

**THE EFFECT OF EXCHANGE RATE VOLATILITY ON
EXPORT EARNINGS: A CASE OF KENYA'S EXPORTS TO
UGANDA**

BY

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DECLARATION

This research project is my original work and has not been presented to any other University or College for academic purposes.

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This research project has been submitted for examination with my approval as the University supervisor.

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DEDICATION

I dedicate this work to my wife Faith Mumba, family members and friends for their support and patience during the entire period of undertaking the research study.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
EAC	East African Community
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
IMF	International Monetary Fund
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KRA	Kenya Revenue Authority
KNBS	Kenya National Bureau of Statistics
NGO	Non- Governmental Organisation
UNCTAD	United Nations Conference on Trade and Development
US	United States

ABSTRACT

Kenya's export earnings are a key contributor to the country's economic growth. Kenya actively trades with other nations of the world among them the East Africa Community with Uganda being the leading destination of Kenya's exports. The opening up to the global market has made Kenya witness currency fluctuations especially between the Kenyan shilling and the US Dollar. With such exchange rate fluctuations are uncertainties that affect the export earnings of a country. The objective of this study was to determine the effect of exchange rate volatility on export earnings with reference to Kenya's exports to Uganda. The study used secondary data in order to achieve the stated research objective. The data was obtained from Kenya Revenue Authority, Kenya National Bureau of Statistics and Central Bank of Kenya. Export earnings were analysed with the exchange rate volatility for the period of five years (2010-2014). Other variables of the study were interest rates and inflation rates. This was to understand how these factors affect export earnings to Uganda. In order to test the relationship between export earnings and exchange rate volatility, interest rates and inflation rates, multiple regression was employed. The study found exchange rate volatility affects Kenya's export earnings to Uganda. There is need for the policy makers to ensure adequate monitoring of the exchange rate and ensure that the rate is stable, because its stability will in turn enhance or increase economic growth. The monetary authorities should play a critical role in creating an enabling environment for growth. The determination of the optimal lending rate should reflect the overall internal rate of returns in the productive sector with due attention to market fundamentals. The Central Bank should be given some instrument autonomy. Effective monetary targeting and accommodating monetary policies should be designed and implemented as the needs arise. There is also need for the government to ensure price stability, as this help to reduce the pressure on general price level. High inflation rate in an economy would hamper economic growth. Other studies in this area should be carried out to ascertain the effect of other factors not accounted for in this study on earnings in Kenya. This study covered a period of five years. There is need to consider a longer duration of study to see whether the results will be consistent.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Over the past years, exchange rates between the Kenya shilling and other hard currencies especially the US dollar have fluctuated enormously. This has brought forth a concern that trade and investment in Kenya is likely to be impacted by the happenings in the foreign exchange market. Traditionally, volatility of exchange rates has influenced the majority of all market participants either in a positive or negative way. Based on the assumption that exporters and importers are likely to exhibit some degree of risk aversion associated with the trade uncertainty, exchange rate fluctuations represent a potential concern. The consequences of exchange rate volatility on real exports have long been at the center of debate among researchers (Afza & Alam, 2014).

Kenya's exports to the EAC countries from the period 2010-2014 have been declining particularly to Uganda and Tanzania. The situation is made worse by the fact that exports to Burundi have not experienced any growth in the past four years and that exports to Rwanda have also started to indicate a declining trend. The decline and stagnation shows inverse expectation of Kenyan exports despite the depreciation of the Kenyan shilling (KIPPRA, 2013).

Additionally, in recent years, growth in imports has outstripped exports, thus leading to deterioration in external trade balance and current account. Given Kenya's size, geographical location and diversity of its commodity trade flows, it is the EAC's leading trading hub. Kenya's largest and most important trade partner is Uganda. The EAC (2012) attributed to the country's lengthy licensing and customs procedures, red-tape, corruption and sluggish commercial dispute settlement process to reduction in Kenya's

competitiveness in the region.

This study was anchored on the Flow Oriented Model and the Stock Oriented Model. The Flow Oriented Model claims that changes in exchange rates alter the international competitiveness of a firm as well as the balance of trade position, and thus exchange rate changes affect real income and output in a country (Joseph, 2012). The Stock Oriented Model shows exchange rates as serving the supply and demand for financial assets such as stocks and bonds. This approach suggests that an increase in stock prices induces investors to demand more domestic assets and thereby causes an appreciation in the domestic currency, implying that stock prices lead exchange rates and that they are negatively related. The appreciation of the domestic currency attracts more foreign capital and investments into the domestic market, which then leads to further currency appreciation (Pilbeam, 1992).

The effects of exchange rate volatility on exports are ambiguous (Pilbeam, 1992). While a large number of studies find that exchange rate volatility tends to reduce the level of trade, others find either weak or insignificant or positive relationships. The literature reveals that exchange rate fluctuations affect the level household incomes and consumption; firm investment, import and employment decisions; government's fiscal and monetary policies and trade balances. Exchange rate therefore plays an increasingly significant role in any economy as it directly affects domestic price level, profitability of traded goods and services, allocation of resources and investment decision. There is need for this kind of empirical studies to be undertaken in developing countries such as Kenya with time-variant exchange rates in order to counter this prevalent ambiguity in the literature and fill the research vacuum in less developed countries (Gachua, 2011).

This study therefore sought to fill this gap by examining the effects of exchange rate volatility on export earnings with reference to Kenya's exports to Uganda. Foreign exchange rates and inflation rates in Kenya over the last two decades have been characterized by volatility which creates uncertainty in the investment market (Gachua, 2011). Prediction of the future rates for these two variables is made difficult both in the short and long-run by the constant fluctuations causing uncertainty in the investment market. This uncertainty implies that potential international businesses are naturally exposed to exchange rate risk if they are to invest in Kenya.

1.1.1. Exchange Rate Volatility

Exchange rate volatility can be defined as exchange rate movements that emanate from currency fluctuations. Such volatility affects both the cash flow of a firm's operations and the value of a firm. From a theoretical perspective, it is a generally held view that exchange rate fluctuations are an important source of macroeconomic uncertainty. They should thus have a significant impact on firm value, regardless of whether the firm is domestically or internationally oriented. This is because growing globalization has encouraged many corporations to extend their businesses beyond the geographical boundaries in order to benefit from competitive advantage and economies of scale (Afza and Alam, 2014).

Penetration into new markets has increased the firm's profitability, on one hand, and on the other it has also increased the variability in net income because of various financial risks. Therefore, the managers of the multinational firms are focusing on the importance of risk management techniques to reduce variability of their cash flows from foreign operations due to the fluctuations in foreign exchange rates. Exchange rate therefore plays an increasingly significant role in any economy as it directly affects domestic price level,

profitability of traded goods and services, allocation of resources and investment decision (Afza and Alam, 2014).

The impact of exchange rate volatility on trade has been studied more in industrialized countries than in less developed economies. Agu (2002) states that this lack of attention in developing countries is caused by insufficient time series data. According to Gachua (2011) there is need for this kind of empirical studies to be undertaken in developing countries such as Kenya with time-variant exchange rates in order to counter this prevalent ambiguity in the literature and fill the research vacuum in less developed countries. This research focused on the exchange rate variations between the Kenya Shilling and the US dollar.

1.1.2 Export Earnings

According to Collins dictionary, export earnings are defined as the earnings of a company or country that are generated through the exports of goods or services. There are strong indications in literature which link a country's export earnings to fluctuations in foreign exchange rates. For instance, De Rosa et al (1991) suggest that in order to boost export earnings, exchange rates should be allowed to adjust to more realistic values. This will lead to significant increases in production and export of such export items as high value horticultural products.

