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Effect of Foreign Exchange Transaction Risk Management on Financial Performance of Firms in Horticulture Industry in Kenya

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Abstract

In Kenya, the horticulture industry is a big revenue earner with the sector earning the country foreign exchange by exporting their products to various countries overseas. However, in the preceding five years to the study, horticultural firms had steadily declined hindering their sustainability and contribution to the economy. The purpose of the study was to determine the effect of foreign exchange transaction risk management on financial performance of firms in horticulture industry in Kenya. To accomplish the objectives, the study employed an explanatory research design to analyse several horticultural enterprises at a certain point in time. Primary data were obtained through a questionnaire that included questions that were both closed and open-ended, while secondary data were acquired using schedule tables. The population of interest for this study was 63 horticultural enterprises in Nakuru County. Due to the study population's small size, a census of all 63 enterprises was done. After collecting data, Statistical package for social sciences (SPSS) version 21 was used to derive descriptive statistics and conduct multiple linear regression analysis. The averages and standard deviation were determined using descriptive statistics, and multiple linear regression analysis was applied to test the study's hypotheses. After that, the output was summarized in reports and frequency tables. The findings revealed transaction risk management having a significance value of 0.000 and a coefficient of 0.533. The significance value of 0.000 was less than the standard 0.05 which implied that foreign exchange transaction risk management had a noteworthy influence on ROCE value at 95 percent confidence level. The study concludes that foreign exchange transaction risk management has an influence on profitability of horticulture firms in Kenya. The study thus recommends that the senior management in the horticultural businesses should enter into a variety of forward contracts and options to enable them to manage this risk effectively and have the expected positive effect on their ROCE.

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Keywords: Foreign Exchange, Transaction Risk Management, Horticulture Industry, Financial Performance.

1.0 Background of the study

One of the main objectives of a company management is to maximize shareholder wealth, which is usually expressed in monetary terms (Ahmad & Hussanie, 2018). Financial performance is used to measure how optimally a firm utilizes its assets and in its business operation and generate revenue (Henry, Robinson & Van Greuning, 2008). Management therefore needs to measure its operations and activities in financial terms to know whether it has the capacity to accomplish its obligations and other objectives. In the course of carrying out their operations, businesses experience uncertainties which affect operations and the bottom-line financial performance (Tasneem, 2006). The uncertainties facing a company create risks and unless they are identified, measured and dealt with, it poses a risk which might result in a financial loss (Dlabay and Scott, 2011).

Globalization and competition have had an impact on the global horticulture business, particularly in terms of product safety and quality. The significant expansion in horticultural commerce is due to technical advancements in postharvest technologies, storage, and transportation (Lumpkin, Weinberger & Moore, 2005). Global demand for fruit and vegetable products is expanding, in part due to logistics, with the advent of supermarkets in poorer nations, and also due to a desire in affluent countries to have year-round access to exotic food (Nicola & Fontana, 2010). Horticulture's rise in Sub-Saharan Africa has been fuelled by changes in the sector's governance patterns of trade. This is a result of the more complex stringent environment for food safety regulation, as well as labour and environmental standards (Ouma, 2010).

In Kenya, agriculture caters for around 20% of the gross domestic product (GDP) of the country and 75% of jobs in the country, which is the world's biggest exporter of black tea and provider of a third of Europe's fresh-cut flower trade (Tschirley, Muendo & Weber, 2018). Horticulture is the agricultural sector's second greatest earner of foreign money after tea, accounting for 36% of agriculture's GDP contribution and continuing to rise (KNBS, 2016). Over the years, the Kenyan horticultural sector has achieved a significant growth, with the volume of horticultural exports increased by 22.8 percent from 256,951.39 metric tonnes in 2016 to 323,588.47 metric tonnes in 2017 (Horticulture Crops Directorate, 2017). The volume of exported vegetables increased by 17.5 percent from 73,425.6 metric tonnes in 2016 to 86,285.2 metric tonnes in 2017. The volume of fruits export experienced the greatest increase of 23 percent over the same period with improvement from 54,473.55 metric tonnes to 66,837.3 metric tonnes. The volume of flowers exported went up by 21.5 percent, from 129,052.2 metric tonnes in 2016 to 159,466 metric tonnes in 2017.

