The Effect of Exchange Rate Fluctuations on Export- Oriented Businesses

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Abstract

This can lead to changes in how people do business that affect other countries. Different currencies have different values, which affects how managers decide on strategies, how competitive they are, and how much money their countries make.The information that was gathered was organized, analyzed, understood, and shown in a way that is clear, exact, and straightforward. Using data from Kenya's flower business, this study looked at how changes in foreign exchange rates affect the money made from exports. Descriptive statistics were used to number and code this data. The study found that Kenya's flower industry's sales gains fluctuate, which may be explained by fluctuations in foreign currency rates, inflation rates, and loan rates. Total export revenues from the flower sector are the dependent variable, whereas interest, inflation, and the exchange rate are the independent variables that positively correlate with it. To assist growers in coping with significant fluctuations in currency value, the government may establish a flower export stabilization mechanism.

Keyword: Foreign Exchange, Exports Earnings, Foreign Business, Exchange Rate, Enterprises

1. INTRODUCTION

When doing business with other countries, one of the most important things that can change is the exchange rate. This can lead to changes in how people do business that affect other countries. Different currencies have different values, which affects how managers decide on strategies, how competitive they are, and how much money their countries make. Egypt's finances were badly hurt by many things that happened from 2017 to 2022 and in other years as well. The country wants to use market-based policies to help it get out of its current financial slump (Chete et al.). It is taking steps to both open up and close down foreign direct investment (FDI).

More and more research is being done on exchange rate (XR) exposure. It shows that this exposure is still a big source of business risk, even though it can be lessened or removed by using financial and practical hedging methods. However, most of what we know about XR exposure comes from studies that use groups that are mostly made up of big companies that trade internationally. The other thing that all of these studies have in common is that they don't check to see if the expected risks improve or hurt performance. A group of SMEs, or small and medium-sized enterprises, in theUK are used as examples in this paper to talk about these problems.

We guess how much they are exposed to the XR and then come up with a new way to figure out whether the exposures are improving or hurting their performance. As far as we know, this is the first study to quantitatively measure SMEs' XR exposures and categories them as either beneficial or detrimental to business success. The British pound has maintained a rigid, free-floating XR system since the Bank of England was granted actual independence over monetary policy in 1997. Because of this, the UK sample we generate is very relevant for XR exposure studies. Also crucial to the UK economy are SMEs, or small and medium-sized enterprises. They account for 56% of total value added and 54% of gross value added, respectivelyjobs, and 52% of sales. Small and medium-sized businesses are also different from big businesses in a number of important ways. Because they are small and don't have easy access to people and money, they are more likely to be hurt by market flaws like unequal knowledge and practical and financial limits. Like, Mulligan (1997) says that the costs of doing business with small businesses are too high. Small and medium-sized businesses (SMEs) are likely to have money problems, as Titman and Wessels (1988) point out. Whited (1992) and Fazzari and Peterson (1993) show that small businesses are more likely than large businesses to be affected by financial problems because they can't get enough money from within the business and getting money from outside the business costs a lot.

SMEs also have very different ways of making decisions and who owns them compared to big companies with lots of owners. Pennings and Garcia (2004) demonstrate that in SMEs, those in chargewho are in charge of many different business functions make decisions, rather than managers who are only in charge of a few specific functions. This might change XR exposure if, rather than in isolated incidents, corporate and financial choices are coordinated based on risk perceptioncompanies.

SMEs also tend to have a small group of owners, which means that their agency costs are affected by a number of different factors. These costs are important in determining how much risk they are willing to take. Lastly, there is some circumstantial proof that SMEs are more likely to be affected by XR risk. We suggest that MSMEs, or small and medium-sized enterprises, areespecially sensitive to the unpredictability and competitive pressures that changes in the XR bring because of their size, how they are owned, Given the little resources available to them, both human and monetary.

2. LITERATURE REVIEW

Abdelraouf, Mohamed & Muharram, Farid. (2025). This research looks at how changes in the exchange rate affected doing business with other countries in Egypt from 2005 to 2022. The study looks at how Inflation, GDP, export quantities, exchange rates, and fixed effects models all show a correlation with one another. Results show that international business agreements are positively affected by changes in the currency rate, which is a noteworthy finding. At the 99% confidence level, fixed effect models reveal that GDP, inflation, and the exchange rate all significantly impact the quantity of exports. Values of adjusted R-squared ranging from 0.66 to 0.75show that changes in exchange rates are a big reason for changes in export volumes. These results show how important stable exchange rates are for Egypt's foreign trade. The study adds to the body of research by using real-world data from a growing economy. It can help lawmakers and companies make better decisions about risk management and strategy planning in international trade.