Export earnings are essential ingredients for a country's economic growth and development. Such earnings stimulate economic growth in a number of ways which include production and demand linkages, economies of scale due to larger international markets, increased efficiency, adoption of superior technology embodied in foreign produced capital goods, learning effects and improvement of human resources together with increased productivity

through specialisation (Basu et al., 2000). Export earnings also help in the creation of jobs for citizens across the world. According to Ricker and David, 2010 export earnings help support millions of jobs in the world for instance in the US the total number of jobs supported by exports were 11.3 million in 2013.

Firms that export can experience productivity improvements and are found to have higher labour productivity and higher total factor productivity than firms involved in exporting. This is due to the fact that firms may become more productive due to the pressure provided by increased competition from foreign firms. Technological spillovers that result from increased contact with firms and markets abroad can also improve productivity. However, it is also possible that there is self-selection involved in the pool of firms that are willing and able to sell abroad. That is, firms that are already more productive are the ones more likely to decide to export. However, some more evidence suggests that while firms that export are more productive, it is also true that the act of exporting can make firms more efficient (Harris and Li, 2011).

Jobs in export intensive industries pay more. A research conducted by International Trade Administration of the U. S department of Commerce has shown that workers in export-intensive industries earn on average 18 percent more than their counterparts in other manufacturing industries (Ricker and David, 2010). The reasons behind this high level pay include greater access to international markets prompting firms to heavily invest in technology and capital. This investment increases the productivity of workers which in turn contributes to higher earnings. Of course higher earnings can reflect industry factors that increase the productivity of the worker whether they export or not, but which also increase the probability that the workers' industry will succeed in exporting. For example, if a U.S

industry produced an exceptionally high quality, relatively unique set of goods, then export success would coincide with higher earnings, even if export intensity did not increase the earnings (Bernard and Jensen, 1999).

Kenya's export commodities mainly involve coffee, tea, edible oils, cement among others. Due to this export earnings are more vulnerable to fluctuation in exchange rates and world prices. Out of the goods exported in Kenya, manufactured goods form a small portion of total export earnings (Wagacha, 2000).

1.1.3. Exchange Rate Volatility and Export Earnings

Several international studies on the effect of exchange rate volatility on export earnings have been undertaken. A study conducted by MacDonald (2008) to analyze the impact of exchange rate volatility on the volume of bilateral U.S. trade flows provides evidence of a negative effect on trade from exchange rate volatility. Williams (2005) analyzed the relationship between exchange rate uncertainty, trade volumes, and price competitiveness. Using data on UK manufacturing exports, the author came to the conclusion that unexpected fluctuation in exchange rates is usually accompanied by increasing export prices and decreasing trade volumes.

Choudhry (2005) investigates the influence of exchange rate volatility on real exports of the U.S. to Canada and Japan using aggregate monthly data ranging from January 1974 to December 1998. The study finds significant and mostly negative effects of the exchange rate volatility on real exports. Sukar and Hassan (2001) investigate the relationship between the U.S. The study finds evidence for a significantly negative relationship between U.S. export volume and exchange rate volatility. However, the short-run dynamics of the relationship shows that the effect of exchange rate volatility is insignificant. Chou (2000)

estimates the effect of exchange rate fluctuations on total exports and exports of China by Standard International Trade Classification (SITC) category.

Irene (2011) did a study on the relationship between foreign exchange risk and financial earnings of Airlines in Kenya whose objective was to establish the relationship between foreign exchange risk and financial earnings of Kenya Airways. Muriithi (2011) did a study whose objective was to establish the relationship between foreign exchange rate and market earnings for manufacturing companies. Chiira (2009), conducted a survey of foreign exchange risk management practices by exporting companies in Kenya, he however did not examine how foreign exchange rate fluctuations affect Kenya's export earnings to Uganda. As such, there is no evidence of local study in Kenya conducted on the effect of exchange rates volatility on Kenya's export earnings to Uganda.

1.1.4 Kenya's Export Earnings to Uganda

Uganda is one of the countries neighbouring Kenya. It is a member of the East African Community and actively trades with its partners including Kenya. According to Kenya's Vision 2030 Economic Pillar, trade is identified as a key driver of Kenya's economic growth. The development blueprint emphasizes on Kenya's commitment to be the lead manufacturing point for the regional market and the provider of choice for basic manufactured goods in Eastern and Central Africa; by enhancing improved efficiency and competitiveness at firm level. However the long term sustainability of Kenya's competitiveness in the region in terms of being a regional leader in exports is currently in question after Kenya registered a significant decline in exports to the EAC countries and particularly to Uganda for the past three years (Vision, 2030).

Kenya's export earnings to Uganda, its biggest exports destination, have reduced for the third year in a row in line with a general decline in the country's out-bound trade. Data in the Economic Survey 2015 shows Kenya exported goods worth Ksh 65.36 billion to Uganda in the 2013, which was 3.1 per cent or Ksh 2.09 billion lower than the previous year's Ksh 67.45 billion. Exports to Uganda were highest in 2011 when they peaked at Kshs75.95 billion, which was 13.9 per cent higher than 2010. In 2014 export earnings to Uganda declined from Ksh 65.36 billion to Kshs 60.78 representing a 7% decline. Uganda was the largest destination of exports in the region among partner states with lime, cement and fabricated construction materials (other than glass and clay) being its major imports from Kenya (KNBS, 2014).

Kenya and Uganda are members of the East African Community who actively participate in trade. Export earnings from the East African Community (EAC) member states grew marginally from KSh 124,957 million in 2013 to KSh 125,798 million in 2014. Despite a 7.0 per cent decline in the value of exports to Uganda, it remained the leading destination of Kenya's exports in 2014. Cement, flat rolled products of iron and steel and; salt were the main exports to Uganda during the period under review. In contrast, export earnings from Tanzania registered a 5.5 per cent increase to KSh 42,725 million in 2014. Similarly, the value of total exports to other COMESA countries expanded from KSh 79,210 million in 2013 to KSh 86,904 million in 2014 (KNBS, 2015).

Kenya's exports experienced a growth stage, maturity and then a decline stage. A number of research institutions and international development organizations have published reports that indicate Kenya's exports to the EAC countries have declined for the past there years. According to the (KNBS, 2015) exports to the EAC partner states decreased by 7.4% for the period (2012-2013). According to the KIPPRA economic survey, 2013,

Kenya's exports to the EAC member countries declined from Kshs.137.2 billion to Kshs.134.9 billion in the year (2011-2012). The report further stated that following the implementation of the EAC Customs Union in 2005, it was expected that Kenya would dominate regional trade by diversifying its exports to the EAC market especially to Uganda which is the largest destination but this was however not the case (KIPRA, 2013).

According to the projections of the (World Bank Kenya State of the Economy Report, 2011), strong economic growth of EAC countries combined with the depreciated Kenya shilling should translate into higher regional exports of manufactured goods that will allow Kenya to expand its exports within the region and especially with Uganda the leading destination of Kenya's exports. The (KNBS, 2014) report shows economic results contrary to the World Bank 2011 projections; an indication that despite the economic growth in EAC countries Kenya still registered significant decline and stagnation in its export value especially to Uganda hence the research question that this study sought to fulfill.

1.2 Research Problem

Kenya's presence in international trade continues to increase drastically. As a result, Kenya is engaging in a much wider range of cross border transactions with different countries and products. This has led the country to witness foreign exchange fluctuations and the unpredictability of exchange rates affects the country's export earnings. Exchange rate fluctuations represent one of the major sources of macroeconomic risk for Kenya's Exports. In the long run exchange rate changes influence a country's volume of foreign trade. The costs of exports and foreign purchases alter the country's domestic and international competitiveness. In this regard therefore the strategic responses in addressing

changes in the dynamic foreign exchange market, is key to achieving competitive advantage in export business (Alaba, 2002).