In terms of value, the overall increase of the horticulture industry was by 15.7 percent from Ksh.103,538.9 million in 2016 to Ksh.120,820.17 million (Statistical Release, 2018). The decrease in export value as compared to volume can be attributed to the weakening shilling which affects the profitability of the horticulture firm since they receive less revenue than would have been the case for a stable or strong local currency. The export sector of a nation is important since it is a source of growth due to the foreign cash generated (Greve & Were, 2019). This is obvious in Kenya's horticulture sub-sector, which has been instrumental in generating foreign cash and creating jobs during the previous decade. Horticultural export subsectors contribute considerably to economic development in numerous African nations (Barrett *et al.*, 2001).

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Coric and Pugh (2010) demonstrated that currency exchange rate changes have a detrimental influence on international commerce. If a nation is reliant on foreign currency exports, cash flow shocks will have an effect on the profitability and production of exports. Kenya's sensitivity to external shocks is heightened by the country's heavy reliance on agricultural exports such as horticulture, tea, and coffee, exposing the country's export profits to direct exchange rate swings (Bunde & Korir, 2011). External variables such as government exchange rate policy, international competition, and the overall political climate may all have an effect on the financial success of an exporting corporation, which the research will analyze later. Foreign exchange rate volatility has therefore been a major source of anxiety for businesses with worldwide operations, because cash flows in the future, and consequently the value of businesses, may be impacted (Dufey & Srinivasulu, 1995).

Horticulture in Kenya is the fastest expanding agricultural subsector, ranking third in terms of foreign currency revenues after tourism and tea (Central Bank of Kenya annual report, 2016). With such a vital part of the Kenyan economy, every risk that might result in currency and income fluctuations must be addressed (Avutswa, 2009). Foreign exchange risk refers to the possibility that an organization may be obliged to pay less or more than anticipated owing to currency exchange rate variations between the currency denomination of the payment and its base currency. When the outcomes of a business's initiatives are contingent on exchange rates in the future and the changes in the exchange rates are unpredictable, the business is exposed to foreign currency risk (Madura, 1989). Hedging with derivatives is one of the common techniques used by firms to manage their foreign exchange risks (Mumoki, 2009).

Financial performance is a term that relates to the pace at which an objective is being performed or has been accomplished (Raiyani & Bhatasna 2011). Because the policies and operations of a business can be quantified in financial terms, financial performance is used to assess the complete monetary health of the firm over an identified time period. Financial performance is also applied in comparing similar businesses in a certain industry or to aggregate sectors or industries (Crane, 2009). Profitability is a financial statistic that indicates how well a business uses its resources in order to create shareholder value and profit. Profitability is the ratio of profit to various forms of employed resources (Parvutoiu, Popescu & Grigoras, 2010). The study looked at the return on capital employed of horticulture industry in Kenya as a profitability measure. The study used ROCE since it clearly brings out the performance of profitability using the capital employed and can be easily calculated through the firms. The return on capital employed is the quotient of the profit before tax and interest (PBIT) and capital employed.

According to the Kenya National Bureaux of Statistics (2017), horticultural export volumes increased by nearly 23% to reach 323,800 tonnes in 2017. Earnings from exports of fresh produce hit Sh.84.1 billion (\$925.1m), a rise of around Sh.700 million (\$7.7m) over 2016 and driven by a 12.5% spike in fruit export revenues, which reached Sh.5.4 billion (\$59.4m). The return on capital employed for the sector was 21.6%. However, in 2018 and 2019, export revenues from horticultural exports reduced by 11.6% year on year. Earnings from vegetables also fell nearly 8% to Sh.18.8 billion (\$206.8m) in 2019, despite higher volumes of export (Appendix III). This also led to reduction in ROCE to 19.6% in 2018 and then 19.2% in 2019. It can therefore be seen that the rise in export volume is not in correlation with the export value hence the revenue and profitability. Besides, the sector has experienced reducing RCE over the period. According to Oxford Business Group (2016), despite the improvements in quality control, currency volatility remains a challenge to the industry.