Liu, Shuang. (2024). A lot of the company's operations are sensitive to fluctuations in the currency rate. Typically, changes in the value of one currency relative to another may impact theterms of foreign trade. People around the world pay a lot of attention to China and Japan's trade relationships with other countries. The point of this piece is to talk about how changes in the value of the yen affect China's and Japan's businesses that buy and sell goods. We will look at how changes in the exchange rate affect businesses in both countries in terms of income, competitiveness, costs, and demand. We will then talk about how the businesses in each country responded. strategies that will help businesses keep growing even when the value of the currency changes.

OLUWATOYIN, OLUITAN, & Abolaji, Anifowose & ISAAC, AROKOYO, (2021). The study examines the impact of changes in the value ofsome African countries' currencies affect their export earnings, focusing on South Africa and Tunisia. These extra numbers came from the World Bank Data Atlas and show the amount of money in circulation, the exchange rate, the inflation rate, the export revenue, and the money supply for the years 1990 to 2019. Augmented Dickey Fuller (ADF) was used to do the unit root tests. The GMM method is used to estimate the factors. 56% of the change in export income can be attributed to the money supply (MS), the exchange rate (EXR), and the inflation rate (INFR). The inflation rate (INFR) has a good effect on the export earnings of the chosen countries, but it is not statistically significant. The money supply (MS) and exchange rate (EXR), Conversely, possess a robust, favorable, and statistically significanteffect on the export revenues of the chosen African countries.

Mehtiyev, Jalil & Magda, Robert & Vasa, Laszlo. (2021). As there is more foreign trade, there are more rules and regulations that could make it harder to trade. One of these problems is the fluctuating exchange rate, which has both direct and secondary effects on trade. When currencies' exchange rates change, it can affect both the trade that a country does and its trade balance. One important thing that the study shows is that changes in monetary policy can have a big effect on trade over the long term. Changes in the number of imports happen over time, while changes in the number of exports happen right away. The study looks at the link between inflation and deflation and makes it clear how they affect the trade balance. The weakening of Azerbaijan's currency is used as an example of how currency fluctuations can hurt trade, which is looked at in more detail in this research. Additionally, association and multiple regression models using data from the OECD and World Bank are used to study the links between inflation and devaluation and how they affect a country's import level. The data show that the import-export trade balance is very sensitive to fluctuations in the currency rate.Because of this, the exchange rate is a non-trade barrier that impacts trade between countries.

Belghitar, Yacine & Clark, Eph & Dropsy, Vincent & Mefteh-Wali, Salma. (2021). A new method is presented in this paper that considers how exchange rate (XR) exposures change over time and sorts them sort them into those that increase returns on investment and those that decrease them. This is carried out in order to study how changes in XR affect the performance of SMEs in the UK. It demonstrates that XR developments significantly hinder the performance of SMEs across all sectors and even within specific SMEs themselves. Aside from the euro, this is true for any change in the value of the pound relative to the dollar, whether it's an increase or fall. When it comes to the Euro, the dangers for businesses are often not substantial and much less. Also, at the corporate level, there is a more equitable distribution between those who boost performance and those that lower it.It is also looked at

how firms that focus on exports and firms that focus on local markets are affected by changes in the value of the dollar. The economic implications of our findings for Brexit are important.

3. RESEARCH METHODOLOGY

Research Design

Research design, or the methods and steps used to answer the research question or problem, is how the study is planned and carried out (McMillan and Schumacher, 1984). Descriptive research was used to look into the relationships between factors, which is also called connection because the researchers tried to figure out how the facts, they gathered related to each other to learn more about the situation.

Data Collection

This research used information that was already out there. It came Throughout a ten-year period (2008) from HCDA, KNBS, KFC, EPC, and CBK. We can get updates on the foreign currency market from the CBK.rate, and the KNBS will give us information on inflation. Fresh Cut Flower export earnings will be gathered by HCDA from 58 approved firms (see Appendix 1) and export statistics will be gathered from KFC and EPC.

Data Analysis

The gathered information will be displayed, analyzed, handled, and comprehended in a manner that makes it easy to understand and follow. To organize and categories this data, descriptive statistics will be used. The social science statistical program SPSS 22.0 will be used toexplain, sort, and analyse the data that has been gathered.

4. DATA ANALYSIS

How Well Flower Exports Did

In Table 1, you can see how well the factors used in this study worked for flower export.

