



EFFECT OF COST MANAGEMENT ON FINANCIAL PERFORMANCE OF AGRIBUSINESS ENTERPRISES IN KENYA

Gitau, B. N.

EFFECT OF COST MANAGEMENT ON FINANCIAL PERFORMANCE OF AGRIBUSINESS ENTERPRISES IN KENYA

Gitau, B. N.

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

Accepted: July 13, 2019

ABSTRACT

Agribusiness enterprises in Kenya are a major economic activity that should be creating employment thus increasing GDP. In the recent past, there have been renewed efforts by the government and other players to promote Agribusiness enterprises. Thus this study sought to determine the influence of cost management on performance of Agribusiness enterprises in Kenya. The study design was descriptive panel research design. Secondary data was used for analysis. The target population was four Agribusiness enterprises with a total population of one thousand two hundred and forty five (1,245) farmers registered as at December, 2018 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 2009-2018 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 members. This was controlled by taking the officials through the areas of cost management to have them understand the concepts under enquiry. The study findings showed that cost management had significant influence on return on investment, a measure of financial performance of Agribusiness enterprises in Kenya and tests for significance also showed that the influence was statistically significant. The study therefore recommended that all Agribusiness enterprises farmers be trained on cost management aspects.

Key words: *Cost management, financial management, Agribusiness enterprises*

CITATION: Gitau, B. N. (2019). Effect of cost management on financial performance of agribusiness enterprises in Kenya. *The Strategic Journal of Business & Change Management*, 6 (3), 237 – 245.

INTRODUCTION

Agriculture in developing countries, all over the world, is experiencing profound, fast-moving changes (Lucas & Timmer, 2005). In Kenya, an average of 60% of the population is dependent on agriculture. The sector contributes more than 60 per cent of the total export earnings and about 45 per cent of government revenue, while providing for most of the country's food requirements (Price house water Coopers [PWC], 2011).

The potential of agriculture and smallholder farming can be illustrated by the enhanced income generation in several East African agricultural export sub-sectors. In this context, Kenyan horticulture exports often serve as an example of agricultural export success in Africa (USAID, 2009). The increasing trend in global demand in developed as well as emerging countries, driven in part by population growth, has created opportunities for the expansion of Agribusiness enterprises by smallholder farmers. Many business people do not want to involve themselves in financial management because they are extremely tied up with other aspects of business work or they do not have enough knowledge of maintaining the system (Korah, 2003). According to Meredith (2006) financial management is one of several functional areas of management but it is the central to the success of any small business including Agribusiness enterprises smallholder agriculture.

Agribusiness enterprises are important for provision of food crop in Kenya. The area under production grew from 20,181 hectares yielding 227,470 tons (valued at KSh 3 billion) in 2009 to 22,989 hectares in 2011 yielding 300,267 tons valued at KSh 3.6 billion (provisional data, HCDA 2012). About one percent of the world's Agribusiness output enters world trade with Canada, United Kingdom, France and Netherlands being the major importing countries (Singh, 2001). China is the world's largest producer with an annual harvest of 100 million tonnes. Some cultivation of the Agribusiness enterprises is carried

out in parts of Eastern, Central and Coast provinces. Nyanza regions account for over 50 percent of national production.

Statement of the Problem

Despite the rise in output and good prices of Agribusiness enterprises in Kenya, the high level of poverty in the producing region casts doubt on the contribution of the enterprises to the wellbeing of its producers. This scenario calls upon any rational investor to question why this failure, and where are the mistakes. For example, empirical evidence has shown that, majority of farmers with nothing to show from their produce and bad financial results in the developed nations had committed some serious cost management mistakes (Mishra *et al.*, 1999; Janse *et al.*, 2002; Ladue *et al.*, 2002).

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 cost 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 cost management on the performance of the Agribusiness enterprises 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 Agribusiness enterprises in Kenya. The specific objectives were to establish the effect of cost management on financial performance of Agribusiness enterprises in Kenya.

Research Hypothesis

H₀: There is no significant effect of cost management on financial performance of Agribusiness enterprises in Kenya.