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Foreign exchange rate risk, as described by Kallianiotis (2013), is the financial risk created by unforeseen fluctuations in exchange rates. The currency exchange rate is critical in determining how the local economy allocates its production and expenditure between foreign and domestic commodities (Brealey, Myers & Allen, 2011). Foreign exchange rate instabilities have a considerable influence on both the short-term business success of internationally engaged organizations and the medium- to long-term corporate plans, including the location of production bases (Takatoshi, Satoshi, Kiyotaka, & Junko, 2013).

Foreign exchange risk management is a term that refers to techniques used to mitigate possible financial losses associated with monetary dealings denominated in a currency different from the base currency of the organization (Pappaioannou, 2006). Foreign currency risk management may be used by businesses to control risk/exposure using both financial and operational strategies. This is referred to as hedging, and firms operating in different countries employ diverse techniques to manage their foreign exchange risk, including forward contracts, futures contracts, currency call options, invoicing all transactions in the home currency, currency risk sharing, leading and lagging, and the use of re-invoicing centres (Madura, 2012). The influence of exchange rate fluctuations on a multinational corporation involved in foreign-currency operations is quantified by the sort of risks to which the corporation is exposed and the risk level experienced (Hakala & Wystup, 2002). Companies used to manage foreign exchange risk through diversification of operations and forward contracts. But with the growth of exchange markets over the years, futures contracts, options and other risk management techniques have been embraced by multinational companies (OECD, 2014). These risks are transaction risk, economic risk, and translation risk.

According to Pappaioannou (2006), transaction risk denotes the threat of cash flow and is linked with the influence of currency rate variations on the exposure of transactional accounts to dividend repatriation, payables (import contracts), and receivables (export contracts). Any fluctuation in the foreign currency of the financial contract results in an unswerving transaction exchange rate risk for the company (Boldbaatar & Jinjarak, 2007). To avoid foreign currency concerns, some horticultural businesses utilize transaction risk management techniques like as futures contracts and forward contracts. Futures and forward contracts may be used to control foreign transaction risk.

A futures contract is an arrangement between two entities to sell or buy a definite quantity of a foreign currency or financial instrument in the future at a fixed price (Partnoy, 2001). Financial futures are legally binding agreements that ties both seller and buyer to a certain rate and amount: the buyer is unable to withdraw. When an organization enters into a futures contract, it is required to pay in advance to the clearing house of the futures exchange a margin of between one and three percent of the value of the contract (Watson & Head, 2007). Due to daily oscillations in the currency exchange rate and interest rate itemised in the futures contracts, there are frequent debits or credits from the organization's margin account, in regard to whether the rate is advantageous or unfavourable (Horcher, 2005).

A forward contract is an arrangement to swap one item for an alternative at a defined future delivery date and time (Varma, 2008). It is an agreement designed in the current period for the delivery of an economic resource at a future date and price stated in advance. No money is exchanged until the timer expires. A futures contract is a kind of an agreement that includes pre-set delivery dates and quantities and allows for trading on an exchange (Aswathapa, 2010). Forward contracts are of two types; Forward Exchange Contracts (FECs) and Forward Rate Agreements (FRAs). Forward Exchange Contracts (FECs) enable firms to specify the future

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exchange rate that will be used for a future purchase for an agreed quantity of foreign currency. FECs are often entered into through commercial banks and are legally non-negotiable agreements. FRAs, on the other hand, enable firms to lock in a specified deposit rate or borrowing rate in the future for a certain duration in advance based on a notional primary amount (McCarron, 2004).