According to the projections of the World Bank Kenya State of the Economy Report (2011), strong economic growth of EAC countries combined with the depreciated Kenya shilling should translate into higher regional exports of manufactured goods that will allow Kenya to expand its exports within the region. However despite the depreciation in Kenya shilling, in recent years, growth in imports has outstripped exports- as a matter of fact Kenyan exports to Uganda in the past three years have registered sharp declines thus leading to deterioration in external trade balance and current account. Despite this no study has been undertaken in Kenya to determine the relationship between exchange rate volatility and Kenya's export earnings to Uganda.

A study conducted by MacDonald (2008) analyzed the impact of exchange rate volatility on the volume of bilateral U.S. trade flows. The study finding provides evidence of a negative effect on trade from exchange rate volatility. Williams (2005) analyze the relationship between exchange rate uncertainty, trade volumes, the authors came to the conclusion that an unexpected fluctuation in exchange rates is usually accompanied by increasing export prices and decreasing trade volumes. Choudhry (2005) investigates the influence of exchange rate volatility on real exports of the U.S. The study finds negative effects of the exchange rate volatility on real exports. Irene (2011) studies the relationship between foreign exchange risk and financial earnings in Kenya. Muriithi (2011) studied the relationship between foreign exchange rate and market earnings for manufacturing companies. Despite the contributions of these studies no studies have been done to examine how exchange rate fluctuations affect Kenya's export earnings to Uganda.

Exporting companies are constantly engaging in a much wider range of cross border transactions with different countries and products. Such fluctuations expose exporting companies to foreign exchange risk. Moreover, the Kenyan economy is getting more and more open with international trading constantly increasing and as a result firms are becoming more exposed to exchange rate fluctuations. These fluctuations bring increased uncertainty to traders which may influence the volume of international trade leading to the research question, what is the effect of exchange rate volatility on export earnings with reference to Kenya's export earnings to Uganda?

1.3 Research Objective

To establish the effect of exchange rate volatility on export earnings, a case of Kenya's exports to Uganda.

1.4 Value of the Study

The rationale behind this study was to enhance an understanding on the effect of foreign exchange rate volatility on the earnings of Kenya's exports in the East African region and also attempts to identify the recommendations for purposes of informing policy and towards enhancing long term sustainability and competitiveness of Kenya's manufacturing industry as portrayed in the Kenya's Vision 2030 Economic Pillar which emphasizes Kenya's intentions to be the lead manufacturing point for the regional market and the provider of choice for basic manufactured goods in Eastern and Central Africa.

This research will therefore ensure that the threats to the achievement of Kenya's vision 2030 economic pillar such as the decline in exports are addressed in a timely manner to enhance sustainable economic development and improvement of living standards of

Kenya's exports. The research will therefore be particularly useful to regional integration institutions and their development partners in Kenya.

The findings of this study will therefore provide important guidelines on policy interventions and negotiations by member countries in order to achieve the five pillars of regional integration in the long-run and to ensure that the full benefits of integration are realized by member countries. Future researchers will use this study as a basis for their literature review in establishing knowledge gaps for future researches on regional integration. Through this study, policy makers in Kenya will be able to make informed decisions on approaches to matters of regional integration and how such policy decisions will affect Kenya's economy in general.

The study will help exporting companies to have a clear understanding of how foreign exchange rate fluctuations affect their financial performance. The study will make multiple contributions to the literature on foreign exchange volatility through investigation of optimal investment decisions in continuous-time downside risk-based foreign exchange system. In addition study paves the road for further research on continuous-time downside risk in foreign exchange investment decisions. Students interested in finance as a subject will find it useful and build on the existing body of knowledge. Finally the study will come in handy to support the government as a regulator in its quest to streamline operations in the exporting sector putting in mind that the economy as a whole inches on how the exporting sector performs. Inappropriate resource allocation can hinder growth in the economy.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter, the researcher presents the knowledge of study available on exchange rate volatility and export earnings. It is a summary of the findings, recommendations and theories suggested from studies done by scholars and researchers in that field.

2.2 Theoretical Review

This part explores the theoretical literature applicable to this study, with considerations being made to the Flow oriented model and the Stock oriented model.

2.2.1 Flow Oriented Model

This model was developed by Dornbusch and Fisher in 1980. This model claims that changes in exchange rates alter the international competitiveness of a firm as well as the balance of trade position, and thus exchange rate changes affect real income and output in a country. Share prices of companies are influenced by exchange rate changes and future cash flows of firms. This implies that exchange rate changes lead to stock price returns, and that they are positively correlated. The flow oriented model maintains that a causal relationship, which runs from the exchange rate to the stock prices simply means that exchange rate changes affect the competitiveness of firms as a result of its effect on input and output prices (Dornbusch and Fisher, 1980).

It follows therefore that if exchange rate appreciates, exporters are likely to be affected negatively. In the same regard an appreciation of the currency is likely to cause goods and services to be dearer on the international market. This will therefore bring about a decline in exports, as they will be seen as expensive by buyers on the international market. It means therefore that such goods will lose their competitiveness internationally. Consequently, their profits will drop and if profits decrease the firms will lose competitiveness on the

domestic stock market. Their attractiveness on the domestic stock market will decrease and this will result in their stock prices decreasing in value. Resultantly, a negative relation between domestic currency and stock price can be confirmed (Dornbusch and Fisher, 1980).

2.2.2 Stock Oriented Model

This model was developed by Branson and Frankel in 1983. These models show exchange rates as serving the supply and demand for financial assets such as stocks and bonds. This approach suggests that an increase in stock prices induces investors to demand more domestic assets and thereby causes an appreciation in the domestic currency, implying that stock prices lead exchange rates and that they are negatively related. The appreciation of the domestic currency attracts more foreign capital and investments into the domestic market, which then leads to further currency appreciation (Branson and Frankel, 1983).

Pilbeam (1992) points out an obvious problem with the flow oriented model as being that they have nothing to say about international capital movements, although it is known that international capital movements are very large, broad and comprehensive review of the literature on the relationship between real exchange rate volatility and trade shows that there are theoretical models that postulate both positive and negative effects of the exchange rate volatility on trade. However, earlier empirical evidence, using different measures of exchange rate volatility, usually fails to establish statistically significant relationship between exchange rate variability and volume of trade, where such a relationship is established the coefficient of exchange rate volatility is either negative or positive dominate the foreign currency market. Stock oriented models put much stress on the role of the financial (formerly capital) account in the exchange rates determination. In other words, currency fluctuations may influence stock price movements (Pilbeam, 1992).

2.3 Determinants of Export Earnings

Export earnings represent the outcome of an economy's activities in export markets (Sousa, Martinez-Lopez, and Coelho, 2008). Research into the determinants of export earnings has grown considerably during the past few decades. A number of factors have been brought forth as the determinants of export earnings as listed below.

2.3.1 Foreign Exchange Rate fluctuations

Otieno and Mudaki (2011), in their study state that exchange rate movements determine export earnings of the exporting country. In recent times we have witnessed exchange rate fluctuations have increased posing challenges for macro management. There is need to monitor exchange rate fluctuations and to adopt appropriate monetary and fiscal policies to ensure stability in exchange rates and thereby stability in export earnings (Kiptui, 2008).

2.3.2 Inflation

The expected rate of inflation is universally related to export earnings. So, an increase in the general price level erodes the real value of money and induces a portfolio shift. Friedman treats the rate of inflation as the rate of return on real assets just as the rate of interest is the rate of return on financial assets. Therefore, higher inflation rates lead people to shift part of their wealth from money and financial assets to real assets which, in turn, mean that higher inflation rates are associated with lower demand for money. Empirical work on developing countries has been less successful in discovering significant and stable coefficients for inflation elasticity than for income elasticity. It will be interesting to show how inflation affects export earnings (Vong and Chan, 2009).

