Kaizen Cost Management Technique and Profitability of Small and Medium Scale Enterprises (SMEs) in Ogun State, Nigeria

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Abstract: The study examines the relationship that exists between Kaizen cost management technique and profitability of small and medium scale enterprise in Ogun State, Nigeria. It evaluates the nature of Kaizen cost management technique and how it can be adopted to reduce and control operational costs of SMEs. The study adopted primary data and a sample of 269 respondents consisting of small and medium scale enterprises were purposively chosen from agro-allied, confectionery, general trading and transport business in Ogun State, Nigeria. The study population comprised 2,685 enterprises obtained through a preliminary survey of SMEs in the three senatorial districts of Ogun States namely Ogun West, Ogun East and Ogun Central. A structured questionnaire was used to elicit information from respondents. The Statistical Package for Social Sciences (SPSS) was adopted to analyze the questionnaire. The result of statistical test of hypothesis shows that there is a significant relationship between Kaizen cost management technique and profitability of SMEs. A further test of significant relationship between cost components and profitability of SMEs using regression analysis shows that only fixed cost reliably predicted the average annual profit by a factor of 0.099.

Key words: Kaizen, cost management, technique and profitability, hypothesis, enterprise, Nigeria

INTRODUCTION

Innes and Mitchell (1991) assert that the survival triplet today for any company is how to manage product/service cost, quality and performance. The 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. Thus, cost has become a residual. The challenge is being able to manufacture products or provide services within the acceptable cost framework. Innes and Mitchell (1991) affirmed that cost management has to be an ongoing and continuous improvement activity within the company so as to enhance profitability and survive.

For any business to have enough profit to cover all its operating costs, it is imperative for such business to cut costs. The drive towards profit is a distinctive and dominating attribute of every business and the implication of profit drive is to engender cost reduction which is an important successful factor for business success. If a business is to succeed, it would accumulate capital both as a reward for success and an opportunity to compensate for unforeseen losses. In order to achieve these objectives any venture ought to render a worthwhile service or produce worthwhile goods which sell innovatively, persistently and consciously such ventures must also be able to keep the cost down in order to conserve resources. Any business whose profitability dwindles will inextricably lapse in obscurity and possibly fold up. Whereas any business that undergoes growth, sustainability and independence based on consistent profitability will thrive for a long time.

It is important to note that in Nigerian context small and medium scale enterprises are facing a lot of challenges which affect profitability. These challenges have constituted threats to the growth and survival of this level of businesses. It is apparent that many of SMEs have gone into oblivion due to intolerable and unacceptable decadent forms of infrastructural developments (Oghojafor, 1998). The poor state of the country’s basic infrastructure has not been resolved and so, it becomes difficult for small and medium scale enterprise to thrive. Basic enabling environment includes good roads, stable electricity, pipe borne water, communication facilities and security system.

In this study, effort was made to examine how some of the advantages of Kaizen cost management technique could be adopted to control the operational costs of small

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and medium scale enterprises so as to enhance the survival and profitability of this level of business. The review of related literature was done to examine the relationship that exists between cost components, Kaizen cost management technique and profitability and survival of this level of business. Primary data were collected through a structured questionnaire administered to 269 respondents in the three senatorial districts in Ogun State. The Statistical Package for Social Sciences (SPSS) was used to analyze the data collected.

**Statement of the problem:** In spite of the importance of SMEs to the Nigerian economy, observations by Ogundele (2004) and Ayoade (2005) have shown that small and medium scale enterprises operate in a volatile environment that is not conducive for business survival. By implication, most of them incur huge costs to ameliorate the effect of adverse environment and huge cost of production is expected to affect the profitability indexes of small and medium scale enterprises. According to Burns (2007) these profitability indexes include capital base, workforce, turnover, market shares and efficiency in production. Literature has shown that the identified indexes are determinants for the profitability level. Also Horngren et al. (2009) and Adeniji (2011) identified Kaizen cost management technique as one of the cost management techniques that can be adopted to reduce the operational costs of these levels of business by assessing and adopting some of the advantages inherent in the technique. However, the empirical finding substantiating the adoption of Kaizen cost management technique by SMEs to control cost of production and possibly record profit is not available.