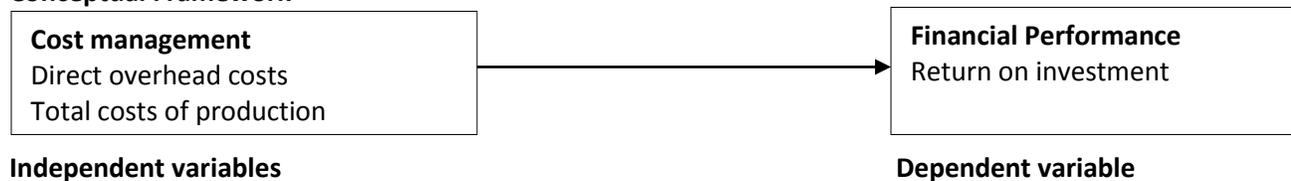
THEORETICAL FRAMEWORK

Financial Stewardship Theory

This theory explains how information asymmetry between principals and agent may impair the efficient allocation of capital (Diamond & Verrecchia, 1991) leading to higher costs of capital (Botosan & Plumlee, 2002). Tayles et al.(2007) in their research, found some support for the fact that, amongst Malaysian companies, greater information asymmetry between investors and the management in high financial management companies meant that there is greater scope for surprise, resulting in stock market volatility and stock price over-reaction. When information is asymmetric in the market, investors without inside

information, such as details concerning human capital, are in a disadvantaged position when judging the quality of companies and this affects the agricultural performance of the firms. Often, principals engage intermediaries such as financial analysts and rating agencies to seek private information to uncover manager's superior information (Healy & Palepu, 2001). The privileged position of analysts, via private meetings with company management, permits some degree of access to additional information not available to ordinary shareholders.

Conceptual Framework



Independent variables

Figure 1: Conceptual Framework

Source: Author (2019)

Financial Performance

To measure the success of an enterprise and to guide executives through the benefits realization process, an appropriate performance measurement model is needed. It is common practice to measure the performance of any business on a financial scale. Return on Investment (ROI) and Return on Capital Employed (ROCE), sales, profitability among others are the most common ways of measuring the financial success of a business (Kaplan & Norton, 2000).

An organization may involve many interested parties with each having their views in applying financial statement analysis in their evaluation. Practitioners use financial ratios for instance, to forecast the future success of organizations, while the researchers' main interest has been to develop models exploiting these ratios. According to Pandey (2005) a ratio is used as an index or yardstick for evaluating the financial position and performance of a firm.

In the same vein, Adeniji (2004) posited that ratios

express the relationship between two or more financial /statistical data in the financial statement or management account. It is also expressed as a percentage of or in relation to another figure or group of figures in the same financial statement. Ilaboya (2005) recognizes that accounting ratio is an index computed from two or more accounting values with close affinity or relationship. He further asserted that it is based on information disclosed in the financial statements; and the efficacy of accounting ratios in assessing the performance of business organizations is limited by the distortions in accounting data from which they are derived.

Cost management and performance

Generally, operating costs are expenses incurred in the process of running business operations that actually turn acquired products intended for sale into actual sales revenue. They include payments to workers and storage expenses among others. Cost behavior according to Asaolu & Nassar (2007) is the study of the ways in which costs vary or do not vary

with the level of activity in an organization. Drury (2011) on the other hand, also defines cost as expenses which have been consumed in earning revenue. However, for adequate profit to be recorded from a business there is a need for adequate control of cost.

Innes et al. (2000) affirmed that the survival triplet today for any company is how to manage product/service cost, quality, and performance. According to their observations, customers are continuously demanding high quality and better performance products/services and at the same time, they want the price to be reasonably low. The shareholders are also demanding a required rate of return on their investment from the company hence, cost has become a residual. The challenge is being able to manufacture products or provide services within the acceptable cost framework. Innes et al. (2000) concluded their study with a recommendation that cost management has to be an ongoing and continuous improvement activity within the company so as to enhance profitability and survival.

According to Aburime (2008) profit means the difference in the revenue generated from the sales of output and the full opportunity cost of factors used in the production of the output. It is therefore important to note that quantity and efficiency of sweet potato output determines the profit of the farm. Recent empirical studies (Pandey, 2005; Van horn & Wachawics, 2005) have established cost control as the most important goal of financial management practice and have been found to be universally associated with each other.

