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Effects of International Fuel Prices on Performance of Floriculture Business in Kenya: A Case of Flower Farms in Naivasha

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Abstract:

In the past few years, fluctuations in fuel prices have been common and have greatly affected performance of various segments of the economy especially in transport. Cut flower industry in Kenya relies heavily on export markets in Europe and America. Changes in fuel prices have also been very common in the recent past. The general objective of the research was to establish the effects of the fuel prices on performance of floriculture business in Kenya. The study was conducted among flower firms in Naivasha District in Nakuru County, Kenya. The study used a descriptive research design where the study population composed of finance and marketing managers of 32 flower farms in Naivasha District. All the members of the target population selected to participate in the study through census design. The study utilized both primary and secondary data. Secondary data was obtained from banks and oil firms. Primary data, on the other hand, was collected using the questionnaire designed by the researcher based on the study objectives. Quantitative data was analyzed using descriptive statistics such as percentages and frequencies. Further statistical inferences and hypothesis testing was done using spearman correlation analysis. The study revealed that fuel price fluctuations were a common phenomena in the global market place. Fluctuations in fuel prices significantly affected the performance of flower industry in Kenya. The cost of production, cost of transport, and the cost of other commodities increased in response to fuel price increase.

Keywords: Fuel Price Fluctuation, performance, floriculture industry

1. Introduction

In the past few years, the global financial markets have been characterized by a series of drastic and unfavorable changes. The current crisis originated from the real estate market, initially triggered by the sub-prime mortgage crisis in the US in mid-2007. The crisis transformed itself into a global financial crisis by September 2008 hitting major developed countries in particular. The crisis inflicted severe effects on the world's economy in general. The credit crunch from the 2007/08 financial crisis led to reductions in consumption, investment and trade, fuelled by uncertainty and falling consumer confidence (UNDP, 2009). The crisis, also led to the contraction of gross domestic product (GDP), declining global demand and commodity prices, the fall in stock markets, depreciation of most African currencies, declining rates of economic growth, global layoffs and activity shutdowns and worsening of fiscal and current account balances in most African countries (AfDB, 2009d).

Similarly, fluctuations in fuel prices have had their toll on the economy. Over the last forty years, one of the most difficult transportation policy questions has been the issue of the price of oil and its associated impact on transportation systems (TEMS, 2008). High oil prices have an impact on the rate of growth of the global economy, as oil has such a significant role as a factor of production in agriculture, basic raw materials, manufactured products and service industries. In Kenya for instance, for agriculture, oil impacts as much as 20-50 percent of total costs, for raw material industries 20-30 percent, for manufacturing industries 10-20 percent, and for service industries 5-10 percent. Floriculture industry is therefore highly affected. However, while increased oil prices slow the growth, and in the short term may limit or cut production.

According to Bolton (2013), in Kenya, fuel prices have increased steadily since their recent lows in early 2009. Petrol prices reached a record monthly high in May 2010, set new records in December 2010 and in each of the following five months and broke these again

in March and April 2012. Diesel prices exceeded their summer 2008 highs in January 2011 and also set new highs in each of the next four months. New records were set in February, March and April 2012. Prices fell by 10-11 pence per litre over summer, approached the earlier highs in early autumn 2012 but fell back somewhat in winter.

The price increase since late 2010 have been as a consequence of rising oil prices, the weaker pound and increases in duty and VAT. Higher prices since early 2011 were caused by higher oil prices following the political unrest in the Middle East and particularly the revolt in Libya. Increasing tension between Iran and the West pushed up oil prices again in early 2012. The threat of a fuel strike led to panic buying in some places in late March/early April and coincided with the peak in prices, but prices also peaked around this time across Europe. Oil prices fell by around \$35 per barrel between April and June, in large part due to deteriorating Eurozone economic prospects and the knock on impact on the world economy. Since June oil prices have recovered and most of the earlier cuts in raw fuel prices have been reversed.

According to Enzo (2008) exports become more expensive when fuel prices rise. The effects on trade are different for oil-producing countries, especially those countries in which oil comprises the majority of exports. If an oil-exporting country receives US Dollars for their oil, and chooses to keep the Dollars as a "reserve" without exchanging or converting the Dollars back into local currency, they can effectively enhance the initial benefit by keeping the Dollars and using them to import goods in the future at better prices.