Therefore, this study seeks to examine the nature of Kaizen cost management technique if it could be adopted to influence the profitability of small and medium scale enterprises in Nigeria.

**Research questions:** The following research questions are designed to guide the study:

- What are the cost components of small and medium scale enterprises in Ogun State, Nigeria?
- What are the cost management techniques adopted by SMEs in the target location?
- What relationship exists between the Kaizen cost management technique and survival of SMEs in Nigeria?

**Research objectives:** The broad objective of this study was to examine the relationship that exists between Kaizen cost management technique and profitability of SMEs in Ogun State, Nigeria. This broad objective is broken down to the following specific objectives.

- To assess the cost components of small and medium scale enterprises in Ogun State, Nigeria
- To analyze the cost management techniques adopted by SMEs in the target location
- To evaluate the relationship that exists between Kaizen cost management technique and the survival and profitability of SMEs in the study area

**Research hypotheses:** The following hypotheses were empirically tested.

**Hypothesis 1:** There is no significant relationship between the cost components and profitability of small and medium scale enterprises.

**Hypothesis 2:** There is no significant relationship between Kaizen cost management techniques and the survival of small and medium scale enterprises.

**Review of related literature**

**Growth and development of SMEs in Nigeria:** In the early 1960-1970s, the industrial policy of Nigeria placed greater attention on economics of scale (Ubom, 2006). The large scale production were more cost effective thereby making large firms the bedrock of modern economy and considering small enterprises as inefficient. However, Ubom posited that this has changed today and in fact, small and medium scale enterprises are the engine of industrial development and have now gained more relevance and acceptance especially in Nigerian economy.

Kuratko and Hodgetts (2001) pointed out that Small and Medium Enterprises (SMEs) account for 70% of employment in the industrial sector and also promote indigenous technology in United Kingdom. Yet small and medium scale enterprises have not been given universal acceptable definitions despite the widely acceptable position that SMEs remain the formidable engine of growth and development of any country.

In Nigeria, different institutions have made efforts to define small and medium sized enterprises before 1992. For instance, in its credit guidelines to banks in 1991, the Central Bank of Nigeria defined a small scale enterprises as a business whose capital investment (including land and working capital did not exceed ₦5 million or whose turnover was not more than ₦25 million annually. In a similar vein, the Centre for Industrial Research and Development (CIRD) at the Obafemi Awolowo University, Ile-Ife in 1972, defined a small scale enterprises as one with not >50 full time employees.
On its part, the National Economic Reconstruction Fund (NERFUND) in 1993 described an enterprise to be small scale if its fixed assets (excluding land) were not in excess of ₦10 million. In 1992 however, the National Council on Industry (NCI) stream lined these definitions which were further revised in 1996. The National Council on Industry in 1996 stated that a cottage industry is any enterprise with total cost (including working capital but excluding cost of land) not more than ₦1 million with labour size of not more than 10 workers. The NCI went on to say that small scale enterprise is any enterprise with total cost (excluding working cost of land) above ₦1 million but not exceeding ₦40 million with labour size of between 11 and 35 workers. Then, medium scale is any enterprise with total cost (including working capital but excluding cost of land) above ₦40 million but not exceeding ₦150 million with labour size of between 36 and 100 workers.

Furthermore, in the context of the recent bankers committee, initiative on the finding of small and medium scale enterprises are defined as any enterprise with a maximum assets base of ₦200 million (excluding land and working capital) and workforce of between 10 and 300.