Well functioning markets send effective signals on cost control practices that influence incentives for investments by firms, households and workers, and enhance their efficiency and opportunities facing them (International Livestock and Research Institute [ILRI], 2011). According to Poulton (2006) this is despite the fact that in developing countries,

particularly in sub-Saharan Africa, cost of agricultural inputs, outputs and finance remain a big challenge and infrastructure, both 'hard' (e.g. roads) and 'soft' (e.g. telecommunications and information) are poor. The result is high transaction risks and costs which can distort crop choices by farmers and significantly dampen farmers' returns from market participation and discourage them from producing for the market (ILRI, 2011).

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 agribusiness enterprises registered by the commissioner of cooperatives in Kenya as at 31st December 2018. The study targeted farmers who were members of four (4) agribusiness enterprises with a total population of 1,245 farmers (MOA, 2015).

The criteria adopted in selection of the sample for this study was that the agribusiness enterprises must be registered with the commissioner of cooperatives as at December 2018. 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. Four agribusiness enterprises were sampled.

Secondary data was obtained from the review of audited financial statements of the agribusiness enterprises over the 10-year period from 2009 to 2018 (both years inclusive). The data collected aided in computation of direct overhead costs as well as return on investment as the financial performance indicator. Therefore, agribusiness enterprises audited financial statements were reviewed.

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. For instance, the current study sought to investigate the percentage by which responses on performance increases or decreases when responses on cost management change by 1 percent.

Secondary data collected on overhead costs from the audited financial statements of the four agribusiness enterprises during the period 2009-2018 was analyzed using Panel Multiple Regression analysis to test the statistical relationships and significance of the various independent variables (cost management) on the dependent variables (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:

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + U_{it}$$

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

Cost management

The objective of this analysis was to find out if there exists a relationship between cost management practice (independent variable) and financial performance (dependent variable) and to this extent, the linear regression analysis which shows the relationship between the dependent variable which is financial performance as measured by ROI and independent variable which is cost management practice. For this variable, the regression model was summarized in Table 1.

Table 1: Regression Coefficients – Cost management and ROI

Model	Unstandardized	Standardized	t	Sig.	
	Coefficients	Coefficients			
	B	Std. Error	Beta		
Constant	14.895	.945		15.763	.000
Cost management	.433	.029	.602	15.092	.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:

$$Y = 14.895 + 0.433 X_i$$

The results indicated that a one percentage change in cost management leads to 43.3% increase in return on amounts invested by the agribusiness enterprises, further affirming research findings by Brignall &

Modell (2000) that the ability to accurately forecast cost performance allows organizations or project

teams to confidently allocate capital, reducing financial risk, possibly reducing the cost of capital.

Table 2: Model summary- Cost management and ROI

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.602	.363	.361	4.36333

The results on table 2 of the linear regression showed $R^2=0.361$ indicating that the change in ROI of the agribusiness enterprises can be explained significantly by the cost management practice, upto 36.1 %. On the other hand, the value of r which was 0.602 is an indication that there is a strong linear relationship between cost management and ROI by the agribusiness enterprises in Kenya.

This finding agreed with the findings of Ton (2009), who surveyed the effects of labour on profitability at a retail market in Boston and established that increasing the amount of labour at a store is associated with an increase in profitability through its impact on performance. The findings further corroborate those of Rajeev (2010) whose study on machine tools small scale enterprises concluded that there is need for business enterprises to embrace

effective cost management practices in order to improve on their performance.

The finding also agreed with that of Salawati et al. (2012) who observed that in the 1980s inventories of raw materials, work-in-progress components and finished goods were kept as a buffer against the possibility of running out of needed items. They further averred that nevertheless, large buffer stock consume valuable resources and generate hidden costs sentiments, concurring with study finding 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 study concluded that stock control is an important undertaking by the sweet potato cooperative societies that would curb perishability when in excess and at the same time ensure sufficient utilization of costs.