1.1. Statement of the Problem

The flower industry in Kenya is heavily dominated by high fuel consumption in powering mechanized farm machines, and transportation of cut flowers largely to European countries. The industry is a major source of foreign exchange in the county. Locally, the floriculture business has been growing steadily in production volumes and revenues until recently in 2014 where the tax exemption for cut flower export to the European countries expired. Many industry players have since expressed concerns over the taxation policy and lack of competitiveness to Kenyan cut flowers due to increased cost. For the industry to remain competitive there is need to evaluate all the cost elements of the cut flower industry and to determine the effects of each on the industry performance and remedies. This study therefore sought to determine the effects of international fuel prices on performance of the Kenyan cut flower industry.

1.2. Purpose of the Study

The purpose of the study was to establish the effects of international fuel prices on performance of floriculture business in Kenya.

1.3. Hypothesis

- H_0 : International fuel prices do not affect the performance of flower firms in Naivasha.
- H_1 : International fuel prices affect the performance of flower firms in Naivasha.

1.4. Significance of the study

The flower industry is a main contributor to the Kenya's GDP due to its employment capacity and the returns from the export earnings. Therefore the findings of this study would be beneficial to the government in understanding the challenges facing the flower industry and in developing strategies and policies to cushion them against global financial crises. The findings would also assist the flower firms' management in understanding the challenges facing the industry and in developing cost cutting strategies. Naivasha alone accounts for 70% of the flower exports in Kenya (WWF, 2012) therefore it is a key area in Kenya's Business environment.

2. Methodology

2.1. Research Design

The study used a descriptive survey research design to explore the effects of fuel prices on the performance of flower industry in Kenya. Descriptive survey was chosen for the study because it allows the researcher to study phenomena that do not allow for manipulation of variables (Kombo & Tromp, 2006)

2.2. Target Population

The study was carried out in Naivasha District in Nakuru County. Naivasha accounts for 70% of the flower exports in Kenya (WWF, 2012). The target population was all the workers of the flower firms in Naivasha. Currently there are 32 flower firms growing and exporting flowers in Naivasha. The total employment population for all the flower farms stood at 30,000 on average according to Kenya Flower Council (2013). Therefore the target population for the study was 30,000 workers from the 32 flower farms in Naivasha.

2.3. Sampling

The study purposively selected marketing and finance managers from all the flower firms targeted. Therefore a sample size of 64 staff comprising of 32 finance managers and 32 marketing managers of flower farms in Naivasha was selected to participate.

2.4. Data Collection and Analysis

The study utilized both primary and secondary data. Secondary data was obtained from document analysis of accessible financial performance reports for the flower farms. Primary data on the other hand was collected using the questionnaire designed by the researcher based on the study objectives. Quantitative data was analyzed using descriptive statistics such as means, mode, standard deviation, percentages and frequencies. Statistical inferences were then drawn using spearman correlation analysis.

3. Findings

3.1. Changes in Fuel Prices

On average, fuel prices were lowest in 2008 at USD45 per barrel before shooting up to USD 70 in 2009, USD 85 in 2010 and USD 110 in 2010. This implies an upward trend in fuel prices for the four consecutive years.

3.2. Effects of International Fuel Prices on the Performance of Flower Firms

The study in this section sought to determine how international fuel prices affected the performance of flower firms in Naivasha. First, managers were asked to provide information on the trends in fuel prices for fuels used in their companies for the past three years. All the managers (100%) indicated that the prices of all fuel products used in their companies had gone up in the past three years.

3.3. Sales Trends during Periods of Fuel Price Changes

The changes in fuel prices globally were continuously on an upward trend and when they happened, 82.6% of the managers indicated that they led to decline in sales, while 10.9% cited that fuel prices never affected their sales. 6.5% on the other hand indicated that their sales increased regardless of increase in fuel prices.

3.4. Trends in Profitability during Fuel Price Increases

It emerged that when fuel prices went up, profitability declined, as indicated by 97.8% of the managers who participated in the study. Fuel costs come as an additional cost to the business. While prices change in different magnitudes across the globe, competition is also inevitable. Therefore, increase in fuel prices does not automatically translate to increase in the prices as some of the costs are absorbed by the company to cushion themselves from the effects of competition.

