

## **Influence of Financial Capability on Competitive Advantage of Sugar Companies in Western Kenya**

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**ABSTRACT:-** The sugar industry contributes about 15 percent to Kenya's agricultural GDP and supports an estimated 25 percent of the country's population. Achieving financial outcomes requires an organization to accurately balance its expenditure within the limitations of its income stream. Financial plans and budgets must be flexible enough to allow for spending patterns to be adjusted as needed and be fully aligned to the organization's strategic and service planning. Memba and Nyanumba, (2013) established that the main causes of financial distress are endogenous variables as compared to exogenous variables. Financial Structure, leverage ratio and cash flow ratios affect the financial performance of the firm. The objective of the study was to assess the influence of financial capability on competitive advantage of sugar companies in Western Kenya. Dynamic Capabilities and Finance theories underpinned this study. The target population was composed of six sugar companies. The study adopted descriptive and correlation research designs. The primary data was collected using a questionnaire pretested for validity and reliability and used a purposive sample survey to obtain the empirical data to determine the linkages between variables. The respondents were 727 senior and middle level managers. Out of 88 questionnaires sent out, 64 questionnaires were received back giving a response rate of 73%. Descriptive and inferential statistics were used to analyze the data. The result of the logit and correlation analyses and hypothesis testing indicated that availability of financial resources does not result in direct competitive advantage of the firm but it depends on how these funds are strategically utilized. With the exception of West Sugar Company, the rest of the sugar firms under study are heavily indebted and insolvent as brought out by the secondary data. The Government should intervene and establish an environment for the sugar industry to enjoy competitive advantage in the COMESA free trade area.

**Key Words:-** Strategic Capability, Financial Capability, Capital Structure, Cash flow Ratios, Competitive Advantage.

### **I. BACKGROUND OF THE STUDY**

Companies today operate in an increasingly dynamic environment and Organizations must be able to act quickly in response to opportunities and barriers (Papulova & Papulova, 2006). The sugar industry plays a significant role in Kenya's rural economy, contributing about 15 percent to the country's agricultural GDP (KSI, 2009). An estimated 25 percent of the country's population depends directly or indirectly on the sugar industry for their livelihood (ActionAid International Kenya, 2005). Sugar Companies that are flexible and prepared to undertake necessary change are more likely to grow and prosper in this challenging economic environment. In 2009, sugar production costs in Kenya were the highest in the COMESA region at USD 415- 500 as compared to Egypt and Swaziland at USD 250-300; Zambia and Malawi at USD 200-260 and Uganda and Tanzania at USD 140-190 (KSI, 2009).

Western and Nyanza regions dominate sugarcane production in Kenya and the population density is very high in these two provinces. Smallholder farmers supply over 92 percent of the sugarcane processed by the sugar companies, while the remainder is supplied by factory-owned nucleus estates (KSI, 2009; KSB, 2010). The above two regions have nine operational sugar firms namely: Muhoroni, Chemelil, Mumias, Nzoia, South Nyanza, West Kenya, Kibos, Butali and Sukari Industries. Neighbouring Rift Valley districts grow sugarcane and have two sugar factories - Soim and Trans Mara Sugar. Coast province has one sugar factory called Kwale Sugar Industries Limited. The sugar firms are the "life-line" of surrounding towns such as Mumias, Muhoroni, Chemelil and Awendo and most farmers in Western part of Kenya rely on sugarcane as the only major source of income (ActionAid International Kenya, 2005). In Kenya, the sugar industry is dominated by the state, than by the practices of private firms (Ellis & Singh, 2010). The focus of this study is in these two provinces due to the economic importance of sugarcane in these two provinces.

Strategic capability refers to: the ability to develop soundly based strategies and the ability to apply strategic thinking and manage an organization strategically (Aldridge, 2007). Components of Strategic capabilities are resources and competencies. Resources are the assets that organizations have and competencies are the ways those assets are deployed effectively (Johnson, Whittington, & Scholes, 2011). Competence means a skill and the standard of performance, whilst competency refers to behavior by which it is achieved. Achieving financial outcomes requires an organization to accurately balance its expenditure within the limitations of its income stream. Deloitte study of over 1,100 businesses across the globe found that financial management was evolving from an uninspiring, albeit necessary, function of doing business to one of the most promising levers of business transformation. The finance masters have not only invested in strong core finance capabilities, they have gone further by building much better business capabilities to support business improvement and transformation (Chartered Institute of Management Accountants, 2009).

A firm's capital structure simply refers to its combination of debt and equity (Calabrese, 2011). Capital structure decision consists of mix of debt and equity and this is a crucial decision because false decision may lead to financial distress and even to bankruptcy. Efficient management of debt ensures that a firm has enough cash to pay all their suppliers on time. A corporation that borrows too much money might face bankruptcy or default during a business downturn, while a less-leveraged corporation might survive.

Cash flow ratios test how much cash was generated over a period of time and compare that to near-term obligations, giving a dynamic picture of what resources the company can muster to meet its commitments. The cash flow ratios most useful fall into two general categories: ratios to test for solvency and liquidity and those that indicate the viability of a company as a going concern.

