



www.strategicjournals.com

Volume 6, Issue 3, Article 4

**EFFECT OF STOCK MANAGEMENT ON FINANCIAL PERFORMANCE OF SWEET POTATO MARKETING
COOPERATIVES IN KENYA**

Gitau, B. N.

EFFECT OF STOCK MANAGEMENT ON FINANCIAL PERFORMANCE OF SWEET POTATO MARKETING COOPERATIVES IN KENYA

Gitau, B. N.

Ph.D, Lecturer, Department of Agricultural Economics & Agribusiness, Rongo University [RU], Kenya

Accepted: June 18, 2019

ABSTRACT

Sweet potato global market is growing every year, presenting opportunities for export and for subsistence farmers to improve their food security situation and boost income from the sales of surplus. However, for most of the populations in the major production regions, this enterprise has given little impetus to the improvement in their incomes. Thus this study sought to determine the influence of stock management on the financial performance of sweet potato marketing cooperatives in Kenya. The study design was descriptive panel research design. Secondary data was used for analysis. The target population was four sweet potato marketing cooperatives with a total population of one thousand two hundred and forty five (1,245) sweet potato farmers registered as at December, 2015 by the Commissioner of cooperatives in Kenya comprising of Homabay, Bungoma, Busia and Siaya counties which also formed the study target units. Census sampling was used to select sample of the population. Secondary data over the ten year-period covering 2006-2015 was obtained. Data was collected using secondary data collection sheet and analyzed using multiple panel regression models. Limitations faced during data collection included high illiteracy levels amongst cooperative members. This was controlled by taking the officials through the facets of stock management to have them understand the concepts under enquiry. The study findings showed that stock management had significant influence on return on investment, a measure of financial performance of sweet potato marketing cooperatives in Kenya and tests for significance also showed that the influence was statistically significant. The study therefore recommended that all sweet potato marketing cooperative officials and members be trained on stock management aspects.

Key words: *Stock management, financial management, marketing cooperative societies*

CITATION: Gitau, B. N. (2019). Effect of stock management on financial performance of sweet potato marketing cooperatives in Kenya. *The Strategic Journal of Business & Change Management*, 6 (3), 45 – 54.

INTRODUCTION

Agricultural enterprises have constantly played a vital role in the socio-economic development of a jurisdiction. The significant role they play in the development of output, employment and economic growth is being acknowledged universally (Beyene, 2002; Lukacs, 2005). Agriculture is a key sector in the development of African economies, contributing a significant portion to the national GDP and employing over 75% of the population (Salami et al., 2010). Agriculture development is the most critical sector for most Sub-Sahara African countries owing to its significance in food security and employment creation.

It is intriguing to note that the informal sector contributes positively to eradication of poverty through employment creation (United Nations Development Programs [UNDP], 2007). Research carried out on eliminating world poverty as reported in the White Paper on International Development of 2000 acknowledged farming enterprises as the main source of new jobs and income for the poor especially in the rural areas. Agricultural enterprises have contributed considerably to growing GDP and creating jobs for labourage people. Vu (2001) summarizes agricultural small enterprise contributions as follows: providing a large number of diversified products, occupying 26 percent of GDP and 30 percent of industrial outputs, creating jobs for 4.5 million people, mobilizing temporarily unused resources such as land, capital, labour and management skills to develop production, and increasing export volume and lessening trade deficits.

According to GOK (2010) sweet potato production increased by 89 percent between 2004 and 2009, a scenario attributed to use of improved cultivars and farming methods which have helped increase yield per unit area (GOK, 2010 ; Kenyon et al., 2005). In the recent past, there have been renewed efforts by the government and other players in the agriculture sector to promote production of traditional high

value crops of which sweet potato is among them. For example, through the traditional high value crops (THVC) program, the government distributes to farmers improved planting materials for the crops as one of the activities in efforts to promote their production.

