COST MINIMIZATION AND FIRMS COMPETITIVE ADVANTAGE

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ABSTRACT

This research on the effect of cost minimization on competitive advantage was aimed at determining the effect of cost reduction on competitive strategy of organizations. The specific objectives are: to determine relationship between reductions of fixed costs and competitive advantage of selected brewery companies; to ascertain if reduction in administrative costs has any significant relationship on competitive advantage of selected brewery companies; and to establish the relationship that exists between reduction in the cost of raw material and firms competitive advantage. The ordinary least square multiple linear regression was used to model the effects of these relationships. The findings reveal that not all aspects of cost minimization studied have effect on the competitive advantage of the selected organizations. The conclusion therefore, is that not all aspects of cost minimization have significant effect on competitive advantage. It is therefore recommended that: measures aimed at reducing further the cost of raw materials could position the organizations competitively over their competitors; fitting a non intercept model for the relationship between competitive advantage and administrative cost may improve the strength of relationship already captured by the intercept model; and the fact that reduction in fixed cost and administrative costs create a competitive advantage, organizations should try to keep such costs as low as possible so as to gain better competitive advantage over their competitors.

KEYWORDS: Cost Minimization, Profitability, Administrative Cost, Raw Material.

I. INTRODUCTION

One of the modern responsibilities of executives in any organization is managing activities internal to the firm. This involves responding to the challenges posed by the firm’s immediate and remote environments. The immediate external environment includes: suppliers, competitors, scarce resources, government regulations, and customers preferences. All these affect the profitability of every firm. To deal effectively with everything that affects the growth and profitability of a firm, executives employ management processes that they feel will position it optimally in its competitive environment by maximizing the anticipation of environmental changes and of unexpected internal and competitive demands.

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Zekiri & Nedelea, (2011), argue that business strategy is all about competitive advantage, noting that businesses need strategies in order to ensure that resources are allocated in the most effective way. The authors further argue that in the business world there are many preparatory strategies for almost every potential activity.

A firm is said to possess competitive advantage over its rivals when it sustains profits that exceed the average for its industry. The purpose of such strategy is to achieve a sustainable competitive advantage. According to Porter (1987), a firm can gain competitive advantage if it is able to create value for its buyers. A firm can gain cost advantage through economics of scale and cheap raw material. The strategy of differentiation involves offering a different product, a different system of delivery, or by employing different marketing approach. And it is up to the management of such firm to decide which factors it wants to emphasize in order to gain competitive advantage (Porter, 1987).

Osadi & Okpako, (2010), noted that there are some key areas in which application of cost minimization is vital. Such areas include: appropriate use of raw materials, reduction in the cost of fixed assets and administrative costs. The essence of cost minimization and management is that it leads to more efficient use of materials, profit maximization, survival and growth of businesses and efficiency in overall performance of such businesses. In this regards, Cruceru (2012) argues that one of the ways firms gain competitive advantage is through cost minimization.

For the brewery companies in Nigeria, the prices of beer keep going up every day despite all attempt made to minimize cost of production; the quality of their products depreciate over time also. This may suggest to the fact that either the cost minimization strategies employed do not really translate into the required profitability level or that they are involved in extreme profit making strategies to the detriment of their customers. The question then is: have firms really gained competitive advantage through all or some avenues of cost minimization? Else, what areas of cost minimization have really given firms competitive advantage?

**Objectives of the Study**

The main purpose of this study is to determine the effect of cost reduction on a firm’s competitive advantage. The specific objectives will be:

1. To determine relationship between reductions of fixed assets costs and competitive advantage of selected brewery companies.
2. To ascertain if reduction in administrative costs has any significant relationship on competitive advantage of selected brewery companies.

3. To establish the relationship that exists between reduction in the cost of raw material and firms competitive advantage

**Research Hypotheses**

The following null hypotheses are of interest in this study:

1. \( H_0: \) Reduction in fixed assets cost does not have positive impact on firms competitive advantage

2. \( H_0: \) There is no significant relationship between firm’s competitive advantage and reduction of administrative cost

3. \( H_0: \) Reduction of cost of raw material does not have any significant effect on firm’s competitive advantage

**II. REVIEW OF RELATED LITERATURE**

A competitive advantage is one gained over competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar prices. Growing a business successfully often dependent upon a strong competitive edge that steadily builds loyal customers, which can be expanded over time.