1.1 Statement of the Problem

Horticulture is the agricultural subsector with the quickest growth rate and ranks third regarding foreign currency profits from exports, behind tea and tourism (AFFA, 2014). The financial performance of horticulture firms has steadily declined due to various factors including foreign currency fluctuations (Chirchir, Muse & Jagongo, 2015). A fluctuation for both balance sheet and income statement items arising from exchange rate changes therefore fluctuates the profitability (Ahmed, 2015). According to the Kenya National Bureau of statistics (2020), the ROCE of the horticultural sector has reduced from a high of 21.6% in 2017 to 19.2% in 2019. The ROCE can be greatly affected by the fluctuation in the foreign currency which created translation risk, transaction risk, and economic risk which affect the net asset value and returns of the firms.

Companies in a bid to increase their sales have ventured in the international market and in the process have to trade in the foreign currency. Since the horticulture industry is among the largest earners of foreign exchange in Kenya, a significant risk due to the export of products overseas would negatively affect the industry and individual profitability and capital employed. Majority of the Kenyan horticultural exporters have not made use of techniques to manage foreign exchange risk to cushion themselves against the exposures that emanate from transacting in foreign exchange (Avutswa, 2009). This can be evidenced from the financial statements of the handful of institutions which provide the services as well as non-familiarity of most of the exporters about the existence of the hedging techniques.

Studies have been done to explore the influence of management of foreign exchange risk on the profitability of companies. Local studies have been done (Muiru *et al.*, 2018; Nzioka & Maseki, 2017; Ogada & Achoki, 2016; and Muriuki, 2011) but they were mainly done in reference to a different economic sector. The study done by Muiru *et al.* (2015) particularly analysed publicly quoted firms at the Nairobi Securities Exchange and looked at profitability as the financial performance indicator but not profitability, while Nzioka and Maseki (2017) analysed non-banking listed companies and not the horticulture industry. The study done by Ogada and Achoki (2017) analysed how diversification affects financial performance of merged institutions. This study provided a gap since it analysed non-horticulture institutions. An international study by Ahmed *et al.* (2014) analysed the influence of hedging with financial derivatives on profitability of organizations and firm value. This study was done in a different economic context. These studies had been done to establish the effect of management of foreign exchange risk, but had not been exhaustive and in particular in the horticulture industry; this motivated this study which sought to determine the effect of foreign exchange transaction risk management on financial performance of firms in horticulture industry in Kenya.

1.2 Research Objective

To determine the effect of foreign exchange transaction risk management on financial performance of firms in horticulture industry in Kenya.

2.1 Theoretical Framework

2.1.1 Theory of Purchasing Power Parity

Since David Ricardo and Gustav Cassel's (1991) proposition, the purchasing power parity (PPP) hypothesis has served as the standard for establishing exchange rates. It is predicated on the idea that a product has the same price in all countries and that transaction expenses, particularly transportation costs, are adjusted accordingly. There is an assumption of perfect competition, which leads to market arbitrage of goods. Ricardo in his theory did not include capital mobility, so as to have a zero-trade balance. Absolute PPP theory is only applicable to tradable goods. The prices and costs of tradable and non-tradable commodities in developed nations mainly progress in parallel. In this case, the reduced alternative of the comparative PPP should apply, that is, there should be no real exchange rate fluctuations. Price level differentials would persist in such a situation, but there would be no change. The changes in exchange rate would only compensate for differentials in inflation (Priewe, 2014). The study was anchored on this theory since it indicates the driver of exchange rates in different countries and how it is used in the export of tradable goods which affects financial performance. Horticulture in Kenya is a tradable goods industry and therefore trade balance as a consequence of exchange rate would affect the export ability and financial performance.