The average sweet potato yield in Kenya is about 10 tons/hectare (GOK, 2010) which is below the genetic potential of 32-37 tons/hectare (FAO, 2008). The average national per capita consumption of sweet potato is about 25 kg/person/year and is highest around Lake Victoria basin. Sweet potato (*Ipomea batata* L.) is an important traditional crop that is grown customarily by small-scale farmers mainly for household consumption. (Carey et al., 2000; Ndolo et al., 2001; Githunguri & Migwa, 2004). Research by Nungo et al. (2007) on the development and promotion of sweet potato products in western Kenya revealed that sweet potato utilization has for a long time been limited to boiling, roasting and chewing raw.

Efficient stock management practices in the agriculture sector should answer questions on how much should be ordered and when should it be ordered. The questions relate to the problem of determining the economic order quantity and the problem can be answered by the analysis of the costs of maintaining certain levels of inventory as there are costs involved in holding too much stock and there are also costs involved in holding too little, hence the need to put in place an effective stock management system to ensure reliable sales forecasts to be used in stock ordering purposes (Atrill, 2006).

Statement of the Problem

Sweet potato farming in Kenya is done in small scale, thus the sector faces many challenges affecting majority of SMEs in developing nations such as Kenya. For instance, in a study conducted by Odondo *et al.* (2014) it was observed that Profitability of sweet

potatoes is affected by several factors which vary in their magnitude of effects. The factors include: Duration of experience in sweet potato farming, market share of the farmer, labour intensity and total operation costs. For instance, the lack of proper planning due to insufficient market information is partly evidenced by the high poverty levels in the major sweet potato growing regions such as Kuria and Rachuonyo, which have poverty levels of 79% and 77% respectively (RoK, 2003; RoK, 2010). The studies failed to show whether the farmers managed their stock efficiently.

Besides, despite the high government of Kenya support to the agriculture sector and specifically sweet potato farming, much documented evidence still report failure in the sector. According to USAID in Andea (2012), sweet potato global market is growing every year, presenting opportunities for export and for subsistence farmers to improve their food security situation and boost income from the sales of surplus. It is therefore of great importance to determine what the farmers or their advices are not doing right. For example, it's in this spirit that stock management is viewed as a 'value adding' activity within any organization and thus should be an integral part of management decision (Chandra, 2003). Therefore, this study evaluated the effect of stock management on the performance of the sweet potato marketers in Kenya.

Objectives of the Study

The main objective of the study was to analyze the effect of working capital management on financial performance of marketing cooperative societies in Kenya. The specific objectives were to establish the effect of stock management on financial performance of marketing cooperative societies in Kenya.

Research Hypothesis

H₀: There is no significant effect of stock management on financial performance of sweet potato marketing co-operatives in Kenya.

LITERATURE REVIEW

Theoretical Framework

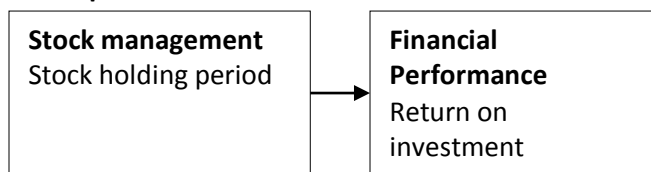
Stakeholder Theory

The theory suggests that all stakeholders have a right to be provided with information on how organizational activities impacted them, even if they choose not to use it (Deegan, 2000). According to Guthrie et al. (2006) organizations will elect to voluntarily disclose information about their human resource, over and above mandatory requirements, in order to meet real or perceived stakeholder expectations. The various interest groups deemed to have an interest in controlling certain aspects of an organization can be efficiently communicated with via the annual reports. Also, companies will voluntarily disclose information such as agricultural performance to meet the demands of stakeholders who have power to control resources required by the organization.