According to Porter (1980) agribusiness become more competitive through cost leadership and /or product differentiation. The competitive advantage of a firm can be taken as its ability to do better than comparable firms in productivity, sales, market shares, or profitability (Lall, 2001). Further, a company maybe said to have a competitive advantage over its rivals when its profitability is greater than the average profitability of all other companies competing for the same set of customers. Competitive advantage is only achieved if a company manages to sustain its edge over its rivals over time. The higher its profitability relative to rivals, the greater its competitive advantage will be.

### **Statement of the Problem**

Kenya's sugar manufacturing firms have remained uncompetitive in both local and regional market. In 2009, sugar production costs in Kenya were the highest in the COMESA region at USD 415- 500 as compared to Egypt and Swaziland at USD 250-300; Zambia and Malawi at USD 200-260 and Uganda and Tanzania at USD 140-190. Low cost imported sugar depresses prices and production, distorts sugar markets, leads to reduced income for farmers and threatens collapse of the sugar industry in Kenya. The above mentioned challenge facing the Kenya sugar industry negatively affect its competitive advantage in the COMESA free market putting at risk 25% of the population that depends on the industry. Several authors in Kenya have written about the strategic issues facing the sugar industry in Kenya but there is hardly any empirical research on influence of financial capability on competitive advantage of the Kenya sugar industry. Therefore, the present research on the Influence of Financial Capability on Competitive Advantage of Sugar Companies in Western Kenya intends to fill this gap and provide new knowledge and a better understanding of the financial effects in the sugar industry in Kenya.

### **Study Objective**

The objective of the study was to assess the influence of financial capability on competitive advantage of sugar companies in Western Kenya.

### **Research Hypothesis**

In answering the objective, the study also sought to test the hypothesis:

**H<sub>01</sub>:** There is no significant relationship between financial capability and competitive advantage of sugar companies in Western Kenya.

### **Theoretical Framework**

Theories are analytical tools for understanding, explaining and making predictions about a given subject matter (Hawking, 1996). Dynamic Capability theory and Finance theories are the theories that under-pin this study.

### **Dynamic Capability Theory**

Dynamic capability theory explains the capacity of an organization to identify new resources, extend or modify its resource base to achieve competitive advantage. According to Pavlou and El Sawy, (2011), the dynamic capability view originates from Schumpeter's innovation-based competition where competitive advantage is based on the creative destruction of existing resources and novel recombination into new operational capabilities.

The concept of dynamic capabilities (DCs) is an extension of resource-based view theory (RBV) for its ability to respond to rapidly technological change (Teece, 2007). Dynamic capabilities have lent value to the RBV arguments as they transform what is essentially a static view into one that can encompass competitive advantage in a dynamic context (Barney, 2001a, b). Teece, Pisano and Shuen (1997) developed the notion of dynamic capabilities as the capacity of the firms to renew competencies so as to achieve congruence with the changing business environment by adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competencies. The dynamic capabilities theory suggests that in order to compete successfully in their markets, firms need two types of capabilities: 'Ordinary' capabilities allow organizations to operate their chosen lines of business efficiently and effectively, while 'dynamic capabilities' help them to upgrade their ordinary capabilities, or to create new ones (Winter, 2003).

### **Finance Theories**

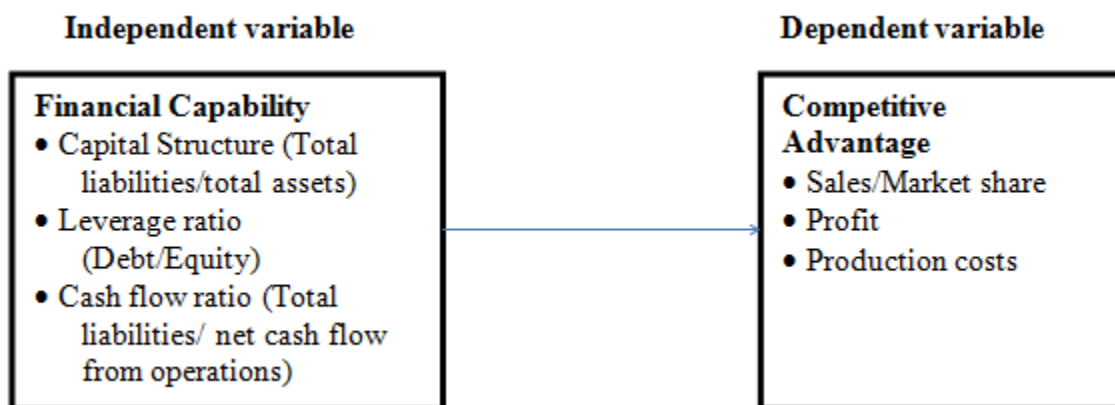
The most commonly used finance theories are tradeoff, pecking order and free cash flow theories. Trade-Off theory suggested by Myers (1984) emphasize a balance between tax saving arising from debt, decrease in agent cost and bankruptcy and financial distress costs. Sheikh and Wang (2010) stated that Trade Off theory expected to choose a target capital structure that maximizes the firm value by minimizing the costs of prevailing market imperfections. The existence of an optimal level of debt implies that firms should appear to have a fairly stable level of debt which reflects an optimal target level (Optimal Debt/ Equity Ratio). The tradeoff theory says that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress.