2.1.2 New Institutional Economics Theory

The New Institutional Economic theory by Williamson (1998) hypothesizes that strategies to manage risk may be dictated by the market or industry institutions or recognized practices. Additionally, the theory relates the acquisition of specific assets with security implying that risk management is vital in agreements between various parties that do not provide for diversification opportunities, such as close partnership contracts with in a supply chain or a large finance contract. Companies in regulated sectors give little possibilities for senior management to exercise discretion over business investment and finance choices. Smith and Watts (1992) said that rules have a significant role in the financial policy of the company. Therefore, when enterprises that are regulated experience more scrutiny and reduced contracting costs, they are less inclined to hedge company risk using derivatives. Additionally, Froot, Scharfstein, and Stein (2003) postulate that when the cost of internal financing is less than the cost of external financing, the business may not benefit from employing derivatives. Specifically, corporations may hedge cash flows in order to avoid expensive capital market visits in the event of a cash shortage; at the same time, derivatives are positively correlated with proxies for the firm's investment opportunity set. This theory was applicable to this research since it describes how financial risk is managed using derivatives which may be used to maximize profitability in the horticultural industry in Kenya.

2.2 Empirical Literature Review

A study by Mugi and Okiro (2021) explored the influence of approaches to the management of foreign currency risk on profitability of Kenyan commercial banks. This research was conducted through a descriptive research approach. The time scope of the research was 2009 to 2014, and the target demographic consisted of the 43 commercial banks operating in the Kenyan industry. The study used a census approach and secondary data was used in the research. The study results revealed that forward contracts have a comparatively high mean when compared to other variables, whereas cross-currency swaps had the biggest standard deviation. Rate of return was positively connected with options, which had the strongest connection. Rates of return were also substantially and positively connected with future contracts and cross currency swaps.

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Muiru, Kisaka and Kalui (2018) conducted an investigation of the profitability of organizations listed in the NSE in Kenya using foreign currency risk hedging approaches. The research population consisted of all 54 businesses that were continually quoted on the NSE between 2011 and 2016. A longitudinal research approach was applied in the study which used secondary information which was extracted from yearly financial reports of publicly traded companies and coded and analyzed using regression, correlation and descriptive statistics using STATA software. Currency hedging, the research found, has a beneficial influence on firm profitability. This suggested that applying hedging methods and instruments properly could assist organizations in achieving their financial goals, hence improving their profitability. The research focused on publicly traded firms, none of which are in the horticulture industry, resulting in a disparity in operations and financial structure. Additionally, return on capital employed was not applied as the measure of profitability in the study.

Kihara and Muturi (2016) investigated how profitability of commercial banks operating in Kenya is influenced by foreign currency risk management approaches. The research examined risk management approaches such as currency forwards, currency options, and currency swaps. The data was gathered from 39 commercial banks licensed in Kenya using a questionnaire to gather main data and a timetable to collect secondary data. The findings from the study determined that the usage of financial derivatives, notably options, swaps, and forwards, had a major influence on profitability of the commercial banks. In comparison to all risk management approaches employed in this research, the study analysis concentrated on transaction risk management (options, swaps, and forwards). Additionally, the research analyzed banks, which are operationally and financially distinct from horticultural enterprises. Finally, the financial performance of the research was determined using income after tax, profits per share, and return on assets, but the current study used return on capital employed.

A study by Ahmed, Azevedo, and Guney (2014) on corporations quoted in the London Stock Exchange assessed the influence of hedging through financial derivatives on business performance and value. The research analyzed a dataset including information on 288 nonfinancial enterprises in the FTSE-All share index between 2005 and 2012. Regression analysis and descriptive statistics were utilized in analysis of the gathered information. The study's results suggested that the efficiency of risk management strategies varied greatly across the derivatives utilized for hedging and the financial risks. The association between total foreign currency risk hedging (that is, when all derivatives are included) and company's financial performance and value is statistically significant and positive. However, this research was conducted in a different economic environment. Additionally, the research focused only on transaction risk exposure management, excluding translation and economic foreign currency risk management.