3.5. How Fuel prices affect performance of Flower firms

From the findings, fuel prices increased the cost of production which led to decline in profit margins. This was indicated by 47.8% of the managers who agreed and an equal proportion who strongly agreed. Increase in fuel prices increased the cost of transport which affected the sales volumes and profitability of flower business in Naivasha as identified by 43.4% of the managers who agreed and 37.0% who strongly agreed. Irregular pricing of fuel in oil producing countries and fuel consuming countries increases competition for cut flower business which affects profitability according to 43.4% of managers who agreed and 26.1% who strongly agreed, 19.6% were not sure. Fuel prices also affects the prices of other essential commodities whose prices simultaneously go up therefore reducing the purchasing power of buyers. As a result, sales volumes of cut flowers are affected this was cited by 52.2% of the managers who strongly agreed and 39.1% who agreed, a few 8.7% were not sure of this. Managers also cited that flowers were tertiary products therefore when their prices went up consumption sharply declined with ease, this view was held by 47.8% of the managers who agreed and 43.4% who strongly agreed, 4.4% were not sure while a similar number disagreed.

Weighted average on the factors revealed increase in prices of other essential commodities as fuel prices went up, translated to the highest impact on the sales performance cut flowers by reducing the purchasing power of buyers as shown by $\bar{x} = 4.43$, $\sigma = 0.65$. The second way in which fuel prices affected the flower industry was through increase in the cost of production which also declined the profit margins from the business with $\bar{x} = 4.41$, $\sigma = 0.65$. The third way in which fuel prices affected the cut flower business was the tertiary nature of roses on the hierarchy of human needs therefore when their prices go up, consumption sharply declines ($\bar{x} = 4.30$, $\sigma = 0.76$). Fuel prices increase also reduced the cost of transport which affected the sales volumes and profitability of flower business ($\bar{x} = 4.07$, $\sigma = 0.95$) this was ranked fourth. Finally, irregular pricing of fuel in oil producing countries and fuel consuming countries led to variations in fuel prices which increased competition to flower producers in the affected countries for cut flower business as a result this affected the profitability as shown by $\bar{x} = 3.85$, $\sigma = 0.94$.

4. Hypothesis Testing

The hypotheses tested were:

- H_0 : International fuel prices do not affect the performance of flower firms in Naivasha.
- H_1 : International fuel prices affect the performance of flower firms in Naivasha.

This hypothesis was also tested using Spearman correlation analysis between the fuel prices and profitability of flower firms in Naivasha.

			Fuel prices	Net Profits
Spearman's rho	Fuel prices	Correlation Coefficient	1.000	-.151
		Sig. (2-tailed)	0.000	0.047
		n	18	18
	Net Profits	Correlation Coefficient	-.151	1.000
		Sig. (2-tailed)	0.047	0.000
		n	18	18

Table 1: Spearman Correlation between the Fuel Prices and Profitability of Flower Firms

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

The results of this test as shown above ($\rho = -0.151$, $P < 0.05$) showed a negative correlation between fuel prices and profitability of flower business in Naivasha which was significant at 0.05. This implies that increment in fuel prices negatively affected profitability of flower farms though. Therefore the study upheld the H_1 and rejected H_0 .

5. Conclusion

Fluctuations in fuel prices significantly affected the performance of flower industry in Kenya especially now when Kenya remains a non-oil producing country. The cost of production, cost of transport, and the cost of other commodities increase in response to this. Therefore flower export business is highly vulnerable to the market prices, changes in the demand and supply of the commodity, and the foreign exchange market too.

6. Recommendation

First, the government through the chambers of commerce should constitute an information bureau for monitoring the indicators of international fuel prices which affect the cut flower business, analyze and project future performance trends and remit the same information to financial, business and sales managers of these flower firms promptly. This will enable them make informed decisions and production planning based on facts about projected international financial crises. The county also needs to fast track the oil exploration and drilling in Turkana as a strategy to safeguard critical segments of the economy.

7. References

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