The pecking order theory says that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. Pecking Order theory does not take into consideration optimal capital structure (Luigi & Sorin, 2009; Mostafa & Boregowda, 2014). Pecking order theory argues that firms first choose to employ internal sources like reserves and retain earnings to finance a project instead of arranging new debt, or prefer debt to issuance of new shares. This theory assumes firms with more profitability will issue less debt and more likely finance their activities with internal funds. Companies maximize their value by choosing to finance new investments with cheapest available sources (Sheikh & Wang, 2010).

Free cash flow is defined as the amount of cash flow in excess of that required for investments in profitable projects or those with positive net present values when discounted at the relevant cost of capital (Jensen, 1986). According to the Free Cash Flow Theory of Jensen (1986), managers prefer to hold high cash level to enhance the volume of total assets in their control. Free cash flow is internally generated capital, which can be used when companies are unable to obtain external funds (Myers & Majluf, 1984). The excess cash may also be used to balance price fluctuation, which maintains the investment financing, particularly when the generated funds are in decline. Free cash flow may result in an increase or a decrease of the firm value depending on its utilization (McCabe & Yook, 1997).

### **Conceptual framework**

The study was guided by the conceptual framework in figure 1. The independent variable is the financial capability and the dependent variable is the competitive advantage.



**Figure1: Conceptual framework**

## II. EMPIRICAL LITERATURE REVIEW

The ratio of total liabilities to net cash from operations estimates the number of years the firm will take to repay debt at the current level of net cash from operations and is called debt cover. Giacomino and Mielke (1993) performed an empirical analysis for the periods 1986 to 1988 of the US industries chosen amongst the Fortune 500. The three-year averages were: chemical industry, 5.62 years; food industry, 6.06 years and for electronic industry 6.5 years. Jooste (1999) did a similar evaluation for companies in the same industries in South Africa (SA). The industry ratios were calculated over a three-year period 1994 to 1996 and results were 2.52 years for chemical industry, 3.27 years food industry and 3.18 years for electronics industry.

Kochhar (1997) looked at the role of financial management in generating superior performance for a firm and concluded that to ensure sustained competitive advantage, capabilities concerning the financing structure of a firm are necessary to extract rents from idiosyncratic resources. Firms cannot earn returns inherent in their resources if the capital structure is not consistent with strategy. Consequently, it is not sufficient for a firm to possess resources that generate sustained competitive advantages; its financial policies are important in realizing the potential rents.

The primary objective of the firm is to maximize the shareholders wealth by selecting an appropriate mix of the sources of finance for a firm including retained earnings, proceeds from the issue of ordinary shares, preference shares and debt (Afza & Hussain, 2011). Amuzu (2010) looked at cash flow ratio as a measure of performance of listed Companies in Ghana. The research project relied on a qualitative methodology and findings were that Cash Flow Ratios are better tools in assessing a company’s financial performance and a credible indicator on the strength, or riskiness, of a particular company. Cash Flow Statements and Ratios should be used in the decision for investments as this would dictate activity.

Shubita and Alsawalhah (2012) studied the relationship between capital structure and profitability of 39 Industrial Jordanian companies during a six-year period (2004-2009). Correlations and multiple regression analysis of data revealed significantly negative relation between short debt to total assets and profitability and total debt to total assets and profitability. This suggests that profitable firms depend more on equity as their main financing option. The capital structure decision is crucial because of the impact such a decision has on an organization’s ability to deal with its competitive environment.

Velnampy and Niresh (2012) studied the relationship between capital structure and profitability of ten Srilankan banks over the 8 year period from 2002 to 2009. The data was analyzed by using descriptive statistics and correlation analysis. Results of the analysis showed that there is a negative association between capital structure and profitability. The researchers established that the debt/equity ratio is safe up to 2. Rehman (2013) research showed negative relationship of debt equity ratio with earning per share, net profit margin and return on equity. The objective of the study was to investigate the influence of financial leverage on financial performance by taking evidence from the period 2006-2011 for 35 listed sugar companies of Pakistan. The dependent variable was the financial performance while the independent variable was the financial leverage which was measured by using debt to equity ratio. Descriptive statistics and correlation analysis were used.

Abubakar (2015) looked at the relationship between financial leverage and financial performance with specific reference to how debt- equity ratio and debt ratio affect return on equity of 11 deposit money banks in Nigeria. The study covered 9 years from 2005 to 2013 and adopted both descriptive and correlation analysis.

The results showed a significant negative relationship between debt-equity ratio and financial performance. A debt- equity value of 2 according to Velnampy and Niresh (2012) is considered normal and safe as cited by Abubakar.

Suryani, Iramani and Awati (2016) objective was to identify financial capability within Small and Medium Enterprises (SMEs) in Indonesia and design application tools to facilitate their financial management. Questionnaires were used to measure SME business performance and financial capability. The study found out that growth in sales and profit growth was positively correlated with financial capability. The study concluded that business decisions, especially regarding funding, profits, and investments can be optimized if these aspects are supported by sufficient financial capabilities.