King (2005) noted that successful ventures perform a combination of business activities well, including marketing, production, distribution, finance, customer service, and/or other activities important to the enterprise. However, a competitive advantage is often a single key element that gives an edge to a business beyond what the competition has or does.

Baroto, Abdullah & Wan (2012) argue that it is believed that competitive industries would not be able to survive unless they adopt two corporate strategies: cost strategy, to process the value chain in the most efficient way so as to produce products or services with the lowest price without jeopardizing the quality; and differentiation strategy, to produce unique products or services compared to its competitors, such as better quality, simpler way to operate, better looking, in other words, the company should have the ability to innovate. Accordingly a firm must make a choice between cost-leadership and differentiation strategies or it will become stuck-in-the-middle without a coherent strategy.

According to Keller, (2010), the challenge most organizations face is to reduce costs in a way that has the least effect on the quality and sustainability of their services. That many
organizations raise the concern that cutting back in certain areas could lead to a loss in productivity that would outweigh any savings, thus weakening their organization.

Osadi, & Okpako, (2010), argue that cost minimization will greatly improve efficiency in business performance. According to the authors, the process will help proprietors or managers of businesses to reduce unnecessary excess expenditures/costs over revenue or income from sales. Some of the costs to be minimized according to the authors include: purchase or cost prices, cost of material, manufacturing costs, fixed asset cost and administrative costs.

Brown (1997) viewed cost in the economic sense to mean the summation of all outlays of an operational nature. He further stated it to mean an amount which represents interest on investment and/or profits. All firms continually need to reduce costs, not only in times of recession, but also in periods of expansion and consolidation. Therefore, cost minimization is a process of cutting down on all unnecessary costs or expenses so as to achieve the ultimate aim of profit maximization. The reasons behind cost minimization is that it leads to more efficient use of materials, maximization of profits, successful survival and growth of business entity and efficiency in overall or general performance of the businesses.

Osadi, & Okpako, (2010), noted that cost can be classified in numerous ways, but a fundamental and important method of classification is into direct and indirect costs. They noted that direct costs (comprising direct material costs, direct wages or salaries costs and direct expenses) are those costs which can be directly identified with a job, batch, product or services. While direct material cost and direct labour costs plus direct expenses are known as prime costs.

Bragg, (2010) argues that cost reduction is the easiest and most certain way to increase profits in the short term. It can also be a major driver of long term growth, if handled properly. According to the author, cost reduction is easier because it is entirely within the control of the company. Simply determine an area for cost reduction and implement it. It is completely unlike the uncertainty of trying to increase revenue, where one must be concerned about pricing, margins, the actions of competitors, and governmental regulation. Cost reduction is the simplest road to increased profitability and enhanced cash flow.

According to Olukunle (2008), the cost of production which includes labour, raw materials and service costs may be reduced by employing machines that will eliminate wastages during production. The costs involved in inventory-production that are incurred by a manufacturing company are categorized under holding stocks and ordering costs. On the other hand, stocks
have to be maintained and stored in certain conditions, depending on the item involved. The
cost of maintaining these stocks are minimized so that deterioration of stock can be avoided.
According to Li, Zhou & Shao, (2009), Scholars have proposed alternative theoretical
views to explain the development of competitive advantage: of these, the competitive strategy
perspective is one of the most influential. According to this perspective, competitive
advantage results from a firm’s correct positioning in an attractive market based on its
analysis of opportunities and threats in the competitive environment. Two primary positions
of competitive advantage exist: low cost and differentiation. low-cost position arises when
the firm becomes the lowest-cost producer in the industry; whereas differentiation position
may be achieved when buyers consistently perceive a firm’s offerings as unique in the
market.

The strategy of Cost leadership is usually developed around organization-wide efficiency.
For firms implementing the cost leadership strategy to maintain a strong competitive position
and sustain their profit margins for a considerable period of time, they have to place a
premium on efficiency of operations in all functional areas. Firms that implement a cost
leadership strategy are able to secure a relatively large market share by being the lowest cost
producers or service providers in their industry or market. Thus, firms implementing the cost
leadership strategy can obtain above-normal profits because of their ability to lower prices to
match or even below those of competitors and still earn profits (Acquaah, 2011).