2.3 Conceptual Framework

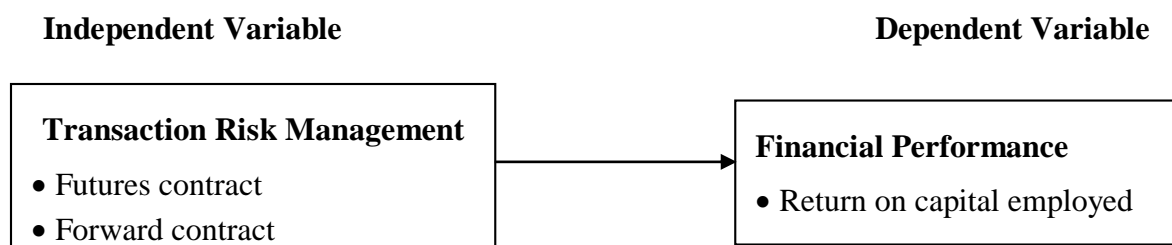


Figure 1: Conceptual Framework

Source: Researcher, (2020)

3.0 Research Methodology

The study used an explanatory research strategy because it provides a clear account of the what, when, and how of the phenomena under investigation. This study's target population was 63 firms (Kenya Flower Council, 2017) made up of the horticultural exporters that are in Kenya. The website by the Fresh Produce Exporters Association of Kenya (FPEAK) indicated that as at 31st August 2018, there were 63 cut flower and vegetable and Fruits exporters based in Nakuru County. Nakuru region was selected for purposes of this research since horticultural exporters in this region is more representative of the total exporters in the country. Since the population is manageable, the study used a survey. In this study, since the population was small and accessible, the study did not apply any sampling and a census was conducted of all the 63 firms. The study hence included all the firms in the study. The research collected data via primary collection instruments. A questionnaire is a set of questions that are asked to persons in order to elicit statistically meaningful information about a certain subject (Satya, 2012), was the tool for primary data collection to gather the risk management techniques used by horticulture firms. It was the suitable collection tool since the study requires structured data and the researcher does not need to be present during the data collection. The collected data was organised in a way to provide consistency in answers and make it easy for analysis so as to answer the research questions. The gathered data was analysed using inferential as well as descriptive statistics. The regression analysis analysed the impact of exchange rate management techniques on profitability measured through return on capital employed for the 3-year period between 2018 and 2020.

From the variables identified, the regression equation comprised of cross-sectional data between 2018 and 2020, which was as follows:

$$Y = \alpha + \beta X + \varepsilon$$

Where:

Y is the dependent variable profitability measured through return on capital employed

X is foreign exchange transaction risk management

β is the coefficient for the variable X

α is the regression constant

ε is the error term

The researcher guaranteed integrity and that the respect of the study partakers was safeguarded throughout the research period with the tool for data collection designed to be objective. The participants were requested to provide information without force or coercion to answer any question(s). Confidentiality was ensured throughout the research period by securing the data and no respondent information that they provide was disclosed to any other party. The study cited and acknowledge all the authors of all literature used. The findings of the study was reported accurately and represent what was provided and the results was not presented in such a manner that would present the results to mislead readers, out of context, exaggerate the results or focus on lesser sections of the study without holistic focus on the entire study and context.

4.0 Finding and Discussion

The study goal and questionnaires were sent to 63 respondents working in horticultural enterprises. Of the 63 respondents, 48 returned the surveys. This resulted in a response rate of 76.19 percent, with the remaining 23.81 percent failing to reply either because they were unable to provide business data or could not complete the questionnaire in the time frame specified by the research. With regards to the demographic information, the study established education level 60.4% university degree, 31.3% medium level college education and 8.3% secondary school education. In terms of duration in the horticulture companies' response rates, majority of them have been in operation for more than 10 years, which was 43.8%, 6 to 10 years 37.5% and between 2 to 5 years 16.7%. It was also established that currency of invoice 62.5% used Euro, 29.2% used Dollar and 6.3% used Pound.