### III. RESEARCH METHODOLOGY

According to Shukla (2010) a research design is a framework or a blue print for conducting a research. It provides a clear plan on how the research will be conducted and helps the researchers in sticking to the plan. The present research is a descriptive cross sectional and correlational designs. The data sources that were employed in this study consisted of both primary and secondary data. The population consisted Muhoroni, Chemelil, Mumias, Nzoia, South Nyanza and West Kenya and the respondents were 727 senior and middle level managers working in these companies. The respondents were 88 drawn from 727 senior and middle level managers working in the companies. Yamane (1967) provides a simplified formula for calculating the sample size of the respondents. A 95% confidence level and precision level,  $e = \pm 10\%$  is assumed for the equation below:

$$n = \frac{N}{1 + N(e^2)} = \frac{727}{1 + 727(0.1^2)} = 88$$

Where n is the sample size and N is the respondents' size.

Out of the 88 respondents, 22 were senior managers while 66 were middle level managers. Convenience sampling was used during data collection targeting respondents from senior and middle level managers who had the required information. The instrument for primary data collection in this research was a numerical 5-point Likert scale questionnaire pretested for validity and reliability. A sample size of 9 participants was used to test the questionnaire for validity and reliability in line with Baker (1994) proposal that 10% of the sample size is good enough for pilot testing of the questionnaire. Construct validity assesses whether a questionnaire has been designed in a manner that will elicit the required information from the respondents. While content validity is a measure of the degree to which data collected using a particular instrument represents a specific domain of indicators or content of a particular concept (Mugenda & Mugenda, 2003). Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. Internal reliability is the extent to which data collection, analysis and interpretation are consistent. External reliability is the extent to which the results can be replicated.

Descriptive statistics and inferential statistics were used to analyze the data. Descriptive statistics was used to summarize both the primary and the secondary data to enable meaningful interpretation and description. The descriptive analysis technics that were used in this study were: percentages, means, overall mean and standard deviation. Standard Deviation (SD) provides an indication of how far the individual responses to a question vary or "deviate" from the mean. The distribution of responses is important to consider and the SD provides a valuable descriptive measure of this. Likert item means and overall mean were analyzed despite the ordinal nature of Likert items. Baggaley and Hull (1983), Maurer and Pierce (1998), Allen and Seaman (1997) and Vickers (1999) as cited by Brown (2011) have argued that Likert scales can indeed be analyzed effectively as interval scales as long as both the item mean and the item standard deviations are provided

Inferential statistics was used in the study to enable the researcher to reach conclusions about the relationship between the variables. Spearman's correlation analysis was performed to determine if variables were correlated, the strength and the direction of the relationship between the variables. Spearman's rho measures the strength of association and direction of two variables in a single value between -1 and +1. This value is called the correlation coefficient. The correlation strengths were interpreted using Cohen (1988) decision rules where r values from 0.1 to 0.3 indicate weak correlation, 0.31 to 0.5 indicate moderate correlation strength and greater than 0.5 indicate a strong correlation between the variables. Chi- square statistic was used for hypotheses testing to determine the relationships and predictions between the independent and dependent variables. The hypotheses were tested within 95 per cent level of confidence interval or 5 per cent level of significance.



**IV. RESULTS AND DISCUSSION**

A total of 64 usable questionnaires were returned giving a response rate of 73%. Out of the 64 questionnaires received, 47 (73.4%) were from the middle level managers and 17(26.6%) from the senior level managers According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for analysis and reporting. This meant that the response rate of 73% was excellent for the study to proceed to the data analysis and discussion.

**Descriptive Statistics**

The preceding section presents findings on how financial capability of a firm influences competitive advantage of Sugar Companies in western Kenya. The results are presented in Table 1 and Table 2 measured in a Likert scale of 1-5 where 5= Strongly Agree; 4=Agree; 3=Neutral; 2= Disagree; 1 = Strongly disagree, M= Mean, SD = Standard deviation and % = Percentage of Respondents.

**Table 1: Financial Capability (Financial adequacy of the Company)**

S/N	Statement		5	4	3	2	1	M	SD
a)	The organization pays its farmers within the stipulated timelines.	%	9.4	48.4	9.4	15.6	17.2	3.20	1.30
b)	The organization pays its other suppliers within the stipulated or agreed timelines.	%	7.8	37.5	15.6	21.9	17.2	3.03	1.28
c)	The organization is able to finance its operations from internally generated funds.	%	12.5	45.3	18.8	10.9	12.5	3.38	1.23
d)	The company has adequate cash reserves which are used for new asset creation and investment to grow its production facilities.	%	1.6	15.6	28.1	31.3	23.4	2.69	1.19
<b>Overall mean</b>								<b>3.08</b>	<b>1.25</b>

The highest Likert item mean was 3.38 for the organizations being able to finance their operations from internally generated funds. In this case, 57.3% of the respondents agreed that the organizations are able to finance their operations from internally generated funds, 18.8% were neutral and 23.4% were of the opinion that their organizations were not able to finance their operations from only internally generated funds. The overall mean for the Organizations being able to meet their financial obligations as stipulated or on time was 3.08 and standard deviation of 1.25. Likert scale mean of 3.08 indicated that the firms’ financial performance was moderate and standard deviation of 1.25 showed less convergence by the respondents on issues of financial adequacy. Low factory capacity utilization with a score of 76.6% with a Likert item mean of 3.86 and low factory extraction efficiency with a score of 82.8% and Likert item mean of 3.94 are factors within the control of the firms and with good strategies the firms should be able to overcome these challenges in order to increase the revenue of the firms.