According to Ubon (2006), the definition given to small and medium scale enterprises varies from one country to the other depending on the yardstick considered best suitable to promote the sub-sector in each country. Emmanuel (2004) noted that in countries like United States of America, Britain, Canada small and medium scale enterprises are defined in terms of annual turnover and the numbers of paid employees. For instance in Britain, SMEs are enterprises with an annual turnover of £2m or less with fewer than 200 paid employees. While in Japan, SMEs are defined according to the type of enterprises, enterprise in manufacturing, output such as those with ₦1,000 million as paid-up capital and 300 employees while those in wholesale trade should have ₦30 million paid-up capital and 100 employees.

**Kaizen cost management technique:** Khan (2000) noted that this concept originated from Japanese words Kai, meaning change and Zen, meaning betterment. It is otherwise called continuous improvement. Kaizen is thus a continuous process of improvement carried out by the person who is doing the job in the day to day workplace. It involves everyone, managers and worker alike for on going improvements. The philosophy emphasizes continuous improvement in the ways of life, social life and home life. This technique has made tremendous changes in management policies not only in Japan but all over the word (Ogundele, 2004).

Blocher et al. (1999) define Kaizen costing technique as the application of continuous improvement specifically to reduce costs; it focuses on making production and service delivery processes more efficient. Kaizen costing is used for making improvement to a process through small incremental amounts rather than through large innovations. Unlike target costing, Kaizen costing is applied during the production stage of the product life cycle (target cost is applied during the design stage).

Adeniji (2011), asserted that Kaizen costing is the process of continuous improvement, encouraging constant reductions by tightening the standard. The cost reduction objective is to set for each process and then adopt value analysis and value engineering to achieve the set objective. With target costing, the focus is on the product and cost reductions are achieved primarily through product design. In contrast, Kaizen costing focuses on the production process and cost reductions are achieved primarily through the increased efficiency of the production process. The aim of Kaizen costing is to reduce the cost of components by a pre-specified amount (Adeniji, 2011). Adeniji concluded by saying that Kaizen costing relies extensively on employee empowerment as employees are assumed to have an in depth knowledge on how to go about the improvement of production processes as they are seen to be the closest to the manufacturing processes and customers which invariably gives them insight towards cost reduction.

**Cost and revenue behaviour:** Asaolu and Nassar (2007) define cost behavior as the study of the ways in which costs vary or do not vary with the level of activity in an organization. They described the level of activity as the amount of work done or the number of events that have occurred. Drury (2005), defines cost as expenses which have been consumed in earning revenue. The term variable fixed and semi-variable have been traditionally used in the management accounting literature to describe how costs react to change in activity level. Short-term variable costs vary in direct proportion to the volume of activity that is doubling the level of activity double the total variable costs. Consequently, total variable costs are linear and unit variable cost is constant (Adeniji, 2011).

Horngren (2006), pointed out that a fixed costs remains unchanged in total for a given time period despite wide changes in the related level of total activity or volume. Horngren et al. (2009), added that costs are defined as variable or fixed with respect to a specific cost object and for a given time. Adeniji (2011), reported that over a sufficiently long period of time, virtually, all costs
are variable. During such a long period of time, contraction in demand will be accompanied by reductions in virtually all categories of costs. For example, senior managers can be relieved of their jobs, machinery may not be replaced and buildings and land may be sold. Similarly, large expansions in activity will eventually cause all categories of costs being incurred by enterprise to increase.

Step fixed costs are fixed within specific levels of activity within a given time period. Many items of cost are fixed costs in nature within certain levels of activity, i.e., relevance range exists (Asalu and Nassar, 2007). Step fixed costs are actually increased or decreased by a constant amount at various activity levels. Semi-variable costs include both fixed and variable components. The cost of maintenance is a semi-variable cost consisting of planned maintenance that is undertaken whatever the level of activity and variable element that is directly related to the level of activity (Horngren, 2006).

**Controllable and non-controllable costs:** Horngren (2006) defined a controllable cost as any cost that is primarily subject to the influence of a given responsibility center manager for a given time period. The allocation of costs to products is inappropriate for cost control, since the manufacture of a product may consist of different operations, all of which are the responsibility of different individuals. The product cost will not therefore pinpoint costs to area of responsibility, to overcome this problem, costs and revenue must be traced to individual who are responsible for their occurrence. This system is known as responsibility accounting.