The disclosure of information on agricultural performance is vital and therefore analysts have developed analytical tools to value a company performance beyond financial results, taking into consideration factors like leadership, human resources, and specialized workforce. In addition, many companies, to reduce the amount of analysts and market speculation, voluntarily disclose information about their strategy, management objectives, and key success factors in supplements to their financial reports. According to Turan *et al.* (2011) without reporting financial management practices and accounting for intellectual capital, financial reports and statements are far from accurate in communicating the real value of the enterprise and its future Agricultural performance potential. Since implicit contracts can be breached at any time, Telser (1980) argues that they become self-enforcing when the present value of a firm's gains from maintaining its reputation and, therefore, future terms of trade are greater than the loss if the firm

reneges on its implied contracts. Stakeholder theory was applicable in this study in determining how stock management affects financial performance of sweet potato business in Kenya.

Conceptual Framework



Independent variables

Dependent variable

Figure 1: Conceptual Framework

Source: Author (2019)

Financial Performance

According to Jennings (1993) a ratio is simply one number expressed in terms of another number to show the relationship between the two numbers and also the important relationship between items in the trading account and in the profit and loss account, between items in trading account and in the balance sheet and between items in the profit and loss account and in the balance sheet. Ratios are simply relationships between two financial balances or financial calculations which establish our references so that we can understand how well an entity is performing financially. Similarly, Okoye (2000) disclosed that financial ratios are tools used in the inter-firm comparison, the aim of which is to improve return on investment by identifying weakness in the production process through comparison with other firms in the same industry and finding ways of improving earnings.

Saliha & Abdessatar (2011) affirmed that ratios are simply relationships between two financial balances or financial calculations which establish our references so that we can understand how well an entity is performing financially. Ratios also extend the traditional way of measuring financial performance; i.e. by relying on financial statements.

Stock management

Inventories refer to the quantity of stock held in a business. Rushton et al. (2010) defined inventory management as the policies and procedures which systematically determine and regulate which things are kept in stock and what quantities of them are stocked. For each item stocked decisions are needed as to the size of the requirement, the time at which further supplies should be ordered and the quantity which should be ordered. Similarly, Baily et al. (2008) opined that decisions regarding the amount of stock that a firm should hold and its location within a company's logistics network are crucial in order to meet customer service requirements and expectations.

According to Kumar & Suresh (2008) stock management ensures that the financial investment is minimal. They further create a linkage between efficient utilization of working capital and minimization of cost due to deterioration, obsolescence, damage and pilferage of inventory. Kumar & Suresh (2008) further assert that effective control on inventory is a must for smooth and efficient running of the production cycle with least interruptions warranted by varying intervals between receiving the purchased parts and transforming them into final products. They further argue that inventory control would ensure adequate supply of products to customers, avoid shortages and ensure timely action for replenishment. They concluded that inventory control promotes economy in purchasing.

Stock control systems have been of concern for many years to business firms worldwide. The systems play a crucial role in enhancing effectiveness and efficiency in handling stock of business firms.

METHODOLOGY

Research design is the blue print for the collection, measurement, analysis of data and a plan to obtain answers to research questions (Coopers & Schindler, 2006). The study used panel descriptive research design. Panel descriptive research design applied on

secondary data involved collecting and analyzing data from cooperative societies over a period of ten years (2006-2015) where it was constituted and analyzed in form of panels. This research design is suitable in studies where both the cross-sectional and longitudinal characteristics of the units being studied are required (Gujarati, 2003).

This study focused on sweet potato enterprises registered as marketing cooperative societies by the commissioner of cooperatives in Kenya as at 31st December 2015. The study targeted farmers who were members of the four (4) sweet potato marketing cooperatives with a total population of 1,245 sweet potato farmers (MOA, 2015).

The criteria adopted in selection of the sample for this study was that the sweet potato marketing cooperative must be registered with the commissioner of cooperatives as at December 2015. Multistage and purposive sampling was used. A sample is a representative of total population nominated for analysis (Kothari, 2004; Bryman & Bell, 2003). Gall et al. (2008) define a sample as a carefully selected subgroup that represents the whole population in terms of characteristics. Orodho (2003) notes that sampling is a procedure of selecting a representative of a population on which research can be conducted and inferential conclusion from the study can be applied in general terms to the entire population. Gall et al. (2008) define sampling as a process of selecting a number of individuals in such a way that they represent the large group. All the four marketing cooperatives in the western region in Kenya were sampled.