**Table 2: Financial Capability (Financial inadequacy of the Company)**

S/N	Statement		5	4	3	2	1	M	Std.
e)	The company struggles to service its operations.	%	20.3	50	10.9	12.5	6.3	3.63	1.19
f)	The company carries more debt than its equity.	%	20.3	28.1	28.1	9.4	14.1	3.16	1.30
g)	The company carries more debt than its assets.	%	14.1	25	25	20.3	15.6	3.12	1.32
h)	The company struggles to service its current and long term debts.	%	23.4	50	12.5	7.8	6.3	3.66	1.09
i)	The company usually borrows funds to finance major factory rehabilitation.	%	34.4	45.3	7.8	10.9	1.6	3.91	1.11
j)	The company borrows heavily to finance its capital expenditure.	%	18.8	15.6	21.9	29.7	14.1	3.02	1.40
k)	Court awards and other litigation costs for sugarcane not harvested are causing cash flow problems	%	9.4	37.5	21.9	15.6	15.6	3.09	1.26

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l)	Low factory extraction efficiency reduces cash generation	%	28.1	54.7	10.9	4.7	1.6	3.94	0.92
m)	Lack of long periods of adequate mature sugarcane affect company finances.	%	9.4	34.4	17.2	21.9	17.2	3.08	1.25
n)	Low factory capacity utilization due to frequent factory breakdowns reduces projected company revenue	%	26.6	50	9.4	10.9	3.1	3.86	1.35
o)	Weakening Kenya shilling increases costs of importing spares	%	29.7	42.2	17.2	7.8	3.1	3.88	1.35
p)	Poaching of firm's developed Sugarcane by other millers cause revenue decline of the Organization.	%	39.1	40.6	12.5	3.1	4.7	4.06	<b>1.49</b>
<b>Overall mean</b>								<b>3.53</b>	<b>1.25</b>

The firms usually borrow funds to finance major factory rehabilitation with a score of 79.7% and Likert item mean of 3.91 indicate that the firms have high leverage ratio. The Company struggles to service its current and long term debts with a score of 73.4% and Likert item mean of 3.66 indicate that the firms are operating on high total liabilities to total assets ratio and high debt to equity ratio. The overall mean for the Likert scale was 3.53 indicating that the survival of most of the sugar firms depends to a large extent on external borrowing of funds resulting in weak capital structure and high leverage (debt/equity ratio). The standard deviation was 1.25 from the mean indicating less convergence of the respondents on issues of financial adequacy. The heavy borrowing of funds is detrimental to the smooth operations of the firms as the various studies have shown. The respondents had moderate convergence that low factory extraction efficiency reduces cash generation by standard deviation of 0.92.

**Capital Structure (Total Liabilities/Total Assets)**

The debt ratio measures the proportion of total assets financed by the firm's creditors.

$$\text{Debt Ratio} = \frac{\text{Total Liabilities (Total Debt)}}{\text{Total Assets}}$$

If the ratio is below 1, then total assets exceed total liabilities. Debt ratio is the percent of financing in the form of liabilities. Debt ratios over several years for various sugar companies under study are shown in Table 3

**Table 3: Capital Structure or Debt ratio (Total Liabilities to Total Assets)**

Firm		2010/11	2011/12	2012/13	2013/14	2014/15
Muhoroni	Total liabilities(A)	14.2B	19.1B	19.13B	19.34B	36.94B
	Total assets(B)	1.5B	914M	1.059B	891M	895M
	<b>A/B</b>	<b>9.47</b>	<b>20.90</b>	<b>18.06</b>	<b>21.71</b>	<b>41.27</b>
Chemelil	Total liabilities(A)	1.66B	2.133B	2.24B	2.22B	2.334B
	Total assets(B)	3.47B	3.23B	5.24B	5.23B	5.08B
	<b>A/B</b>	<b>0.48</b>	<b>0.66</b>	<b>0.43</b>	<b>0.42</b>	<b>0.46</b>
Nzoia	Total liabilities(A)	21B	21B	38B	39.5B	38B
	Total assets(B)	11B	12B	10B	9.6B	9.5B
	<b>A/B</b>	<b>1.91</b>	<b>1.75</b>	<b>3.8</b>	<b>4.11</b>	<b>4.00</b>
Mumias	Total liabilities(A)	8.7B	11.7B	13.9B	12.9B	14.5B
	Total assets(B)	23.2B	27.4B	27.3B	23.6B	20.4B
	<b>A/B</b>	<b>0.38</b>	<b>0.43</b>	<b>0.51</b>	<b>0.55</b>	<b>0.71</b>
South Nyanza	Total liabilities(A)	2.9B	3.4B	3.4 B	4.1B	4.0B
	Total assets(B)	5.5B	6.7B	6.1B	6.3B	5.6B
	<b>A/B</b>	<b>0.53</b>	<b>0.51</b>	<b>0.56</b>	<b>0.65</b>	<b>0.71</b>
<b>Firm</b>		<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	
West Kenya	Total liabilities(A)	3B	3.1B	2.6B	1.7B	
	Total assets(B)	5.6B	6.0B	6.44B	6.7B	
	<b>A/B</b>	<b>0.54</b>	<b>0.52</b>	<b>0.40</b>	<b>0.25</b>	