4.1 Descriptive statistics

Financial Performance in the Horticulture Industry

The study investigated the profit before interest and tax for the horticultural firms that were included in the study. The averages for the firms were computed. Study results are provided in Table 1.

Table 1: Profit before Interest and Tax in the Horticulture Industry

| | N | Mean P.B.I.T |
|--------------------|----|---------------|
| 2015 | 48 | 11,188,270.83 |
| 2016 | 48 | 11,723,020.61 |
| 2017 | 48 | 12,251,914.58 |
| Valid N (listwise) | 48 | |

Table 1 above highlights the average profit before income and tax (PBIT) of the horticulture firms for the years 2015, 2016 and 2017. The findings indicated a mean PBIT of Sh.11, 188,271, Sh.11, 723,021, and Sh.12, 251,915 for years 2015, 2016 and 2017 respectively. This shows an increase in profit before interest and tax over the three years.

Table 2: Total Assets in the Horticulture Industry

| Year | N | Mean Total Assets |
|--------------------|----|-------------------|
| 2015 | 48 | 31,469,064 |
| 2016 | 48 | 30,721,741 |
| 2017 | 48 | 31,525,632 |
| Valid N (listwise) | 48 | |

Table 2 above highlights the average total assets of the horticulture firms for the years 2015, 2016 and 2017. The findings indicated a mean total assets of Sh.31, 469,064, Sh.30, 721,741, and Sh.31, 525,632 for years 2015, 2016 and 2017 respectively. This shows a decrease in total assets in year 2016 and an increase in the year 2017 which might be as a result of translation of foreign denominated assets such as debtors.

Table 3: Current Liabilities in the Horticulture Industry

| Year | N | Mean Current Liabilities |
|---------------------------|-----------|--------------------------|
| 2015 | 48 | 4,245,473 |
| 2016 | 48 | 4,862,691 |
| 2017 | 48 | 4,651,339 |
| Valid N (listwise) | 48 | |

Table 3 above highlights the average total liabilities of the horticulture firms for the years 2015, 2016 and 2017. The findings indicated a mean total liabilities of Sh.4, 245,473, Sh.4, 862,691, and Sh.4, 651,339 for years 2015, 2016 and 2017 respectively. This shows an increase in year 2016 but a decrease in year 2017. This again might be due to fluctuations in foreign exchange during translation of foreign denominated liabilities such as foreign loans and creditors.

Table 4: Return on Capital Employed (R.O.C.E) in the Horticulture Industry

| Year | N | Mean return on capital employed | % change |
|---------------------------|-----------|---------------------------------|----------|
| 2015 | 48 | 0.4109 | - |
| 2016 | 48 | 0.4533 | +10.32% |
| 2017 | 48 | 0.4559 | +0.74% |
| Valid N (listwise) | 48 | | |

Table 4 above highlights the average R.O.C.E and their percentage changes of the horticulture firms for the years 2015, 2016 and 2017. The ROCE is computed by dividing the profit before interest and tax by the capital employed, which is the total assets less current liabilities. The findings indicated a mean of 0.4109, 0.4533, and 0.4559 for years 2015, 2016 and 2017 respectively. This shows an increase of approximately 10.32% in 2016 compared to 2015 and a small increase of 0.74% in year 2017 compared to 2016.

Transaction Risk Management

The study sought to determine the effect of foreign exchange transaction risk management on financial performance of firms in horticulture industry in Kenya. Tables 5 and 6 shows the descriptive results.