Drury (2005) said responsibility accounting is based on the recognition of individual area of responsibility as specified in a firm’s organisation structure. These areas of responsibility are known as responsibility centers. Horngren (2006) added that a responsibility accounting systems could either exclude all uncontrollable costs from a manager’s performance report or segregate such costs from the controllable costs. Drury (2005) defines responsibility center as a segment of an organisation where an individual manager is held responsible for the segment performance. The centers identified by Drury are:

- A cost centre where managers are responsible for the expenses that are under their control
- A profit centre where managers are accountable for sales revenue and expenses, e.g., selling and production department of a company
- An investment centre where managers are normally accountable for sales, revenue and expenses and also, responsible for some capital investment decisions and able to influence the size of the investment

Horngren (2006) asserted that the manager of the responsibility centre should classify costs and revenue allocated to responsibility centres according to whether or not they are controllable or non-controllable. Drury (2005) asserted that all costs are controllable at some management level. For example, top management has authority to dispose of facilities and increase or decrease the number of managers employed. However, not all costs can be controlled at lower management levels, so there is need for costs to be classified into controllable and non-controllable categories in the performance reports that the accountant prepares for each responsibility centre. If costs were not classified this way, it would be difficult to evaluate a manager’s performance and in addition managers may lose interest in cost control if they found that their performance was judged on items that were outside their control.

Horngren (2006) argued that non-controllable costs may be controllable at a higher level of responsibility. For example, a responsibility centre manager may have no control over the number of supervisors employed in his department but his superior may make this decision. Hence, the supervision costs will be a non-controllable cost on the responsibility manager’s performance report but it will be a controllable cost on his superior performance report.

Horngren et al. (2009) said classifying costs into controllable and non-controllable elements entails a detailed analysis of controllable costs so that the responsibility centre manager and his superior can pinpoint those costs that do not conform to plan. Drury (2005) added that it is equally important to classify controllable costs into various important categories of expenses and that the difference between the budgeted and actual results be emphasized and the variance is known.

Finally, for cost control in small and medium scale enterprise to be successful, it is essential to compare actual and budgeted costs based on the level of activity but costs must be initially classified into fixed, variable and semi-variable elements so that the budgeted costs can be adjusted to the level of activity under which a manager operates for the period (Adeniji, 2011).

**MATERIALS AND METHODS**

**Population, sample and sampling procedure:** The study comprised population of 2,685 small and medium scale enterprises which had been initially identified through a preliminary survey in the three senatorial districts in Ogun State namely Ogun West, Ogun East and Ogun Central. The respondents consisted of SMEs in agro-allied,
confectionery, general trading and transport. A sample of 269 respondents was purposively selected for the study representing a sample fraction of 10%: agro-allied (72), confectionery (67), general trading (71), transport (59). The selected enterprises are within the accepted criteria and definition of small and medium scale enterprises the world over which include total cost, labour size, number of employees, sale value, financial strength, relative size, initial capacity outlay, independent ownership and type of industry (Ango, 2008).

The investigation covered such businesses that have been in existence for >5 years from 2006-2010 and those businesses established from 2011 to date were excluded because adequate information about them was not available. In addition, the evidence substantiating the workability of Kaizen cost management technique coupled with the likelihood of continuity in operation were also not available.

**Research instruments:** The study made use of primary data and questionnaire was adopted to gather the data and the data collected covered the period of 5 years. The questionnaire was a 5-point rating scale (Likert scale). The questionnaire was set to solicit information from the entrepreneurs and it was elaborate enough to investigate the study and was designed in such a way that every question in the questionnaire related to the research questions and the hypotheses of the study. Also, the result was used to answer the research questions and Chi-square statistical method was adopted to test the relevant hypotheses.