Source: Respective Sugar Companies (2016)

Muhoroni and Nzoia have debt ratio of above one. Hence if the firms closed, the creditors would not be able to recover all their money. Mumias and South Nyanza Sugar Companies had a debt ratio of 0.71 in

2014/2015. In this case the value is below one and hence creditors may be able to recover their money from the sale of the assets. Chemelil had the debt ratio of 0.46 in 2014/2015 while West Kenya Sugar Company had the lowest debt ratio of 0.25 in 2014. West Kenya Sugar Company is the least indebted sugar company and the best investment destination for creditors. The debt ratio of one is the maximum ratio for an Organization and safe in guarding the interests of creditors. The lower this ratio is below one the more secure the creditors are in event of liquidation. This study indicates negative relation between the debt ratio (Total Liabilities to Total Assets) and the competitive advantage of the Organization. This agrees with Shubita and Alsawalhah (2012) who found significantly negative relation between total debt (total liabilities) to total assets and profitability. Trade Off theory expects Managers of firms to choose a target capital structure that maximizes the firm value by minimizing the costs of prevailing market imperfections and Pecking Order theory assumes firms with more profitability will issue less debt and more likely finance their activities with internal funds.

**Leverage Ratio (Debt/Equity)**

Debt-to-equity ratio measures the amount of debt capital a firm uses compared to the amount of equity capital it uses. Excessive liabilities tend to cause insolvency. This ratio also tells the extent to which the firm depends upon outsiders for its existence. Thus,

$$\text{Debt-equity ratio} = \frac{\text{Outsiders' funds}}{\text{Share holders' funds}}$$

$$\text{Debt-Equity Ratio} = \frac{\text{Total Liabilities}}{(\text{Total Assets} - \text{Total Liabilities})}$$

If the debt-equity ratio is more than 2:1, it shows a rather risky financial position from the long term point of view. A negative value indicates that the firm is insolvent; owners’ equity has been eroded and the company is unable to meet its financial obligation if loans are recalled or demand note for monthly payment is implemented.

**Table 4 : Leverage Ratio (Debt to Equity)**

<b>Firm</b>		<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Muhoroni	Debt(A)	5B	5.1B	5.1B	5.4B	10.045B
	Equity(B)	(12.7B)	(18.2B)	(18.1B)	(18.5B)	(36.050B)
	<b>A/B</b>	<b>-0.39</b>	<b>-0.28</b>	<b>-0.28</b>	<b>-0.29</b>	<b>-0.28</b>
Chemelil	Debt(A)	1.423B	1.511B	2.261B	2.636B	3.006B
	Equity(B)	382.5M	(417.0M)	737.8M	378.3M	(261.7M)
	<b>A/B</b>	<b>3.72</b>	<b>-3.62</b>	<b>3.06</b>	<b>6.97</b>	<b>-11.49</b>
Nzoia	Debt(A)	11B	10B	34B	35B	36B
	Equity(B)	(10B)	(9.5B)	(28B)	(29.8B)	(31B)
	<b>A/B</b>	<b>-1.10</b>	<b>-1.05</b>	<b>-1.21</b>	<b>-1.17</b>	<b>-1.16</b>
Mumias	Debt(A)	3B	5.7B	8.4B	10.6B	13.6B
	Equity(B)	14.5B	15.7B	13.4B	10.6B	5.9B
	<b>A/B</b>	<b>0.21</b>	<b>0.36</b>	<b>0.63</b>	<b>1.00</b>	<b>2.31</b>
South Nyanza	Debt(A)	2.1B	2.6B	2.4B	3.0B	3.4B
	Equity(B)	2.6B	3.3B	2.7B	2.2B	1.5B
	<b>A/B</b>	<b>0.81</b>	<b>0.79</b>	<b>0.89</b>	<b>1.36</b>	<b>2.27</b>
<b>Firm</b>		<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	
West Kenya	Debt(A)	3B	2.6B	2.6B	2.4B	
	Equity(B)	2.6 B	3.4B	3.7B	3.9B	
	<b>A/B</b>	<b>1.15</b>	<b>0.76</b>	<b>0.70</b>	<b>0.62</b>	