2.3.3 Foreign Direct Investments

From the study by UNCTAD(2002), FDI is likely to affect export earnings positively. This is true for most levels of export earnings and for every period under consideration. FDI

contributes to the technological upgrading and structural evolution of the export sector, the structure of the sector is an important ingredient of export earnings both at an early stage of development of the export sector and at a later stage. Overall, the analysis points to the conclusion that supply capacity constraints could also be addressed by improving the technological content of the export sector as indicated by the positive influence of FDI contribution to capital formation on export earnings (Fugazza, 2004).

2.3.4. Domestic transport Infrastructure

Export earnings depend critically on the availability of physical infrastructure, ranging from roads and ports to energy and telecommunications. It appears that internal transport costs have a significant impact on export earnings. Internal transport facilitation plays an important role across all regions in explaining export earnings in later periods. Its significance appears to be more marked among better performing exporters. Internal transport infrastructure plays an important role in export sector development (Fugazza, 2004).

2.3.5 Interest Rates

Differences in interest rates in different markets can cause a flow of funds from markets with low interest rates to markets with high interest rates. interest rate differential will only exist if the exchange rate is expected to change in such a way that the advantage of the higher interest rate is offset by the loss of the foreign exchange rate transactions. In an efficient market with no transaction costs, the interest rate differential should be approximately equal to the forward differential. When this holds, the forward rate is said to be at interest rate parity and equilibrium prevails in the money market. Interest parity ensures that the return on a hedged foreign investment will just equal the domestic interest rate on investments of identical risk which means the covered interest differential (Madura, 2007).

2.3.6 Other Factors

Government can limit or even foreclose entry into industries with such controls as licensing requirements and limits on access to raw materials (Porter, 1998). Regulatory pressures constrain heterogeneity by prescribing uniform resource standards, competencies and ways of deploying resources across given industries and by defining what resources are socially acceptable or permissible as inputs. These pressures limit diversity by constraining the range of firms' permitted resource options and by imposing common societal expectations across competing firms about how inputs should be combined and deployed in production. Political processes and legislation influence the environmental regulations with which industries must comply; as with many factors in the general environment, changes can benefit or damage an industry (Dutta et al., 2003).

2.4 Empirical Review

The following subsection presents a review of empirical studies on how exchange rate volatility affects export earnings. The subsection reviewed empirical studies done locally and internationally as well.

2.4.1 International Evidence

Chit et al. (2010) examined the real exports of five emerging East Asian economies among themselves, as well as to thirteen industrialized countries. The paper provides strong evidence that exchange rate fluctuations have had a statistically significant negative impact on the export earnings of those emerging East Asian economies. They also tested the impact of foreign exchange rate fluctuations on third world countries to establish whether a rise in exchange rate fluctuations between the importing country and other exporting countries encouraged bilateral exports between two trading partners. Their findings tend to confirm that not only absolute fluctuations but also relative fluctuations are important for bilateral export flows and earnings of

emerging East Asian economies. They conclude that exchange rate fluctuations in East Asian economies have a significant negative impact on export flows and earnings to the world market.

McKenzie and Brooks (1997) analyzed the effects of exchange rate volatility on German-U.S. bilateral trade flows. They used annual data from 1973 to 1992. Based on their analysis, authors found the relationship between volatility and trade flows positive and statistically significant. Therefore, they believed that the exchange rate volatility may be beneficial rather than impeding to international trade. They emphasized the fact that volatility in the exchange rate was found to have a positive effect on imports and, therefore, on trade as a whole.

Weliwita, Ekanayake and Tsujii (2009) analyzed the effects of real exchange rate volatility on Sri Lanka's exports to six developed countries during the flexible exchange rate regime. The study finds strong evidence to suggest that Sri Lanka's exports to the countries under investigation were adversely affected by the increased volatility in bilateral real exchange rates during the sample period. Arize (2005) analyzes the effects of real exchange rate volatility on the proportions of bilateral exports of nine categories of goods from the United States to seven major industrial countries. The study also concludes that exchange rate uncertainty has a negative effect on U.S. real exports, and that it may have major impact on the allocation of resources.

Lastrapes and Koray (2000) investigated the relation between exchange rate volatility, international trade and the macro economy. They used a model that estimated U.S. multilateral trade over the floating rate period including a moving standard deviation measure of real exchange volatility. The study finds some evidence of a statistically significant relationship between volatility and trade, but the moving average representation of the system suggests that the effects are quantitatively small. The study also finds that exchange rate volatility is influenced by the state of the economy.

A study by Klein (1990) analyzes the effects of exchange rate volatility on the proportions of the bilateral exports of nine categories of goods from the United States to seven major industrial countries using fixed effects framework. The data are monthly series over the period February 1978 to June 1986. The study finds mixed evidence on the effects of exchange rate volatility on exports. In six categories the volatility of real exchange rate significantly affects the volume of exports and in five of these categories the effect is positive. Koray and Lastrapes (1989) investigate the relationship between real exchange rate volatility and bilateral imports from five countries, namely, the United Kingdom, France, Germany, Japan, and Canada, using a vector auto regression model. The findings of the study suggest that the effects of volatility on imports are weak, although permanent shocks to volatility do have a negative impact on imports, and those effects are relatively more important over the flexible rate period.

Bristy (2013) analysed the impact of exchange rate volatility on exports of Bangladesh. This study inspected how exchange rate depreciation and its volatility affect exports of Bangladesh. The study found that exchange rate depreciation has a positive impact on export earnings of Bangladesh. Despite a positive link between export demand and exchange rate depreciation, He found that the trade balance of Bangladesh was deteriorating over the year. He attributes this to too much fluctuation in the exchange rate that offsets the export growth generated by depreciation. He states that international trade depends on interpersonal relationship and because of long run relationship between countries; trade may not response immediately with the change of exchange rate policy. Therefore, the previous year's exchange rate plays a significant role in augmenting exports. He concludes that, a good understanding of economic and business environment of trading partners policies are needed to improve export earnings of Bangladesh.

Cushman (1988) conducts a study to test for real exchange rate volatility effects on U.S. bilateral trade flows using annual data for the period 1974-1983. The study finds evidence for

significant negative effects in five of six import flows, and in two of six U.S. export flows with one export flow showing a significant positive effect. A survey of the early empirical work done on the relationship between exchange rate volatility and trade volumes was presented in IMF (2004). The study did not suggest consistent results, with many of the studies discussed finding little or no support for a negative effect. There are several reasons that might have contributed to the lack of robust findings in these studies, including the fact that there were no conclusive findings amongst the theoretical studies and that the observations included often captured only a relatively short period where exchange rates showed significant variation.

Sukar and Hassan (2001) found a significant and negative relationship between US exports and exchange rate volatility. In contrast, positive effects of exchange rate volatility have also been obtained in several studies. Asseery and Peel (1991) examine the influence of real exchange rate volatility on aggregate export volumes. In this case, the authors used quarterly data from 1972 – 1987, for 5 countries including Australia, Japan, UK, US and (West) Germany. The authors provided evidence of a significant and positive effect of real exchange rate volatility.

Klein (1990) also finds different effects across categories of exports when using a fixed effect framework to test for the effects of exchange rate volatility on nine categories of goods exported from the US to seven major industrialized countries. A major point to make is that all the empirical studies discussed above have assumed that the effect of exchange rate volatility on trade volumes is symmetric. This is potentially too restrictive. It is possible that risk-averse exporters behave differently over different degrees of exchange rate volatility. Few empirical studies have directly incorporated the asymmetric effects of exchange rate volatility on trade volumes into the estimation of models.