Table 5: The extent of adoption of futures contract

| | Frequency | Percent |
|----------------|-----------|--------------|
| Disagree | 1 | 2.1 |
| Neutral | 17 | 35.4 |
| Agree | 26 | 54.2 |
| Strongly Agree | 4 | 8.3 |
| Total | 48 | 100.0 |

Table 5 above indicates the frequency distribution of the responses on the extent of effectiveness of futures contract usage on profitability. From the responses, 54.2% agreed (N=26), while another 8.3% (N=4) strongly agreed that a futures contract stabilizes a firm's profitability (R.O.C.E). The findings indicate 35.4% (N=17) of the respondents were neutral on whether a futures contract stabilizes the firm's profitability (R.O.C.E). The responses also had a mean of 3.688 and a standard deviation of 1.434.

Table 6: The extent of adoption of forward contract by horticultural firms

| | Frequency | Percent |
|----------------|-----------|--------------|
| Disagree | 3 | 6.3 |
| Neutral | 12 | 25.0 |
| Agree | 32 | 66.7 |
| Strongly Agree | 1 | 2.0 |
| Total | 48 | 100.0 |

Table 6 above indicates the frequency distribution of the responses on the extent of effectiveness of forward contract usage on profitability of horticulture firms in Kenya. From the responses, 66.7% agreed (N=32) that the use of a forward contract is effective on the profitability (R.O.C.E) of horticulture firms, while 25% (N=12) of the respondents were neutral that the use of a forward is effective on the profitability (R.O.C.E) of horticulture firms in Kenya. The responses had a mean of 3.464 and a standard deviation of 1.396.

4.2 Regression Analysis

The study did regression analysis to establish the influence of foreign exchange transaction risk management, on the financial performance (return on capital employed) of horticulture enterprises. The dependent variable i.e. return on capital employed was ratio scale while the independent variables were ordinal in nature. To have a single measure for each independent variable, a mean of each of the two indicators of the independent variables was computed and it was used as input in the regression. Regression analysis results revealed that the predictor variable adequately forecast the return on capital employed value in the horticulture industry in Kenya. The calculated p-value is compared to the standard level in testing to determine the statistical significance of the model (p value=0.000 < 0.05). This indicated that the model of the predictor variable is statistically significant in predicting return on capital employed values of the horticulture industry in Kenya.

Additionally, the estimated model table showed the coefficient and significance values of the predictor variable on the outcome variable, return on capital employed. The findings showed transaction risk management having a significance value of 0.000 and a coefficient of 0.533. The significance value of 0.000 was less than the standard 0.05 which implied that foreign exchange transaction risk management had a significant influence on return on capital employed value at 95 percent confidence level. These findings agreed with the findings by Mbaka (2016), Banafa (2015), and that done by Ahmed (2015) which found a relationship and influence of foreign exchange transaction risk management and financial performance. The results from these previous studies support the results of this study which could have been as a result of convergence on how financial performance is influenced by management of foreign exchange transaction risk.

5.0 Conclusions

Conclusions were made based on the study findings. The study found that foreign exchange transaction risk management has an effect to a great effect using descriptive analysis while regression analysis indicated that at 95 percent confidence level, it has a significant influence on the return on capital employed of horticulture firms in Kenya. Conclusions made from the findings are that foreign exchange transaction risk management has an influence on profitability of horticulture firms in Kenya. This might be because the variability in profit as a result of foreign exchange fluctuations does not directly affect the capital employed of the firms in many instances. The amount of profit reinvested in the companies are after redistribution are for specific capital requirements and therefore not proportionate to after-tax profit. This might be because the variability in profit as a result of foreign exchange fluctuations does not directly affect the capital employed of the firms in many instances. The amount of profit reinvested in the companies are after redistribution are for specific capital requirements and therefore not proportionate to after-tax profit.

6.0 Recommendations

The study determined that businesses engaging in multiple currencies face transaction risk because exchange rates may move dramatically in a short period of time. Therefore, the senior management in the horticultural businesses should enter into a variety of forward contracts and options to enable them to manage this risk effectively and have the expected positive effect on their ROCE.

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