**Source: Respective Sugar Companies (2016)**

From the data in Table 4 Muhoroni, Chemelil and Nzoia are insolvent. These three Companies’ Debt-to-equity ratio is negative indicating that the firms are insolvent; owners’ equity has been eroded and the company is unable to meet its financial obligation if loans are recalled or demand note for payment is implemented. Mumias Sugar Company was solvent in 2010/2011 at a ratio of 0.21 and has continuously and progressively deteriorated to a debt to equity ratio of 2.31 in 2014/2015 indicating serious financial position of the firm. The same applies to South Nyanza Sugar Company which had a ratio of 0.81 in 2010/2011 and worsened to 2.27 in 2014/2015. West Kenya Sugar Company; a private owned firm is the only firm under study which has shown a health financial position from 2011 to 2014 as indicated by its ratios which has the least risk ratio of 1:1. The result of this study showed that most of the sugar companies had a debt to equity ratio above 2:1. Velnampy and Niresh (2012) observed that the debt/equity ratio is safe up to 2. Abubakar (2015) research



revealed a significant negative relationship between debt-equity ratio and financial performance. Abubakar considered Debt- equity value of 2 as normal and safe. Rehman (2013) study showed negative relationship of debt equity ratio with net profit margin. In reference to Velnampy and Niresh (2012) and Abubakar (2015) all the sugar companies under study with the exception of West Kenya Sugar Company have ratios above 2 and this shows that they are operating under financial distress. Hence, these firms with a ratio above 2:1 are not expected to be profitable.

**Cash Flow Ratio (Total Liabilities/ Net Cash flow from Operations)**

Operating cash flows information indicates the business' ability to generate sufficient cash from its continuing operations. The cash flow statement provides information about the firm's liquidity and its ability to finance its growth from internally generated funds. A firm with a strong cash flow is best placed to witness a faster recovery following a temporary financial crisis. According to Everingham, Kleyhans, and Posthumus (2003) operating cash flow ratios are indicators of performance. They determine the extent to which a company has generated sufficient funds to repay loans; to maintain operating capabilities; to pay dividends and to make new investments without using external financing. Table 5 provides ratios for total liabilities to net cash from operations for the companies under study.

Muhoroni Sugar Company best debt cover was 60.4 years in 2010/2011 and this has gotten out of hand for the succeeding years indicating that the firm cannot meet its financial obligation on total debt. Chemelil had the best debt recovery of 5.6 years in 2012/2013 before deteriorating to negative cash flow. Nzoia Sugar had the best debt recovery of 34.5 years in 2014/2015. South Nyanza Sugar Company had the best debt recovery of 8.2 years in 2011/2012 before sliding into negative cash flow. Mumias Sugar had the best debt recovery of 13.3years before sliding into negative cash flow. West Kenya Sugar Company has the best debt recovery which was 3 years in 2010/2011 and has gradually improved to 0.9 years. West Kenya Sugar Company is the most liquid of the companies under study. Amuzu (2010) established that Cash Flow is the lifeblood of any corporate. If, the inward flow is less than the outflow then the sustainment of corporate life will be in peril. The financial capability of an organization is affected by maximizing revenue generation and minimizing its expenditure.

**Table 5: Cash-Flow Ratio (Total Liabilities to Net Cash from Operations)**

<b>Firm</b>		<b>2010/11</b>	<b>2011/12</b>	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>
Muhoroni	Operation cash (A)	235M	50.3M	105.2M	67.3M	(34.6M)
	Total liabilities (B)	14.2B	19.1B	19.13B	19.34B	36.94B
	B/ A	<b>60.4</b>	<b>379.7</b>	<b>181.8</b>	<b>287.4</b>	<b>-1067.6</b>
Chemelil	Operation cash (A)	49.5M	(220.5M)	401.2M	(366.2M)	(281.9M)
	Total liabilities (B)	1.66B	2.133B	2.24B	2.22B	2.334B
	B/ A	<b>33.5</b>	<b>-9.7</b>	<b>5.6</b>	<b>-6.1</b>	<b>-8.3</b>
Nzoia	Operation cash (A)	147M	1.1B	(32M)	(281M)	1.1B
	Total liabilities (B)	21B	21B	38B	39.5B	38B
	B/ A	<b>142.9</b>	<b>19.1</b>	<b>-1,187.5</b>	<b>140.6</b>	<b>34.5</b>
Mumias	Operation cash (A)	656M	(1,280M)	(940M)	(1,329M)	(2,002M)
	Total liabilities (B)	8.7B	11.7B	13.9B	12.9B	14.5B
	B/ A	<b>13.3</b>	<b>-9.1</b>	<b>-14.8</b>	<b>-9.7</b>	<b>-7.2</b>
South Nyanza	Operation cash (A)	135,412	414,898	(408,867)	(707,012)	(1,365,062)
	Total liabilities (B)	2.9B	3.4B	3.4 B	4.1B	4.0B
	B/ A	<b>21.4</b>	<b>8.2</b>	<b>-8.3</b>	<b>-5.8</b>	<b>-2.9</b>
<b>Firm</b>		<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	
West Kenya	Operation cash (A)	1B	1.2B	1.4B	1.9B	
	Total liabilities (B)	3B	3.1B	2.6B	1.7B	
	B/ A	<b>3.0</b>	<b>2.6</b>	<b>1.9</b>	<b>0.9</b>	

**Source: Respective Sugar Companies (2016)**

From 2011 to 2014 the average factory capacity utilization for the firms under study was between 55% and 61% as shown in Table 6. This means that the lost opportunity production of sugar was represented by between 45% and 39% capacity utilization and therefore the revenue by the same percentage if it is assumed that the factory can run at 100% capacity utilization.