Theoretical Framework
This study anchors on the resource-based view of the firm and strategy of Penrose (1959),
and elaborated on by Barney (1991). The resource based theory sees the firm as a collection
of assets, or capabilities. In the modern economy, most of these assets and capabilities are
intangible. The success of corporations is based on those of their capabilities that are
distinctive. Companies with distinctive capabilities have attributes which others cannot
replicate, and which others cannot replicate even after they realize the benefit they offer to
the company which originally possesses them (Barney, 1991)

A firm that has attained a competitive advantage has created economic value (the difference
between the perceived benefits of a resource-capability combination and the economic cost to
exploit them) than its competitors. Economic value is generally created by producing
products and/or services with either greater benefits at the same cost compared to competitors
(i.e. differentiation-based competitive advantage) or the same benefits at lower cost compared to competitors (i.e. efficiency-based competitive advantage) (Peteraf and Barney, 2003).

Because superior benefits tend to enhance customer loyalty and perceived quality (Zou, Fang, and Zhao, 2003), a firm that can exploit its resource-capability combinations to effectively attain a differentiation-based competitive advantage should be able to improve its performance compared to competitors by selling more units at the same margin (i.e., parity price) or by selling the same number of units at a greater margin (i.e., premium price).

The practitioner implications of the theory as cited in (Barney, 1991), is that (1) performance advantage results when valuable and rare combinations of resources and capabilities are applied to reduce costs, exploit market opportunities, and/or neutralize competitive threats, (2) firms of all sizes can achieve advantage, and (3) with novelty one can produce rare and valuable (unique) combinations of resources and capabilities from even common resources and capabilities -- the pursuit of novelty to develop a truly unique basis for advantage is conceivably within the reach of all firms. Distinctive competency (Selznick, 1957) and its renewal is an essential pursuit in the evolution of the firm.

Powell (2001) views business strategy as the tool that manipulates the resources and create competitive advantage, hence, viable business strategy may not be adequate unless it possess control over unique resources that has the ability to create such a unique advantage. Summarizing the view points, competitive advantage is a key determinant of superior performance in the brewing industry and it will ensure survival and prominent placing in the market. Superior performance being the ultimate desired goal of a firm, competitive advantage becomes the foundation highlighting the significant importance to develop same.

The firm's objective is profit maximization or, in more sophisticated versions, wealth maximization, that is, the maximization of the net present value of future profits. Acting under conditions of perfect and costless information, neoclassical theory focuses on the firm producing a single product using the resources of capital, labor, and sometimes land. These "factors of production" are assumed to be homogeneous and perfectly mobile; that is, each unit of labor or capital equipment is assumed to be identical with other units and can "flow" from firm to firm without restrictions. The role of management is to respond to changes in the environment by determining the quantity of product to produce and implementing a production function that is identical across all firms in each industry.

In the light of this theory, firms in the brewing industry should strive to create a unique competitive advantage over other competitors so as to distinguish their products in terms of
cost reduction and consequently leading to reduction in market prices. This in the long run gives the firm a strategic edge and improved performance.

**EMPIRICAL FRAMEWORK**

Acquaah, (2011) examines the effect of business strategy on performance of family businesses and how their managerial social networking relationships with external entities moderate the business strategy–performance link. The author used data from 54 family firms from Ghana and the result shows that: the pursuit of the business strategies of cost leadership and differentiation create competitive advantage for family businesses; social networking relationships with government bureaucratic officials and community leaders are beneficial to family businesses and argued that social networking relationships with political leaders is detrimental to family businesses; finally the result shows that the benefit of business strategy to family businesses is moderated positively by networking with community leaders, but negatively by networking with political leaders.

Anand (2012) studied the cost reduction practice applied in an Industry. According to value engineering tool the author applied, the value of a product can be increased by reducing the cost of the product or by increasing the functionality of the product. An automotive company which manufactures headlamps for several reputed companies was used for the study. The result show that by applying all the available alternatives Sheet-metal is the most suitable material used as an adopter, which can successfully reduced the raw material cost.

Wang (2012) explored the supply chain structure from a manufacturing perspective. The study proposed a total cost reduction model, a guideline for an incentive programme in which the vendor will be motivated to reduce the lead time for each purchase. A case study of manufacturing flexible circuit board with a sensitivity analysis was undertaken. Two finding were obtained from the study: purchasing lead time reduction will result in cost advantage with regards to inventory, transportation and capacity; also there exist a there exist a tradeoff between transportation and expected capacity cost.