Secondary data was obtained from the review of audited financial statements of the cooperative societies over the 10-year period from 2006 to 2015 (both years inclusive). The data collected aided in computation of inventory holding period as measures of stock management as well as return on investment as the financial performance indicator. Therefore,

sweet potato marketing cooperatives' audited financial statements were reviewed.

Linear regression analysis was used to test the influence of predictor variables on the predicted variable as prescribed by various Scholars (Kline, 1998; Faraway, 2002 & Cohen et al., 2003). Castillo (2009) observed that the use of ordinary Least Squares Regression is preferred due to its ability to show whether there is a positive or a negative relationship between independent and dependent variables. In addition, Cohen et al. (2003) further emphasized that OLS is useful in showing linear elasticity/sensitivity between independent and dependent variables. For instance, the current study sought to investigate the percentage by which responses on performance increases or decreases when responses on stock management change by 1 percent.

Secondary data collected on inventory holding period from the audited financial statements of the four cooperative societies during the period 2006-2015 was analyzed using Panel Multiple Regression analysis to test the statistical relationships and significance of stock management on the dependent variable (financial performance as measured by return on investment). A panel data set is one that follows a given sample of individuals over time and thus provides multiple observations of each individual in the sample. The choice of panel regression was informed by and in line with Baltagi et al. (2005) who observed that Panel data enables the researcher to control for unobserved heterogeneity, and secondly since panel data have both cross-sectional and time series dimensions, it provides the researcher with sufficient data points to reduce the likelihood of biasness in the parameter estimators.

The general pooled regression model is specified by:

$$Y_{it} = \beta_1 + \beta_2 X_{it} + U_{it}$$

Where;

Y_{it} is the predicted, X_{it} is the vector of predictor

variables, β_1 is the coefficient of the predictor variable, i refers to the firm and t refers to the time.

FINDINGS AND DISCUSSION

Panel Regression Analysis

Stock management

The purpose of this analysis was to determine if there exists a relationship between stock management and financial performance of the sweet potato marketing cooperatives in Kenya. The analysis involved use of

linear regression method. The choice of the tool was based on the fact that it was used by researchers like Şamiloğlu and Demirgüneş (2008) who conducted a study to examine the relationship between working capital management and profitability on a sample of manufacturing firms listed in Istanbul stock exchange for the period of 1998-2007.

For the analysis of this variable therefore, the regression model was summarized in Table 1.

Table 1: Regression Coefficient –Stock management and ROI

Model	Unstandardized	Standardized	t	Sig.
	Coefficients	Coefficients		
	B	Std.Error	Beta	
Constant	15.151	.923		
Stock management	.370	.037	.605	.000

Using the summary presented in Table 1, a linear regression model of the form,

$Y = \alpha + \beta X_i$ can be fitted as follows;

$$Y = 15.151 + 0.370X_i$$

The results showed that 1% change in stock management leads to 37.0 % variation in ROI.

The results indicated that an improvement in policy regarding stock management leads to an improvement of performance of the sweet potato marketers. The study findings corroborate with a study by Nyabwanga et al. (2012) on “Effects of Working Capital Management Practices on the financial performance of SMEs in Kisii District Kenya” where they averred that majority of the small scale enterprises often prepared stock budgets and reviewed their levels. They concluded that preparation of stock budgets and review of stock

levels are regularly carried out by SSEs’ owner/managers, being in harmony with findings of Kwame (2007) which averred that many small businesses review their stock levels and prepare budgets. This is further stressed by Lazaridis and Dimitrios (2005) that enhancing stock management enable businesses to avoid tying up excess capital in idle stock at the expense of profitable ventures.