Table 1: How Well Flower Exports Did

Year	N	Aggregate export earnings of the flower industry (Quarterly - KSh)	Quarterly Foreign Exchange Rate (fluctuations)	Quarterly Inflation rate	Quarterly interest rates	Valid N
2005	40	2,221,736,783	.2577	.4645	.1685	
2006	40	3,347,394,589	.2799	.4799	.1274	
2007	40	956,790,322	.3279	.4803	.1834	
2008	40	821,495,853	.4576	.5298	.2284	
2009	40	1,897,986,749	.5278	.5699	.3394	
2010	40	6,288,883,494	.5568	.5388	.4638	
2011	40	8,659,865,897	.7732	.5037	.4839	40
2012	40	9,975,932,551	.8021	.4209	.5493	
2013	40	11,853,878,003	.8189	.4102	.5990	
2014	40	12,557,897,850	.8038	.3287	.6383	

According to records, the flower business made an average of KSh 2,221,736,783 in exports in 2005 and as much as KSh 12,557,897,850 in 2014. According to the study, the total amount of money made from exports went up slowly in 2005 and 2006, but then it went down in 2007 and 2008. Because of this, it was clear that the political unrest in the country from 2007 to 2008 had an effect on the flower industry's overall export earnings. After that, 26 numbers were seen to go up from 2009 to 2014. The quarterly change in the foreign exchange rate was 0.2577 in 2005 and kept going up until it reached 0.8038 in 2014. Over the first five years of study, the quarterly inflation rate slowly went up, but from 2010 to 2014, it started to go down. It was also seen that the quarterly interest rate went up gradually from 0.1685 in 2005 to 0.6383 in 2014.

Statistics That Describe

This study's factors are shown in Table 2 below, along with some data that describe them. For this study, SPSS 22.0 software was used to do a detailed analysis of all the factors for the flower business in Kenya over the course of ten years, from 2005 to 2014.

Table 2: Statistics That Describe

Statements	N	Mean	Std. Dev.
Log of total export earnings of flower industry	40	4.253	.874
Quarterly foreign Exchange Rate fluctuation	40	4.045	.541
Quarterly Inflation Rate	40	3.985	.461
Quarterly interest rate	40	3.487	.823

It was found that the log of the flower industry's total export earnings had a mean value of 4.253 with a standard deviation of 0.874. On a quarterly basis, the average change in the exchange rate was 4.045, with a standard deviation of 0.541. Every three months, inflation changed an average of 3.985 percent, with a standard deviation of 0.461 percent. With a standard deviation of 0.823, the average quarterly interest rate change was 3.487.

Analysis of Correlation

One way to look at how the Use correlation variables to determine the impact of inflation, interest rates, and currency rates on Kenya's flower export revenues. The purpose of this research was to determine if the independent variable followed a linear pattern in relation to the other twenty-seven independent variables. The regression model relies on this assumption. We determined the strength of the relationship between the independent and dependent variables by using the Pearson correlation.were linked.

Table 3: Coefficients of correlation

	Log of total export earnings	Quarterly foreign Exchange Rate fluctuation	Quarterly Inflation Rate	Quarterly interest rate
Log of total export earnings	1.000			
Quarterly foreign Exchange Rate fluctuation	.603	1.000		
Quarterly Inflation Rate	-.121	.273	1.000	
Quarterly interest rate	.639	.532	.478	1.000

All of the independent variables have a correlation with the dependent variable, according to the SPSS analysis. Table 3 shows that there was a 60.3% connection between the overall export revenues of the flower sector and the foreign exchange rate. In the floral business, total export profits were inversely

correlated with monthly inflation rates (-12.1%) and positively correlated with monthly interest rates (63.9%).

Stats on how well things fit

Rates of interest, inflation, and currency exchange all tracked monthlyare shown in Table 3. This shows how strongly the link between flower export earnings and these factors is.

Table 4: How well the exercise measure works

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.907a	0.823	0.796	0.1774832

When we change the independent factors, we can see how the dependent variable changes. This is shown by the changed coefficient of determination (R squared). We can see from Table 4 that the R squared was 0.796 after adjustments. What this implies is that changes in interest rates, inflation, and currency exchange rates every three monthsrates can explain 79.6% of changes in Kenya's flower industry's total export earnings, with a 95% confidence interval. Other things that aren't included in the model explain 20.4% of the changes in the flower industry's overall export earnings. There was a 90.7% connection between the two things, which is known as R. That meant Interest, inflation, and the study's other variables were all positively correlated with one anotherforeign exchange rate.