Osadi, &Okpako, (2010) in their study of cost management strategy employed the survey research design in generating relevant data for the study. Questionnaire and direct observation were the major research instruments used in generating data. Their study used a total population of sixty respondents that resulted in forty valid responses. Their study shows that Cost management is a good strategy for improving efficiency as well as profit maximization and growth of businesses; they concluded therefore, that with meaningful
recommendations among others, management of businesses should try to establish areas in which unnecessary costs can be minimized at regular basis in the course of daily business activities.

Klein, (2008) examined the types of strategies and operating cultures of organizations in terms of their effectiveness at the individual, work-unit, and organizational levels of analysis. The framework focuses first on the relationship between the type of strategy adopted by organizations and their operating cultures, based on contingency or “fit” theories proposing that different cultures are appropriate for different types of strategies. The theoretical framework used in their study also focused on the relationship between organizational culture and effectiveness. This relationship was considered in terms of both “adaptive” theories of cultures—which propose that certain types of cultures promote effectiveness regardless of environmental and strategic factors—and contingency theories—which propose that such strategic factors moderate the relationship between culture and effectiveness. Babatunde & Arogundade (2011) focused on the reflection of inventory production cost minimization on organization’s profit. Their study aims at identifying various inventory-production cost minimization techniques and strategies that will yield the best optimal level of profit and also, to examine the possibility of inventory-production cost minimization in manufacturing industries. Regression Analysis was used as a research technique and their result indicated that there is positive reflection of inventory-production cost minimization on organization profit. Finally, Babatunde & Arogundade (2011) recommended that the companies should introduce new technological software that will enable them meet up their daily demand. They should endeavor to use more ‘cost minimization techniques as a yard stick in arriving at the optimal level of profit actualization. In summary, majority of the above mentioned studies made use of total cost such as: inventory cost Babatunde & Arogundade (2011), minimization strategy Osadi, &Okpako, (2010), Total cost model by Wang (2012), cost of raw material in car industry by Anand (2012). In all these, administrative cost reduction and fixed cost reduction have never been considered, cost of raw material was only considered in a car manufacturing industry. In order to bridge the gap in the previous studies, this study attempts to study the impact of reduction in administrative, fixed and raw material cost in the brewing industry.
III. RESEARCH METHODOLOGY

This study employs the descriptive research design. Descriptive studies portray the characteristics of a particular individual, situation or group and also in determining the frequency of a particular event or characteristics.

The study used only secondary data. The data were sourced from journals and annual reports of the selected companies.

The least square regression analysis was used to model the effect of competitive advantage on profitability. The costs employed here are on the assumption that before a firm arrives at any cost, it must be the minimum possible cost that gives the optimum profit. The model is given as:

\[
\text{PAT} = F(\text{AC}, \text{FC}, \text{RM})
\]

\[
\text{PAT} = \alpha_0 + \alpha_1 \text{AC} + \beta_2 \text{FC} + \beta_3 \text{CRM} + \epsilon
\]

Where: \(\text{PAT} = \text{Profit after Tax}\)
\(\text{AC} = \text{Admin Cost}\)
\(\text{FC} = \text{Fixed Asset}\)
\(\text{CRM} = \text{Cost of Raw Material}\)

And \(\alpha_1, \alpha_2\) and \(\alpha_3\) are the rates of change of the profit after tax with respect to profitability.

Hence the log transformed model is given as:

\[
\log \text{PAT} = \alpha_0 + \alpha_1 \log \text{FC} + \alpha_2 \log \text{AC} + \alpha_3 \log \text{CRM} + \epsilon
\]

Where: \(\log \text{PAT}\) is the logarithmic transformation of profitability
\(\alpha_0\) is the slope of the regression;
LogAC is logarithmic transformation of Administrative Cost;
Log CRM is logarithmic transformation of Cost of Raw Material;
LogFC is logarithmic transformation of Fixed Cost;

And \(\alpha_1, \alpha_2\) and \(\alpha_3\) are the rates of change of the logarithmic transformations of the globalization indices with respect to profitability.

IV. RESULT AND DISCUSSION OF FINDINGS

The general objective is modeled using equation (2) for both companies.

