by Ghana's choice to be the headquarters of AfCFTA. Ghana's manufacturing industry comprise electronics manufacturing, car manufacturing, electric car manufacturing, automotive manufacturing, light manufacturing, aluminium smelting, food processing, cement, and small commercial ship building, production of food and beverages, textiles, chemicals and pharmaceuticals, and the processing of metals and wood products.

It is known that increase in exchange rate makes import expensive and export more profitable. Since Ghana is deemed as a country that depends largely on imports, the depreciation of the cedi against the dollar has the potential to stifle the profit-making efforts of many manufacturing firms.

From the findings in the study, it can be deduced that the change in exchange rate has a ripple effect on the profitability of firms. It is therefore fair to conclude that exchange rate has a significant impact on the financial performance of manufacturing firms in Ghana.

5.5 RECOMMENDATIONS

Per the findings, the study intends to make the following recommendations to researchers and manufacturing firms in Ghana.

5.5.1 Manufacturing firms

This study recommends that manufacturing firms should mitigate the problems that come with exchange rate fluctuations by adopting measures such as currency swaps, diversification, future contracts in order to be able to hedge against fluctuations and remain competitive in its industry.

The study again recommends that manufacturing firms should endeavor to acquire import substitutes from the local market to reduce the cost they incur in importing goods especially in times when the Ghana is depreciating against the dollar.

5.5.2 Researchers

This study recommends future research to delve into the impact of exchange rate fluctuation on the other sectors of the economy.

Again, future studies should delve into how exchange fluctuations affect the GDP of Ghana as a whole.

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