Table 5: A Look at the Variance

Model	Sum of squares	Df.	Mean Square	F	Sig.
Regression	.213	3	.071	14.200	.000a
Residual	.180	36	.005		
Total	.393	39			

A value of 14.200 was found for the F Test, which is higher than the crucial value of F. The overall significance was well-explained by the regression, as seen by this. With a value of 0.000 being lower than $\alpha = 0.05$, the regression model successfully predicted the relationship between the overall export profits of the flower sector and the elements that served as predictors. Probability has a far larger role in explaining the regression model's findingsoutside of the model, as there is a very small chance that they are due to the real link in the model.

Model for Regression

It was possible to tell determined, by regression analysis, if there was a statistically significant link between the independent and dependent elements. Finding out how the dependent variable changes in relation to the independent factors is the goal of regression analysis. Examining the impact of interest, inflation, and the currency rate on Kenya's flower export revenues, theresearcher used multiple regression 29 analysis. The equation below shows how the model for the regression analysis was written:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

Table 6: Coefficients of regression

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
1 (Constant)	2.316	0.123		7.367	0.000
Quarterly foreign exchange rate	0.398	0.028	0.158	3.357	0.001
Quarterly inflation rate	-.565	.022	-.329	-4.039	.000
Quarterly interest rate	0.836	0.030	0.105	1.194	0.002

a) The dependent variable is the log of the flower industry's total export earnings.

b) Predictors: all four rates of interest and inflation (nominal, quarterly, and annualized)foreign exchange rate

These are the regression values that were used to make the multiple regression models, which can be seen above in Table 6. As you can see from the table below, the regression data show that the models for multiple linear regression are now complete;

$Y = 2.316 + 0.398 X_1 - 0.565 X_2 + 0.836 X_3 + 0.123$

Where:

X_1 = Changes in the exchange rate every three months

X_2 = Quarterly rate of inflation

X_3 = Quarterly rate of interest

Based on Every independent variable in the multiple linear regression models has a positive coefficient. Log of total export revenues from the flower business is the dependent variable seen in the graph above is positively related to the independent factors (quarterly interest rate, quarterly interest rate, and quarterly foreign exchange rate). Based on what was found, the overall export revenues of the flower sector increase by 0.398 units for every one-unit change in the quarterly foreign exchange rate. For every one-unit change in the quarterly inflation rate, there is a 0.565-unit decline in the log of the total export profits of the flower business. With a one-unit increase to the quarterly interest rate, theflower industry's overall export gains go up by 0.836 units.

The t-test helps figure out how important each variable in the model is compared to the others. If we want to find useful indicators, we look for t numbers that are well below -0.5 or well above +0.5. According to records, the flower business made an average of KSh 2,221,736,783 in exports in 2005 and as much as KSh 12,557,897,850 in 2014. According to the study, the total amount of money earned from exports went up slowly in 2005 and 2006, but then it went down in 2007 and 2008. If this was true, then the political unrest in the country from 2007 to the quarterly export revenues of the flower business were impacted by 2008. Afterwards, it became clear that prices increased between 2009 and 2014. The 2005 foreign exchange rate increased to 0.8038 after a steady climb of 0.2577 every three months. During the first five years, the quarterly inflation rate increased graduallyf the study, but it started going down in 2010 and continued to go down until 2014. It was also seen that the quarterly interest rate went up gradually from 0.1685 in 2005 to 0.6383 in 2014.

From Table 3, we can see that changes in the foreign exchange rate were linked to the flower industry's total export gains by 60.3%. There was a negative 12.1% correlation between quarterly inflation rates and total export earnings and a positive 63.9% correlation between quarterly interest percentages and overall revenue from exports in the flower business.

5. CONCLUSION

Using monthly the research examined the impact of changes in the foreign exchange rate on Kenya's overall export revenues using time series data from 2005 to 2014. The flower industry's total export profits logarithm used as the dependent variable in this research. Three separate variables were considered: interest, inflation, and the value of the currency exchange rate. It was shown that the independent variables significantly affected the total amount of money the flower business made from exports. Supply capacity has had a big impact on the export performance of economies that have been doing well, but this doesn't have as much of an impact on emerging countries like Kenya. Kenya's flower industry has been struggling because of unstable politics, a weak political and financial environment, and bad infrastructure. This has hurt the country's ability to sell flowers. This matched what Were et al. (2002) found when they looked at examines the impact of the currency rate on Kenya's export performance andbig impact on Kenya's agricultural export performance.

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