Table 3: ANOVA – Cost Management and ROI

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression		1	4336.653	227.782	.000
Residual	7615.461	298	19.039		
Total	11952.115	299			

Table 3 showed a significant F-statistic of 227.782 at 0.00 level of significance since the significance of the F-statistic was 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 implied that cost management as a variable in this study cannot be ignored when explaining the factors that have an influence on ROI. Cost management is therefore a significant variable that must be taken into account when studying performance of

agribusiness enterprises affirming findings by (Pandey, 2005; Van horn & Wachawics, 2005) who established that cost control was the most important goal of financial management practice and have been found to be universally associated with financial performance.

Hypothesis Testing Results

The analysis results of secondary data showed that operating cost management has significant effect on financial performance of agribusiness enterprises at 5% level. This was evidenced by the p-values

corresponding to the coefficients of operating cost management variable ($p=0.0000$, $p=0.0000$ 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 operating cost management has significant effect on financial performance of agribusiness enterprises in Kenya.

SUMMARY

The objective of the study sought to establish the influence of operating cost management on performance of agribusiness enterprises in Kenya. Results revealed that operating cost management had positive influence on performance as measured by ROI. This is supported by the coefficient of determination which showed that operating cost management explains the variations in return on investment of agribusiness enterprises in Kenya. The test for significance also showed that the influence was statistically significant and hence the alternative hypothesis was accepted. This means that operating cost management is good at skimming out profits and having a good return to their initial outlay.

CONCLUSION

Based on the study findings, it was concluded that cost management affect performance of agribusiness enterprises in Kenya positively. The adoption of the cost management by the agribusiness enterprises 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

REFERENCES

- Aburime, T.U. (2008). Determinants of bank profitability: company-level evidence from Nigeria. Retrieved from *SSRN 1106825*. Retrieved from: <http://ssrn.com/abstract = 1106825>.
- Adeniji, A. (2004). *An Insight into Management Accounting*, Third Edition Value Analysis Consult (Published).
- Asaolu, T. O., & Nassar, M. L. (2007). *Essentials of Management Accounting and Financial Management*. Cedar Productions, Ile-Ife, Nigeria.

though farmers need to be sensitized more on the need to adopt fully the management of cost. Agribusiness enterprises have continued to perform well even when production of other crops has been declined over the years. This can be explained by the adoption of management of cost 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 agribusiness enterprises is not purely and wholly derived from the management of cost because there are other drivers of performance in the farming sector.

RECOMMENDATIONS

Cost management entails monitoring of the direct and the indirect costs of a business venture. There is therefore need for both farmers and cooperative officials to have close control over cost position of their businesses. Money should be used for the intended purposes hence the need for budgeting. The cooperative officials should also embrace accountability techniques so as to win the shareholders trust and to create value on their returns.

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 cost management on other farming enterprises and especially those in large production.