2.4.2 Local Evidence

Mwangi et al., 2014 examined the effects of exchange rate volatility on French beans exports in Kenya. In this study, the values of exchange rate volatility of the Kenya shilling against the US dollar were computed using a generalized autoregressive conditional heteroscedasticity model. The results of co-integration analysis using vector autoregressive model indicated the presence of a long run equilibrium relationship between French beans exports and exchange rate volatility. The exchange rate volatility variable had negative long run effects on French beans exports. The responsiveness of French beans export demand in the EU market to exchange rate volatility was negative and elastic. This implied that an increase in the shilling exchange rate volatility leads to a more than proportionate decrease in demand for French beans exports from Kenya in the EU market. As the results indicated, a unit increase in exchange rate volatility in Kenya leads to a two-fold decrease in French beans exports to the European Union. The short-run dynamics of the French beans export demand model were estimated using a Vector Error Correction model and the coefficient on error correction term was found to be -0.77. The negative sign of this coefficient indicated that the direction of correction is towards the long-run equilibrium while the size indicated the speed of adjustment towards the long-run equilibrium. The results of this study indicate that exchange rate volatility is one of the variables that influence performance of French beans exports from Kenya to the European Union market with a negative and elastic short run and long run relationship. They also conclude that there is interdependence between exchange rate stability, macroeconomic stability, institutional reforms and export performance.

Irene (2011) did a study on the relationship between foreign exchange and financial earnings of Airlines in Kenya whose objective was to establish the relationship between foreign exchange and financial earnings of Kenya Airways. She used a case study design. From her findings, there is a negative relationship between foreign exchange risk and financial performance. Currency fluctuations impact on prices hence negative impact on revenues and expenses denominated in foreign currency.

Muriithi (2011) did a study whose objective was to establish the relationship between foreign exchange rate and market earnings for manufacturing companies. The study used a descriptive research design. His study showed that exchange rates had a positive influence on market performance. In addition, Mongeri (2011) did a study on the impact of foreign exchange rates and foreign exchange reserves on the earnings of NSE share index whose objective was to determine the impact of foreign exchange rates and foreign exchange reserves on the earnings of NSE index. The study used a longitudinal study design. Results showed a positive relationship between foreign exchange rates and stock market performance. Differences in foreign exchange rates had a direct impact on stock market performance.

Otieno and Mudaki (2011) did a study on factors influencing real exchange rate and export sector performance in Kenya argue that the real exchange rate has positive effects in the short-run but these effects are found to be statistically insignificant. From their findings, they also conclude that exchange rate fluctuations have not been to levels that harm export growth and thereby earnings, that is, there could exist a threshold level at which exchange rate fluctuations harm exports. The positive relationship between export performance and depreciation of the shilling in real terms in Kenya has raised questions over underlying determinants of demand for the country's exports.

Kiptui (2008) did a study on impact of exchange rate volatility on export earnings from horticulture. His findings showed that foreign earnings are sensitive to foreign exchange rate fluctuations with the effect of the foreign exchange rate fluctuations dominating the financial performance of the export oriented products and crops. Total export earnings from horticultural crops in Kenya historically tend to have an inverse relationship with movements in the exchange rate, although the trend is obscured by changes in volumes from year to year.

2.5 Summary of Literature

A number of studies have been done on the effect of unstable exchange rate on various macroeconomic variables and its impact on the different sectors of the economy. The studies on exchange rate fluctuations and their effect on export earnings have resulted in mixed results. Existing empirical evidence is however mainly based on developed countries whereas a few empirical investigations had been undertaken in African countries like Kenya. There is therefore a gap as far as studying exchange rate volatility versus export earnings. It is evident that it has not been done fully especially in the emerging markets. In addition, most of the studies conducted have been in developed countries and they are not conclusive. This study therefore sought to fill this gap by examining the effects of exchange rate volatility on export earnings with emphasis on Kenya's exports to Uganda.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the various stages and phases that were followed in completing the study. It outlines procedures and techniques used in the collection and processing of data such as the research design, target population, data collection instruments, data collection procedures and finally data analysis.

3.2 Research Design

Burns and Grove (2003) define a research design as a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. Parahoo (1997) describes a research design as a plan that describes how, when and data are to collected and analysed. The study was a descriptive case study and it utilized secondary data. According to Burns and Grove (2003), descriptive research is designed to provide a picture of a situation as it naturally happens. It may be used to justify current practice and make judgment and also to develop theories. The researcher analyzed the earnings of Kenya's exports to Uganda for the past five years while correlating the export earnings with movement of Kenya's exchange rate against the dollar using monthly data for the same period to establish trade patterns.

3.3 Data Collection method

The study utilized secondary data from Kenya National Bureau of Statistics, Kenya Revenue Authority and Central Bank of Kenya for the period of five years (2010-2014) on a monthly basis. The secondary data on Kenya's Exports earnings to Uganda for the past five years on a monthly basis was collected from Kenya National Bureau of Statistics and Kenya Revenue Authority. While data on exchange rate movements, interest rates and inflation for the past five years on a monthly basis was collected from Central Bank of Kenya.

3.4 Data Analysis

Once the data was collected, it was summarized, coded, classified and tabulated. Data classification reduces data into homogeneous attributes that enabled establishment of meaningful relationships between variables. Two statistical methods; correlation analysis and descriptive and inferential analysis were applied to measure and determine the relationship that exists among the collected data. Regression analysis and Correlation analysis tools were used to test the relationship between the variables over time. Variance analysis using standard deviation and spearman's coefficient of correlation were used to understand the relationships between the variables of study. The research findings were presented using tables and graphs as appropriate.

3.4.1 Analytical Model

The following multiple regression model was used.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where Y= Natural Logarithm of Monthly Export earnings to Uganda

X₁ = Exchange Rate Volatility

X₂ = Monthly Inflation

X₃ = Monthly Interest rates

e = Random error term

Exchange Rate Volatility (X_1) was determined using moving sample standard deviation of the exchange rates (Chowdhury, 1993). The formula is as follows:-

$$X_1 = \left(m^{-1} \sum_{i=1}^{i=m} (\ln R_{t+i-1} - \ln R_{t+i-2})^2 \right)^{1/2}$$

Where;

R_t – is the nominal or real effective exchange rate at time t .

m – is the number of periods.

The analytical model above shows how data on the changes in Kenya's monthly Export earnings to Uganda for the past five years on a monthly basis was correlated with changes in exchange rate, monthly inflation and interest rates within the same period so as to establish their relationship and how each of these independent variables affect export earnings.

3.4.2 Test for Significance

The researcher employed tests of significance tools mainly analysis of variance (ANOVA), Coefficient of determination (R^2), Correlation coefficient (R) and the F statistic at 95% confidence level to better understand the different relationships between the variables in the study.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSION

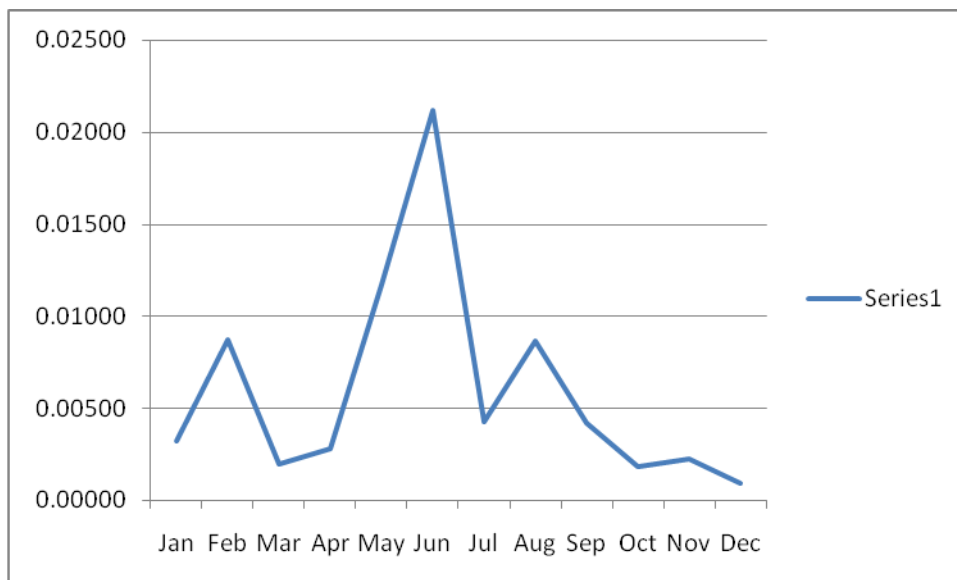
4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research objective and research methodology. It begins by preliminary data findings by giving the descriptive statistics, correlation analysis and regression analysis carried out. The data used in the study was secondary data gathered from Central Bank of Kenya, Kenya National Bureau of Statistics and Kenya Revenue Authority.