**Table 6: Four Years' Comparative Data of Factory Capacity Utilization (%)**

Company	Year 2011	Year 2012	Year 2013	Year 2014	Average
Chemelil	28.53	29.5	38.3	41.27	<b>34.4</b>
Muhoroni	42.36	50.85	45.92	56.31	<b>48.9</b>
Mumias	64.51	63.24	55.01	51.05	<b>58.5</b>
Nzoia	69.67	75.78	70.11	82.69	<b>74.6</b>
South Nyanza	59.71	54.42	60.35	56.63	<b>57.8</b>
West Kenya	69.97	60.50	79.96	77.55	<b>72.0</b>
<b>Average</b>	<b>55.8</b>	<b>55.7</b>	<b>58.3</b>	<b>60.9</b>	<b>57.7</b>

Source: AFFA Year Book of Sugar Statistics (2014).

**Logit Regression Analysis**

The study conducted a logit regression analysis to measure the relationship between the financial capability and competitive advantage by estimating the probabilities using the logit function. The financial capability was categorized into two: 0-weak and 1-strong. The competitive advantage was binary: 0-not competitive and 1-competitive. The output of the analysis is presented in Table 7 and fitted into a model.

**Table 7: Logit Regression of Financial Capability and Competitive Advantage**

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.L.for EXP(B)	
							Lower	Upper
<b>Financial Capability</b>	<b>-0.080</b>	<b>0.506</b>	<b>0.025</b>	<b>1</b>	<b>0.874</b>	<b>0.923</b>	<b>0.342</b>	<b>2.489</b>
<b>Constant</b>	<b>-0.143</b>	<b>0.379</b>	<b>0.143</b>	<b>1</b>	<b>0.706</b>	<b>0.867</b>		

Odds of competitive advantage of sugar companies =  $-0.143 + -0.080x_1 + 0.885$ , Where

$\beta_0 = -0.143$  is the constant

$x_1$  - Financial capability

0.885 is the error term (SE)

The objective was to determine the influence of financial capability on competitive advantage of sugar companies in Western Kenya. The results revealed that companies that had strong financial capability were 0.923 times less likely to be competitive compared to those that had a weak financial capability. This leads to a conclusion that the influence of financial capability on competitive advantage of the sugar companies under study depend on how the financial resources are deployed and not merely that the resources are available.

**Correlation Analysis**

Correlation analysis was carried out to gauge if there was any relationship between financial capability and competitive advantage; the direction of this relation and the strength of this relation. The result is tabulated in table 8.

**Table 8: Correlation of Financial Capability and Competitive Advantage**

Variables		Financial Capability	Competitive Advantage
Spearman's rho	Financial Capability	Correlation Coefficient	1.000
		Sig. (1-tailed)	.
		n	64
	Competitive Advantage	Correlation Coefficient	-0.020
		Sig. (1-tailed)	0.438
		n	64

It was established that there was a weak negative and statistically insignificant correlation between financial capability and competitive advantage;  $r = -0.020$ ,  $p = 0.438$ ,  $CL = 95\%$  (2-tailed). The financial capability of the company would only improve depending on how the financial resources are strategically deployed.

**Hypothesis Testing**

$H_{04}$ : There is no statistically significant relationship between financial capability and competitive advantage of sugar companies in Western Kenya.

The  $X^2$  test statistics = 0.025 df=1

The  $X^2$  critical values = 3.84 at 95% CL

Since the  $X^2$  critical values = 3.84 >  $X^2$  test statistics = 0.001 (df = 1), it doesn't fall in the rejection region. Therefore we fail to reject the null hypothesis that there is no statistically significant relationship between financial capability and competitive advantage of sugar companies in Western Kenya. We, therefore, conclude that there is no statistically significant relationship between financial capability and competitive advantage of sugar companies in Western Kenya. The result of the logit regression, correlation analysis and hypothesis testing indicate that availability of financial resources does not necessarily result in competitive advantage of the firm but it depends on how the funds are strategically deployed.

## V. CONCLUSIONS

The financial position of most of the sugar firms under study was weak. The heavy borrowing of funds is detrimental to the smooth operations of the firms. Hypothesis testing indicated that the relationship between financial capability and competitive advantage was not statistically significant. The logit and the correlation analyses results revealed negative relationship between the financial capability and competitive advantage. The firms are operating on high total liabilities to total assets ratio and high debt to equity ratio.

### Recommendations

With the exception of West Sugar Company, the rest of the sugar firms under study are heavily indebted and insolvent as brought out by the secondary data. The Government should intervene to correct this situation if the industry has to survive in the COMESA free trade area.

### Areas for Further Research

The study recommends the research on the suitable ratios for total liabilities to total assets and total liabilities to net cash from operations for companies enjoying competitive advantage in COMESA region. These financial ratios once established will act as a guide for good financial capability of sugar firms that are enjoying competitive advantage. Research in this area of financial ratios in the sugar manufacturing sector is scanty.

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