- 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.
- Brignall, T. J. & Modell, S., (2000). An institutional perspective on performance measurement and management in the 'New Public Sector', *Management Accounting Research*, 11, 281–306.
- Botosan, M. & Plumlee, S. (2002). Effects of Working Capital Management on SME Profitability. *International Journal of Managerial Finance*, Vol. 3 Iss: 2, 164 –177. Emerald Group Publishing Limited.
- Bryman, A., & Bell, E. (2003). *Business Research Methods*. UK: Oxford University Press.
- Castillo, J.J. (2009). Populationsamplingtechniques. Retrieved from *Experiment Resources*: <http://www.experiment-resources.com/population-amplng.html>, retrieved on 10th September 2015.
- Chandra, P. (2003). *Finance Sense: Finance for Non-Finance Executives*. 3rd Edition. Tata McGraw Hill, India.
- Cooper, D. R., & Schindler, P. S. (2006). *Business Research Methods* (9th edition). USA: McGraw-Hill.
- Diamond, D. & Verrecchia, H. (1991). *Monitoring and Reputation: the Choice between Bank Loan and Directly Placed Debt*. *Journal of Political Economy*, 99 (4): 689–721.
- Drury, C. (2011). *Management and Cost Accounting*, Seventh Edition, South-Western Cengage Learning Company.
- Gall, M. D., Borg, W. R., & Gall, J. P. (2008). *Education research: An introduction* (8th ed.). New York: Pearson publishers.
- Gujarati, N. (2003). *Basic Econometrics*. Fourth Edition, New York: McGraw-Hill.
- HCDA. (2012). *Horticulture Validated Report 2012, Nairobi*: <http://www.hcda.or.ke/Statistics/2012/Horticulture%20perfomance%202010%20to%202012.pdf>
- Healy, P.M. & Palepu, K. G. (2001). [Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature](#), *Journal of Accounting and Economics*, 31, (1-3), 405-440.
- Ilaboya, O.J. (2005). *Advanced Financial Accounting*. Dalag Prints and Packaging United.
- Innes, S., John, B., Mitchell & Sinclair, M.A. (2000). Resource use efficiency of Millet/ Cowpea Intercropping in Niger State, Nigeria. 48th Agricultural Economists Association of South Africa (AEASA) Conference, Cape Town, South Africa.
- Janse, V., Rensburg, B. & Groenewald, J.A. (2002). The distribution of financial ratios among farmers during a period of agricultural setbacks: Grain farmers in Western Transvaal. *Agrekon*. 26 (1): 13- 19.
- Kaplan, R. S. & Norton, D. P. (2000). *Having trouble with your strategy? Then map it*. Boston Massachusetts USA: Harvard Business School Press.
- Kothari, C.R. (2004). *Research Methodology: Methods & Techniques*, 2nd edition. New Deli: Wishwa Prakashan.
- Korah, G. (2003). *Good Financial Management by Small and Medium Enterprises*.
- LaDue, E. L., Gloy, B. A., and Hyde, J. (2002). "Dairy Farm Management and Long Term Farm Financial Performance." *Agr. and Resour. Econ. Rev.* 31,2: 233S47.

- Lucas, S. & Timmer, P. (2005). Connecting the Poor to Economic Growth: Eight Key questions. *Centre for Global Development*.
- Meredith, G. (2006). Financial Management of the Small Enterprise. McGraw- Hill, Sydney, New South Wales.
- Mishra, R.K.(1999). Problems of Working Capital, Mumbai Somaiya Publications Pvt. Ltd.
- MOA. (2010). Economic Review of Agriculture. Nairobi: Government Printer.
- Nyabwanga, R. N., & Ojera, P. (2012). Inventory management practices and business performance for small-scale enterprises in Kenya. *Journal of business management*, 4.
- Orodho, J.A. (2003). *Essentials of educational and Social Sciences Research Methods*. Nairobi.
- Pandey, I.M. (2005). Financial Management 9th Edition, Vikas Publishing House PVT Ltd.
- Poulton,T. (2006). Agribusiness management in an Economy: the Nigerian perspective (Revised edition), Uyo. Robert minder international publishers.
- PWC (2011). *Agricultural Companies in Kenya*, Retrieved from <http://www.pwc.com/ke/en/Industries/agriculture.jhtml>.
- Rajeev, N. (2010). Inventory management performance in machine tools SMEs: What factors do influence them? *International journal of industrial engineering and management*, 3, 542-560.
- Salawati, S., Tinggi, M. & Kadri, N. (2012). Inventory management in malasyian construcion firms: impact on performance. *SIU Journal management*, 2, 59-60.
- Tayles, K. (2007). Growth theories, old and new, and the role of agriculture in economic development. *Economic and social development paper (FAO)*.
- Ton, Z. (2009). The Effect of Labor on Profitability: The Role of Quality. Working Paper 09-040 available at www.hbs.edu/faculty/Pages/download.aspx?name=09-040.pdf, accessed on 20th August, 2015.
- USAID (2009). Ethiopian Horticulture Producers Enjoy New Export, Success Story #14, March [www.fintrac.com/cpanelx_pu/ethiopia%20atep/16_25_8095_USAID_ATEP_Success_14_%20\(2\).pdf](http://www.fintrac.com/cpanelx_pu/ethiopia%20atep/16_25_8095_USAID_ATEP_Success_14_%20(2).pdf)
- Van-horn, J.C. & Wachowicz J.M. (2005), "Fundamentals of Financial Management" (12th edition). New York: Prentice hull publishers.