4.2 Exchange Rate Volatility

The study sought to establish the effect of exchange rate volatility on export earnings with reference to the mostly used foreign currency the United States Dollar. The findings were as shown below

Figure 4.1: Exchange Volatility Year 2010

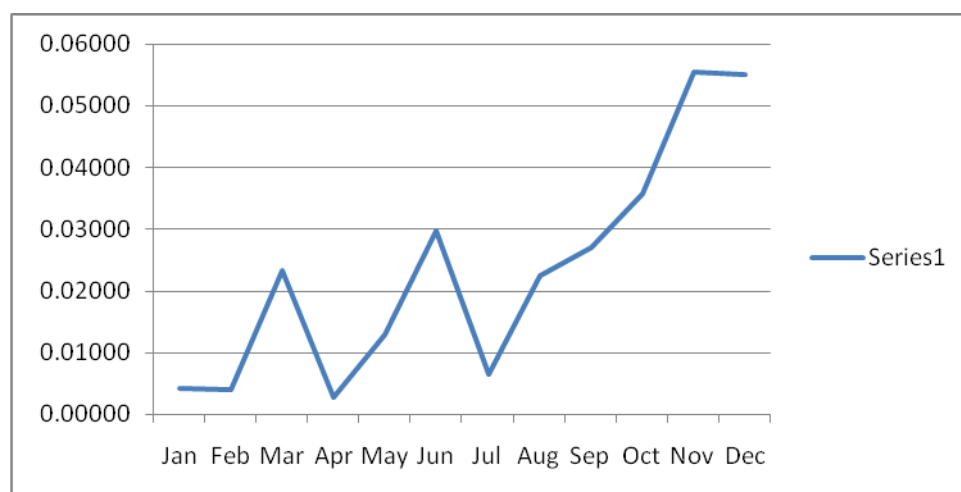


Source: Research Findings (2015)

From the findings presented above, during the year 2010, Kenya shilling exchanged at appreciation rate to the US Dollar in January and depreciated in February. In March to May the Kenyan shilling appreciated with a higher rate in April to May. In June the Kenyan shilling

depreciated at a higher rate before the government intervened to bring it back. In July the Kenyan shilling appreciated again. The exchange rate depreciated slowly the remaining months. This indicates that the government was coming up with fiscal and monetary policies to intervene the shilling.

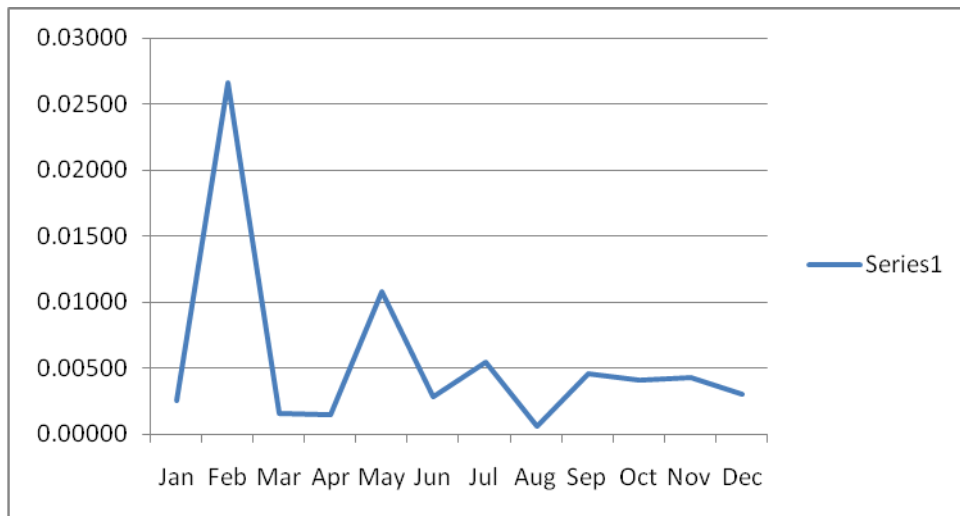
Figure 4.2: Exchange Volatility Year 2011



Source: Research Findings (2015)

For the month of January to February, the exchange rate remained stable with negligible changes before the local currency appreciated to exchange. The currency depreciated in the month of March and June. The year saw great appreciations in the local currency as the Kenyan shilling value was increasing.

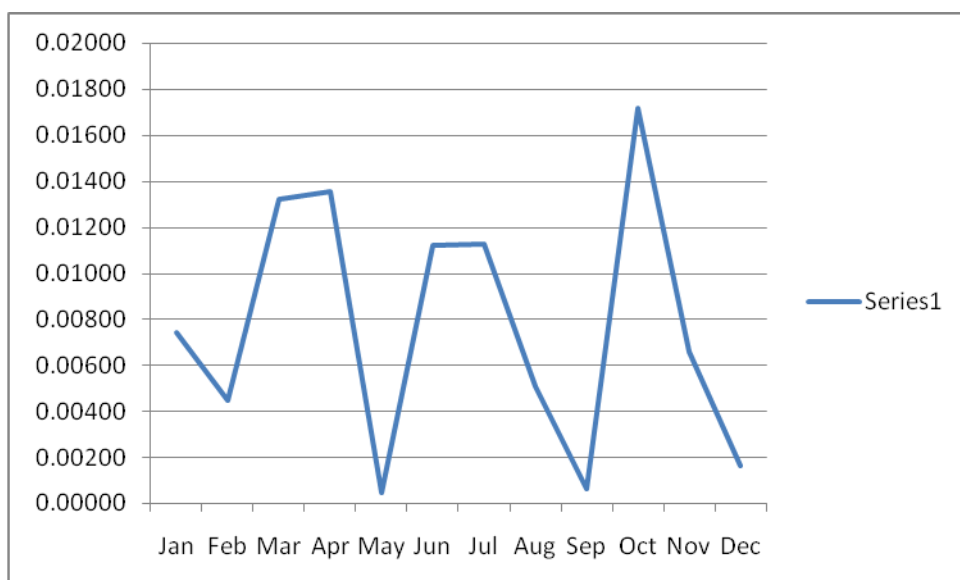
Figure 4.3: Exchange Volatility Year 2012



Source: Research Findings (2015)

For the year 2012, the exchange rates in January after which it started depreciating in March the same year and remained stable in March. It then appreciated slightly for the month of April after the government intervention and kept on fluctuating for the remaining months.