The questionnaire consisted of two sections so as to gain information on all the necessary variables. Section A contained the characteristics of the population, the location, the age, the workforce, average annual turnover and the categories of business under the study. Section B contained questions on cost information, perceived importance and survival strategies of Kaizen cost management technique in Ogun State, Nigeria. The independent variable of the study is Kaizen cost management technique while the dependent variable is profitability of small and medium scale enterprises. The two hypotheses proposed to guide this study were tested using Pearson χ²-test which is a non-parametric test to establish relationship between the two categorical variables. It was used to evaluate whether the frequencies that were empirically obtained from the field survey differed significantly or otherwise as most of the data collected for the research work were more of qualitative.

**Data analysis and interpretation:** The data analysis and interpretation started with the observation of demographic information of the respondents operating in Small and Medium Scale Enterprises (SMEs) in Ogun State and the cost management techniques adopted to enhance their profitability level.

**Test of hypothesis one**

**H₀:** There is no significant relationship between the cost components and profitability of small and medium scale enterprises in Ogun State.

**H₁:** There is a significant relationship between the cost components and profitability of small and medium scale enterprises.

Table 1 shows that there was a high effect of cost component on 90.4% of the total SMEs within the average annual profit of ₦4,600,000 and above while 9.6% of the SMEs who were within the average annual profit of ₦4,600,000 and above experienced low effect of cost components on the profitability.

The χ²-test shows that there is a statistically significant relationship between cost components and profitability of SMEs with χ² = 13.034 at p<0.05; df = 2, p = 0.001. This implies that cost component has a significant influence on profitability of SMEs in Ogun State. The Phi-value of 22.2% measured the variation in SMEs profitability which was accounted for by cost component incurred. Hence, the result of the test of hypothesis shows that the null hypothesis is rejected and the alternative hypothesis that says there is a significant relationship between the cost component and profitability is accepted. This result agreed with the findings of Anand et al. (2005) that cost has become a residual and the challenge is being able to produce goods or provide service within the stipulated cost framework. Hence, cost management has to be an ongoing and continuous improvement programme in SMEs so as to attain high level of profitability.

<table>
<thead>
<tr>
<th>Annual profit range</th>
<th>Cost components</th>
<th>Low (%)</th>
<th>High (%)</th>
<th>Total (%)</th>
<th>χ²</th>
<th>df</th>
<th>Sig</th>
<th>Phi-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>₦ (1,000,000-2,000,000)</td>
<td>Within average annual profit</td>
<td>3 (13.0)</td>
<td>20 (87.0)</td>
<td>23 (100)</td>
<td>13.034</td>
<td>2</td>
<td>0.001</td>
<td>0.222</td>
</tr>
<tr>
<td>₦ (2,100,000-4,500,000)</td>
<td>Within average annual profit</td>
<td>23 (27.1)</td>
<td>62 (72.9)</td>
<td>85 (100)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>₦ (4,600,000 and above)</td>
<td>Within average annual profit</td>
<td>15 (9.6)</td>
<td>142 (90.4)</td>
<td>157 (100)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Within average annual profit</td>
<td>41 (15.5)</td>
<td>224 (84.5)</td>
<td>265 (100)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Field survey in 2011
Table 2: Kaizen costing technique and profitability of SMEs

<table>
<thead>
<tr>
<th>Annual profit range</th>
<th>Count (%)</th>
<th>Kaizen technique</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (%)</td>
<td>High (%)</td>
</tr>
<tr>
<td></td>
<td>Total (%)</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>₦100,000-500,000</td>
<td>10(46.5)</td>
<td>21(58.5)</td>
</tr>
<tr>
<td>₦500,000-1,000,000</td>
<td>24(16.5)</td>
<td>85(100)</td>
</tr>
<tr>
<td>₦1,000,000 and above</td>
<td>15(15.9)</td>
<td>142(84.1)</td>
</tr>
<tr>
<td>Total</td>
<td>41(18.5)</td>
<td>224(81.5)</td>
</tr>
</tbody>
</table>

Field survey in 2012

**Test of hypothesis 2:** There is no significant relationship between Kaizen costing technique and survival of small and medium scale enterprises in Ogun State, Nigeria.