RESULT 1

Dependent Variable: LN_PAT
Method: Least Squares
Date: 06/27/14  Time: 22:18
Sample: 2006 2013
The model of cost minimization and competitive advantage for the first company is given as:

\[ \text{LN\_PAT} = 7.9283 + 0.7570 \text{LN\_AC} - 0.7331 \text{LN\_CRM} - 0.1541 \text{LN\_FC} \]

The result reveals that all the variables have significant impact on \( \text{lnpat} \) except \( \text{lnfc} \). The \( R^2 \) shows that 93% change in \( \text{lnPat} \) is attributable to administrative cost, fixed cost and cost of raw materials. Furthermore the prob (F-statistic) being less than \( \alpha = 0.05 \) shows that the multiple linear regression model is a good fit for the relationship between profit after tax and the independent variables.

**RESULT 2**

Dependent Variable: LNPAT
Method: Least Squares
Date: 06/27/14  Time: 23:09
Sample: 2006 2013
Included observations: 8
LNPAT=C(1)+C(2)*LNAC+C(3)*LNCRM+C(4)*LNFC
<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C(1) 15.76583</td>
<td>3.476564</td>
<td>4.534887</td>
<td>0.0105</td>
</tr>
<tr>
<td>C(2) -3.941579</td>
<td>1.044731</td>
<td>-3.772816</td>
<td>0.0196</td>
</tr>
<tr>
<td>C(3) 0.965696</td>
<td>0.197813</td>
<td>4.881862</td>
<td>0.0081</td>
</tr>
<tr>
<td>C(4) 1.614350</td>
<td>0.437839</td>
<td>3.687089</td>
<td>0.0211</td>
</tr>
</tbody>
</table>

| R-squared | 0.952857 |
| Adjusted R-squared | 0.917500 |
| S.E. of regression | 0.054401 |
| Sum squared resid  | 0.011838 |
| Log likelihood | 14.71202 |
| F-statistic  | 26.94936 |
| Prob(F-statistic) | 0.004101 |

the model of cost minimization and competitive advantage in second company is given as:

\[ \text{LNPAT} = 15.77 - 3.9416 \text{LNAC} + 0.9657 \text{LNCRM} + 1.614 \text{LNFC} \]

The result shows that all the variables have significant impact on lnPat. The R-squared of 95.29% shows that 95.29% change in lnPat is attributable to administrative cost, fixed cost and cost of raw materials. Furthermore the prob (F-statistic) being less than \( \alpha = 0.05 \) shows that the multiple linear regression model is a good fit for the relationship between profit after tax and the independent variables. The Durbin Watson value of 2.0 shows the absence of autocorrelation.

The result of the analysis on the effect of cost minimization on competitive advantage carried out in the selected companies show all variables have significant impact on competitive advantage except the cost of raw materials that shows an inconsistent result. 93% and 95.29% variation in competitive advantage is found to be attributable to cost minimization respectively.

The results on the effect of fixed cost on competitive advantage have consistently shown for both companies, that there is a significant relationship between competitive advantage and fixed cost. A direct relationship exists between competitive advantage and minimization of fixed cost. Furthermore, 52.25 and 65.93% relationship respectively exist between competitive advantage and minimization of fixed cost.
The result on the effect of minimization of administrative cost on competitive advantage reveals that there is a significant relationship between competitive advantage and minimization of administrative cost in both organizations.

An inconsistent result was observed on the effect of minimization of cost of raw materials on competitive advantage as minimization of raw material costs is significant in one company alone.

V. CONCLUSION AND RECOMMENDATION

The findings on the research conducted on the effect of cost minimization on competitive advantage carried out in selected brewing companies in Nigeria leads to the conclusion that not all aspects of cost minimization studied has effect on the competitive advantage, as the reduction in cost of raw materials do not have significant impact on competitive advantage in all the organization studies. The conclusion of this research therefore, is that not all aspects of cost minimization have significant effect on competitive advantage.

Owing to the findings in this research, the following recommendation may be proffered:

Further measures aimed at reducing further the cost of raw materials could position the organizations competitively over their competitors; fitting a non intercept model for the relationship between competitive advantage and administrative cost may improve the strength of relationship already captured by the intercept model; and the fact that reduction in fixed cost and administrative costs create a competitive advantage, organizations should try to keep such costs as low as possible so as to gain better competitive advantage over their competitors.

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