Figure 4.4: Exchange Volatility Year 2013

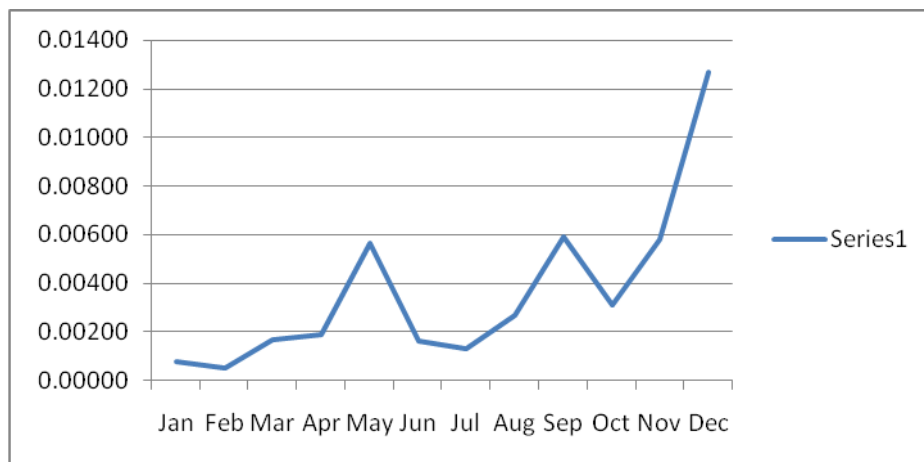


Source: Research Findings (2015)

In 2013 started the currency depreciated in January before appreciating from February to April. However, for the remainder of the year, the local currency kept on depreciating and

appreciating in the months of June, September and May, July, August, November and December.

Figure 4.5: Exchange Volatility Year 2014



Source: Research Findings (2015)

In year 2014, the exchange rate depreciated slightly for January and appreciated for February, March and April and depreciated May. It appreciated after government intervention. Starting October till the end of the year, Kenya Shilling appreciated marginally.

4.3 Descriptive Statistics

The study statistics namely mean, standard deviation, skewness and kurtosis were investigated. Mean is used to locate the center of the relative frequency distribution, kurtosis characterizes the relative peakedness or flatness of a distribution compared with the normal distribution, skewness characterizes the degree of asymmetry of a distribution around its mean while the standard deviation measures the spread of a set of observations.

Table 4.1 Descriptive Statistics

	Mean	Std. Deviation	Skewness		Kurtosis		Min	Max
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	Statistic	Statistic
Monthly Export Earnings	8.5353	.29456	-3.562	.309	19.476	.608	6.81	8.87
Monthly Interest Rate	16.5760	2.12959	.341	.309	-1.020	.608	13.85	20.34
Monthly Inflation	8.0375	4.80645	1.144	.309	.117	.608	3.18	19.72
Monthly Exchange Rate Volatility	.0086	.01204	2.299	.309	6.041	.608	.00	.06

Source: Research Findings (2015)

Table 4.1 above gives the descriptive statistics for the variables used in the study. The analysis of all the variables in this study were generated using SPSS software for the period of five years (2014 to 2015) for the Kenya's export earnings to Uganda. Export earnings had a mean of 8.5353 with a standard deviation of .29456, skewness of -3.562 and Kurtosis value of 19.476. The interest rate had a mean of 16.5760, a standard deviation of 2.12959, skewness value of 0.341 and Kurtosis value of 1.020. Inflation had a mean of 8.0375 with a standard deviation of 4.80645, a skewness value of 1.144 and Kurtosis value of 0.117. Exchange rate Volatility had a mean of 0.0086, the standard deviation of 0.01204, the skewness value of 2.299 and Kurtosis value of 6.041.

4.4 Correlation Analysis

4.4.1 Correlation Coefficients

Correlation coefficients were used to analyse the effects of exchange rate volatility, interest rate and inflation on Kenya's export earnings to Uganda. As per the regression model, the study sought to establish whether there was linearity between the independent and independent variables. Pearson's correlation coefficient was used to analyse the correlations between the different variables used in the study. Pearson's correlation coefficient is a measure of the degree of relationship between two variables.

Table 4.2: Pearson Correlation Coefficients Matrix

Pearson Correlation		Monthly Interest Rate	Monthly Inflation	Monthly Export Earnings	Exchange Rate Volatility
Monthly Interest Rate	Pearson Correlation	1	.223	.106	.025
Monthly Inflation	Pearson Correlation	.223	1	.315*	.600**
Monthly Export Earnings	Pearson Correlation	.106	.315*	1	.244
Exchange Rate Volatility	Pearson Correlation	.025	.600**	.244	1

Source: Research Findings

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

From table 4.2 above, all the independent variables are correlated to the dependent variable. The exchange rate volatility had a correlation coefficient of 24.4% with export earnings. The interest rate had a correlation coefficient of 10.6% with export earnings. The correlation coefficient between inflation and export earnings was 31.5%.

Pearson product-moment correlation attempts to draw a line of best fit through the data of two variables, and the Pearson correlation coefficient was conducted to examine the relationship between variables, r , indicates how far away all these data points are to this line of best fit (how well the data points fit this new model/line of best fit). The Pearson correlation coefficient, r , can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. As cited in Wong and Hiew (2005), the correlation coefficient value (r) range from 0.10 to 0.29 is considered weak, from 0.30 to 0.49 is considered medium and from 0.50 to 1.0 is considered strong. However, according to Field (2005), correlation coefficient should not go beyond 0.8 to avoid multi co-linearity. The correlation coefficient between monthly interest rates and monthly inflation rates was 0.223 meaning that there was some weak co-linearity between the two variables. This was considered as a limitation in the analysis.

The results show that there is weak correlation between interest rate and export earnings with a value of 0.106, exchange volatility and export earnings with a value of 0.244 and medium correlation between inflation and export earnings with a value of 0.315. The correlation coefficients on the main diagonal are always 1.0, because each variable has a perfect positive linear relationship with itself.

4.4.2 Goodness of Fit Statistics

Table 4.3: Goodness of Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.325 ^a	.106	.058	.28590

a. Predictors: (Constant), Volatility, Interest Rate, Inflation

Source: Research Findings (2015)

Coefficient of determination explains the extent to which changes in the dependent variable (export earnings) can be explained by the change in the independent variables (exchange rates volatility, interest rate and inflation), or the percentage of variation in the dependent variable that is explained by the independent variable. From the analysis, the independent variables studied here had a weak negligible relationship with export earnings as explained by a low positive adjusted R^2 of 0.058. This shows that although independent variables have a relationship with export earnings, the relationship is weak. R is the correlation coefficient which shows the relationship between the study variables. From the findings shown in the table above, there was a medium positive relationship between the studies variables as shown by 0.325.

4.4.3 Analysis of Variance (ANOVA)

Table 4.4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.542	3	.181	2.211	.097 ^a
	Residual	4.577	56	.082		
	Total	5.119	59			

a. Predictors: (Constant), Exchange Rate Volatility, Interest Rate, Inflation

b. Dependent Variable: Export Earnings

Source: Research Findings (2015)

The probability value of 0.097 indicates that the regression was significant in predicting the relationship between exchange rate volatility and export earnings in Kenya. An F ratio is calculated to represent the variance between the groups, divided by the variance within the groups. A large F ratio indicates that there is more variability between the groups (caused by the independent variable) than there is within each group, referred to as the error term (Pallat, 2005). The F value of 2.211 indicates that the overall regression model is significant hence it has some explanatory value. This indicates that there is a relationship between the predictor variables interest rate, exchange rate volatility and inflation and export earnings.