From the findings of the study, it was inferred that the institution of efficient and effective policies enhances the financial performance just as stressed by Lazaridis and Dimitrios (2005) that enhancing the management of stock level enables business to avoid tying up excess capital in idle stock at the expense of profitable ventures.

Table 2: ANOVA – Stock Management and ROI

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4369.339	1	5156.467	230.488	.000
Residual	48.267	298	16.9		
Total	118.826	299			

The ANOVA test on Table 2 shows a significant F-statistic of 230.488 at 0.00 level of significance since the significance of the F-statistic is less than 0.05. This implied that the model in use was significantly fit and can be used to make predictions. As we reject the null hypothesis $H_0: b_0=b_1=0$ and take the alternative that at least one coefficient of the model is greater than zero. This implies that stock management as a variable in this study cannot be ignored when explaining the factors that have an influence on ROI. Stock management is therefore a significant variable that must be taken into account when studying performance of sweet potato farmers. The findings agree with Kumar & Suresh (2008) who opined that stock management ensures that the financial

investment is minimal. They further create a linkage between efficient utilization of working capital and minimization of cost due to deterioration, obsolescence, damage and pilferage of inventory. Kumar & Suresh (2008) further assert that effective control on inventory is a must for smooth and efficient running of the production cycle with least interruptions warranted by varying intervals between receiving the purchased parts and transforming them into final products. They further argue that inventory control would ensure adequate supply of products to customers, avoid shortages and ensure timely action for replenishment. They concluded that inventory control promotes economy in purchasing.

Table 3: Model Summary-Stock management and ROI

R	R Square	Adjusted R Square	Std. Error of the Estimate
.605	.366	.364	4.35396

The result of the model summary in table 3 shows a coefficient of determination $R^2=0.366$ indicating that the change in ROI of the marketers can be explained significantly upto 36.6% by the stock management. On the other hand, the value of r which is 0.605 is an indication that there is a positive linear relationship between stock management and financial performance of sweet potato marketing cooperatives in Kenya, corroborating research findings by Nyabwanga & Ojera (2012) that too much stoking consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss. The studies however did not survey the effects of stock management on performance.

The results indicated in Table 3 show an analysis of the regression results without moderator. In addition, the Wald statistic for both equations is statistically significant, indicating that the variables used are jointly statistically significant. The results also indicated that all the variables have significant effect on ROI.

Hypothesis Testing Results

The analysis results show that stock management has significant effect on financial performance of sweet potato marketing cooperatives at 5% level. This is evidenced by the p-values corresponding to the coefficients of stock management variable ($p=0.0100$, $p=0.0100$ and $p=0.0000$). This finding led the study to reject the stated null hypothesis with 95% confidence level. By rejecting the null hypothesis, the study accepted the alternative hypothesis that stock management has significant effect on financial performance of sweet potato marketing cooperative societies in Kenya.

SUMMARY

The objective sought to establish the influence of stock management on the performance of sweet potato marketing cooperatives in Kenya. Findings on the influence of stock management on ROI showed that variations in returns on amounts invested can be explained by stock management. This finding is further supported by the regression result which showed that stock management have a statistically significant influence on the performance of sweet

potato marketers in Kenya and therefore the alternate hypothesis was accepted. This meant that stock management has a positive influence on performance of sweet potato farmers in Kenya. Sweet potato marketing cooperatives in Kenya ensure stock levels are monitored to avoid excesses that would lead to losses due to the perishability nature of the produce and at the same time, enough stock levels to avoid failure to meet market demand.

CONCLUSION

Based on the study findings, it was concluded that stock management affect performance of sweet potato farmers in Kenya positively. The adoption of the stock management by the sweet potato farmers has a high potential of improving performance and hence better returns to the farmers. The formation of cooperative societies has made the adoption rate to be high among the cooperative society officials though farmers need to be sensitized more on the need to adopt fully the management of stock. Sweet potato farming has continued to perform well even when production of other crops has declined over the years. This can be explained by the adoption of management of stock which has enabled cooperatives to realize enhanced returns for its members as compared to traditional means of selling at the farm gate prices to middle men.

It should also be noted that the performance of sweet

potato marketing cooperatives is not purely and wholly derived from the management of stock because there are other drivers of performance in the farming sector.

RECOMMENDATIONS

Sweet potato produce has the challenge of perishability which can lead to losses by farmers if not well managed. Cooperative societies should embrace modern cooling machines that would prolong the shelf life of the produce. This therefore calls for better management of resources in a manner that boosts shareholders trust to invest in such facilities. Members need to come up with innovative ways including traditional ways of preservation of the sweet potato produce. Other innovative ways that would enhance prolonged shelf life include value addition to include products like flour, processed products like cakes and crisps that would lead to better returns to the farmers as compared to selling raw sweet potatoes.

Areas for further Research

This study did not include all farming enterprises in Kenya. A detailed study can be conducted to establish the effects of adoption of stock management on other farming enterprises and especially those in large production.

REFERENCES

- Andea, G. (2012). Sweet potato production up in Kenya. News updates posted at Kenya. News updates posted at Kenya Agricultural Commodity Exchange LTD web site on Monday 23, April 2012 at <<http://www.kacekenya.co.ke/news.asp?ID=275>>.
- Atrill, P. (2006). Financial management for decision makers (4th Ed). Prentice Hall.
- Baily, P., Farmer, D., Barry, C., Jessop, D., & David, J. (2008). Procurement principles and management. Harlow: pearson Education.
- Baltagi, B. H., Bratberg, E., & Holmås, T. H. (2005). A panel data study of physicians' labor supply: The case of Norway. *Health Economics*, 14 (10), 1035-1045.
- Beyene, A. (2002). Enhancing the competitiveness and productivity of Small and Medium Scale Enterprises

(SMEs) in Africa: An analysis of differential roles of National Governments through Improved Support Services. *Africa Develop.* 27(3): 130 – 156.

Bryman, A., & Bell, E. (2003). *Business Research Methods*. UK: Oxford University Press.

Carey, E., Gichuki, S., Maisiba, G., Tana, P., Lusweti, C., Ngugi, J. (2000). Sweet potato variety selection for Kenya: Food, feed and income. In *Final report of the KARI-Agricultural Research Fund Project*. The International Potato Center (CIP) and Kenya Agricultural Research Institute (KARI).

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd edition). Mahwah, NJ: Erlbaum.

Castillo, J.J. (2009). Populationsamplingtechniques. Retrieved from *Experiment Resources*: <http://www.experiment-resources.com/population-amplimg.html>, retrieved on 10th September 2015.

Chandra, P. (2003). *Finance Sense: Finance for Non-Finance Executives*. 3rd Edition. Tata McGraw Hill, India.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd edition). Mahwah, NJ: Erlbaum.

Cooper, D. R., & Schindler, P. S. (2006). *Business Research Methods* (9th edition). USA: McGraw-Hill.

Deegan, K.E. (2000). Determinants of Sweet Potatoes (*Ipomoea Batatas* L) Profitability in Rachuonyo South District, Kenya. *International Journal of Managerial Studies and Research (IJMSR)*. Volume 2, Issue 4, May 2014, PP 48-60.

Faraway, J. (2002). *Practical Regression and Anova using R*. Retrieved on 17th August, 2015 @ www.r-project.org

Food and Agriculture Organization (2008). *FAO Database* (2008). FAO Rome, Italy.

Gall, M. D., Borg, W. R., & Gall, J. P. (2008). *Education research: An introduction* (8th ed.). New York: Pearson publishers.

Githunguri, C. & Migwa, N. (2004). Performance, foliage and root yield of sweet potato clones from a preliminary yield trial at Kiboko in semi-arid eastern Kenya. In Annual report 2003. NHFRK-Katamani: Kenya Agricultural Research Institute.