4.5 Regression Analysis

The regression analysis is concerned with the distribution of the average value of one random variable as the other variables which need not be random are allowed to take different values. A multivariate regression model was applied. The regression model specifically connects the

average values of dependent variable for various values of the independent variables. A regression equation is in no way a mathematical linking two variables but serves as a pointer to questions to be answered. Basically, the regression analysis is used in two distinct ways; (1) as a means of considering data taking into account any other relevant variables by adjustment of the random variable; and (2) to generate mathematical forms to be used to predict the random variable from the other (independent) variables. The regression model was as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Table 4.5: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.283	.293		28.246	.000
Monthly Interest Rate	.007	.018	.048	.368	.715
Monthly Inflation	.015	.010	.247	1.513	.136
Exchange Rate Volatility	2.304	3.901	.094	.591	.557

a. Dependent Variable: Export Earnings

Source: Research Findings (2015)

The established regression equation after estimation was given as

$$Y = 8.283 + 2.304X_1 + 0.007X_2 + 0.015X_3$$

From the regression equation above, it was established that holding exchange rate volatility (X_1), interest rate (X_2) and inflation (X_3) constant, export earnings would be 8.283. A one unit change in exchange volatility results in 2.304 unit increase in export earnings. A one unit change in interest rate results in a 0.007 unit increase in export earnings. A one unit change in inflation results in a 0.015 unit increase in export earnings.

4.6 Summary of the Findings and Interpretations

Exchange rates play an important role in international trade and investment as they affect the price of internationally traded goods and services. An exchange rate is a price; the price of one currency in terms of another International Monetary Fund (1993). Exchange rate volatility reflect the economy-wide effects of changes in trade flows, world commodity prices, and capital flows between economies that are highly integrated, both with each other and with global goods, services, and financial markets. Exchange rate volatility therefore affects consumers and producers of internationally traded goods and services and firms with assets and liabilities denominated in foreign currencies. Since exchange rates are shared macroeconomic variables, such fluctuations for any internationally integrated economy have counterpart effects in its trading partners.

Exchange rates deal with the value of one currency in terms of another. Devaluation in the currency lowers one currency's value in terms of the other. For this study, it was established that the prevailing exchange rates fluctuated significantly during the study period. In year 2014, the exchange rate depreciated slightly for January and appreciated for February, March and April and depreciated May. It appreciated after government intervention. Starting October till the end of the year, Kenya Shilling appreciated marginally top. For the year 2012, the exchange rates appreciated in January after which it again started depreciating in March the same year and remained stable in March. It then appreciated slightly for the month of April after the government intervention and kept on fluctuating for the remaining months. The year 2013 saw the local currency depreciate in January before appreciating from February to April. However, for the remainder of the year, the local currency kept on depreciating and appreciating.

In the year 2011, the month of January to February, the exchange rate remained stable with negligible changes before the local currency appreciated to exchange. The currency depreciated in the month of March and June. The year saw great appreciations in the local currency as the

Kenyan shilling value was increasing. During the year 2010, Kenya shilling exchanged at appreciation rate to the Uganda in January and depreciated in February. In March to May the Kenyan shilling appreciated with a higher rate in April to May. In June the Kenyan shilling depreciated at a higher rate before the government intervened to bring it back. In July the Kenyan shilling appreciated again. The exchange rate depreciated slowly the remaining months. This indicates the government was coming up with fiscal and monetary policies to intervene the shilling.

The findings from the Pearson correlation coefficient shows that inflation affects the export earnings as they are positively related to each other. This indicates that as inflation rates rises it erodes purchasing power of the investors hence decrease in investment. The findings concur with literature review in that higher inflation rates lead people to shift part of their wealth from money and financial assets to real assets which, in turn, mean that higher inflation rates are associated with lower demand for money (Vong and Chan, 2009).

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study and makes conclusions based on the study results. Policy recommendations, limitations and recommendations for further research are also presented in this chapter. It also presents findings from the study in comparison to what other researchers have concluded as indicated in the literature review.

5.2 Summary

The objective of the study was to establish the effect of exchange rate volatility on export earnings, a case of Kenya's exports to Uganda. To carry out this study, a linear regression model was used consisting of the export earnings function as the dependent variable, while exchange rate volatility, inflation and interest rate as independent variables. The study used secondary data collected from Central Bank of Kenya, Kenya National Bureau of Statistics and Kenya Revenue Authority. Descriptive statistics was employed in the study and use to give detailed information about each of the variables under study.

The research findings indicate that exchange rate volatility, interest rate and inflation have low positive relationship with export earnings as explained by a low positive adjusted R^2 of 0.058. This shows that although foreign exchange rates, inflation and interest rate have a relationship with export earnings, the relationship is weak. These findings are consistent with those established by Vong and Chan (2009) that higher inflation rates lead people to shift part of their wealth from money and financial assets to real assets which, in turn, mean that higher inflation rates are associated with lower demand for money.

The regression results show that when exchange rate volatility, interest rate and inflation have zero values then the export earnings will be 8.283. It is also established that a unit increase in exchange rate volatility leads to a 2.304 unit increase in export earnings; a unit increase in interest rate leads to a 0.007 increase in export earnings while a unit increase in inflation leads to a 0.015 unit increase in export earnings. The implication of these findings is that exchange rate volatility is important determinant of a country's export earnings. Otieno and Mudaki (2011) and Bristy (2013) in their study concluded that the relationship between export earnings and foreign exchange rate fluctuations are positive. In their studies they conclude that the exchange rate is an important determinant of a countries export earnings. These findings are consistent with those made in this study.

5.3 Conclusion and Recommendations

This study examined the effects exchange rate volatility on export earnings from the period of 2010 to 2014. In this study, the dependent variable was export earnings whereas exchange rate volatility, interest rates and inflation were the independent variables. The study found that the independent variables were determinants of Kenya's export earnings to Uganda. From this, it is therefore necessary for the government to ensure adequate monitoring of the exchange rate and ensure that the rate is stable, because its stability will in turn enhance or increase economic growth. This will further attract foreign investors and their investments will be helpful for economic development of the country. The monetary authorities should play a critical role in creating an enabling environment for growth. The determination of the optimal lending rate should reflect the overall internal rate of returns in the productive sector with due attention to market fundamentals. This could be achieved along with appropriate monetary growth targeting that would not destabilize the price formation process.

The Central Bank should be given some instrument autonomy. Effective monetary targeting and accommodating monetary policies should be designed and implemented as the needs arise. There is also need for the government to ensure price stability, as this help to reduce the pressure on general price level. High inflation rate in an economy would hamper economic growth. This will in turn produce enough exportable products, which can generate some foreign currency that will beef up the supply side of foreign exchange market and hence assist the economy to grow.

5.4 Limitations of the Study

The study was faced with some limitations. The study did not incorporate all the factors that affect Kenya's export earnings to Uganda. It only concentrated on exchange rate volatility, interest rates and inflation. This was due to limitations in data.

Time constraints and gathering of secondary information were also encountered in the study. This was because the data was not readily available to the public and therefore the researcher had to consult with the necessary authorities for permission to access such information.

The period for the study was five years from 2014 – 2015. A longer period would have captured different economic conditions such as periods of recession and even boom times. This would have improved the research problem.

In addition, some of the variables were not provided directly and had to be computed using formulae by other researchers for instance exchange rate volatility. The variables interest rate and inflation rate had some degree of co-linearity and although it was weak, it was considered as a limitation in the analysis.

5.5 Recommendations for Further Research

The study sought to determine effect of exchange rate volatility on export earnings. The study recommends that an in-depth study should be carried out on other variables that affect export earnings apart from those considered in the model specification. The study recommends other studies to build on the study findings by incorporating the omitted variables.

This study covered a period of five (5) years. A similar study should be conducted for a longer period for instance ten years to establish the behavior of Kenya's export earnings to Uganda and exchange rate volatility.

This study also focused on the US Dollar as the exchange rate currency. A further study should be conducted on other foreign currencies that form markets for Kenya's exports.

This study was carried out on export earnings to Uganda. Further research should be done on export earnings to other parts of the East African Community.

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