Government of Kenya (GoK). (2010): Rachuonyo District Development Plan, Government of Kenya. Government Printer, Nairobi.

Gujarati, N. (2003). *Basic Econometrics*. Fourth Edition, New York: McGraw-Hill.

Guthrie, A. (2006). *The economic role of SMEs in world economy, especially in Europe*. *Eur. Integr. Studies Miskolc*. 4(1): 3-12.

Jennings, A.R. (1993). *Financial Accounting*, D.P. Publication, London.

Kenyon, L., Anandajayasekeram, P. and Ochieng, C. (2005). A synthesis / lesson- learning study of the research carried out on root and tuber crops commissioned through the DFID RNRRS research programmes between 1995 and 2005. January 2006 http://www.dfid.gov.uk/r4d/PDF/Outputs/Root_Tuber_research_synthesis_P1.pdf

Kline, R. B. (1998). *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press

- Kothari, C.R. (2004). *Research Methodology: Methods & Techniques*, 2nd edition. New Delhi:Wishwa Prakashan.
- Kumar, A. S., & Suresh, N. (2008). *Production and operations management (2nd ed.)*. New Age International Publishers.
- Lukacs, E. (2005). *The economic role of SMEs in world economy, especially in Europe*.*Eur. Integr. Studies Miskolc*. 4(1): 3-12.
- Ndolo, P., Mcharo, T., Carey, E., Gichuki, S., Ndinya, C. & Malinga, J. (2001). Participatory on-farm selection of sweet potato varieties in Western Kenya. *African Crop Science* 1:41-48.
- Nungo, R., Ndolo, P., Kapinga, R. & Agili, S. (2007). Development and promotion of sweet potato products in Western Kenya, *Proceedings of the 13th ISTRC Symposium*, pp. 90 – 794.
- Nyabwanga, R. N., & Ojera, P. (2012). Inventory management practices and business performance for small-scale enterprises in Kenya. *Journal of business management*, 4.
- Odonde, J. A., Mukras, M.S., Momanyi, G. & Bosire, K.E. (2014). Determinants of Sweet Potatoes (*Ipomoea Batatas* L) Profitability in Rachuonyo South District, Kenya. *International Journal of Managerial Studies and Research (IJMSR)*. Volume 2, Issue 4, May 2014, PP 48-60.
- Okoye, A. (2000). *Financial Accounting for students and Managers*. Benin-city, Nigeria: Mindex publishing Co Ltd
- Republic of Kenya. (2010). *Agricultural sector Development Strategy 2010-2020*. Nairobi Government Printers.
- Republic of Kenya. (2003). *The Economic Recovery Strategy, for Wealth And Employment Creation, 2003 – 2007*: Nairobi, Government Printers.
- Rushton, A., Croucher, P. & Baker, P. (2010). *The Handbook of Logistics and Distribution Management*. Kogan Page Publishers.
- Salami, A., Kamara, A., & Brixiova, Z. (2010). Smallholder agriculture in East Africa: Trends, constraints and opportunities. Working Paper Series No. 105. African Development Bank, Tunis, Tunisia.
- Saliha, T., and Abdessatar, A. (2011). The Determinants of Financial Performance: An Empirical Test Using the Simultaneous Equations Method. *Economics and Finance Review*, 10(1), 01 – 19.
- Telser, L. (1980). Efficiency of working capital management and company and profitability. *Financial practice and education*.
- Turan, F. K., Scala, N. M., Kamrani, A. and Needy, K. L. (2008). "Organizational Sustainability: A New Project Portfolio Management Approach that Integrates Financial and Non-Financial Performance Measures", IIE Annual Conference and Expo (IERC), Vancouver, BC, Canada, May 17-21, p. 1025-1030.
- United Nations Development Programme (UNDP). (2007). *Human Development Report 2007/2008*. UNPD: New York.
- Vu, T. (2001). *Developing SMEs in Vietnam: Present situation and solutions*. Statistical Publishing House, Vietnam.