**HI:** There is a significant relationship between Kaizen costing technique and survival of small and medium scale enterprises in Ogun State, Nigeria.

**Interpretation:** In the above stated hypothesis, the dependent variable of the study is survival of small and medium scale enterprises while the independent variable is Kaizen costing techniques.

Table 2 shows that there was a high effect of Kaizen Costing technique on 84.1% of the total SMEs within the average annual profit of ₦4,600,000 and above while 15.9% of the SMEs who were within the average annual profit of ₦4,600,000 and above experienced low effect of Kaizen costing technique on their profitability. Within the average annual profit of ₦2,100,000-4,500,000 there was a high effect of Kaizen technique on 83.5% of the total SMEs while 16.5% had low effect of Kaizen costing technique on survival and profitability.

The $\chi^2$-test shows that there is a statistically significant relationship between Kaizen costing techniques and profitability of SMEs in with $\chi^2 = 10.445$ at $p<0.05$, df = 2, $r = 0.005$. This implies that Kaizen costing technique has a significant influence on the survival and profitability of SMEs. The Phi-value of 19.9% shows the variation in SMEs profitability which was accounted for by Kaizen costing technique adopted. Therefore, researchers reject the Null hypothesis and accept the alternative hypothesis that states there is a significant relationship between Kaizen costing technique and survival of small and medium scale enterprises in Ogun State.

According to Dobi (2007) the underlying Kaizen Costing technique is the recognition that management must seek to satisfy the customer and serve customer needs if it is to survive, stay in business and make profit. Improvements in such areas as good quality and scheduling (meeting volume and delivery requirements) are essential. Kaizen is a customer driven strategy for improvement. In Kaizen, it is assumed that all activities should eventually lead to increased customer satisfaction.

Table 3: Test of full model co-efficient for the relationship

<table>
<thead>
<tr>
<th>Predicted AAP</th>
<th>Observed</th>
<th>Corrected</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AAP</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
<td>240</td>
</tr>
</tbody>
</table>

Field survey in 2011

Table 4: Logistic regression of the relationship between cost component and average annual profit

<table>
<thead>
<tr>
<th>Cost component</th>
<th>B</th>
<th>Sig</th>
<th>SE</th>
<th>[exp(B)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>1.169</td>
<td>0.150</td>
<td>1.107</td>
<td>4.9330</td>
</tr>
<tr>
<td>X2</td>
<td>0.187</td>
<td>0.858</td>
<td>1.049</td>
<td>1.2060</td>
</tr>
<tr>
<td>X3</td>
<td>0.517</td>
<td>0.357</td>
<td>0.561</td>
<td>1.6770</td>
</tr>
<tr>
<td>X4</td>
<td>-0.471</td>
<td>0.385</td>
<td>0.542</td>
<td>0.6250</td>
</tr>
<tr>
<td>X5</td>
<td>0.109</td>
<td>0.877</td>
<td>0.703</td>
<td>1.1150</td>
</tr>
<tr>
<td>X6</td>
<td>0.424</td>
<td>0.480</td>
<td>0.690</td>
<td>1.5270</td>
</tr>
<tr>
<td>X7</td>
<td>-0.187</td>
<td>0.724</td>
<td>0.529</td>
<td>0.8290</td>
</tr>
<tr>
<td>X8</td>
<td>-2.309</td>
<td>0.000</td>
<td>0.532</td>
<td>0.0990</td>
</tr>
<tr>
<td>Constant</td>
<td>2.630</td>
<td>0.000</td>
<td>0.549</td>
<td>13.871</td>
</tr>
</tbody>
</table>

Field survey in 2011

**Regression analysis:** The cost elements that were significantly related to average annual profit using Chi-square technique in bi-variate were further subjected to multi-variate analysis using Logistic Regression Model. The logistic regression analysis was performed with average annual profit of the SMEs as the dependent variable and cost component as independent variable which was operationalized by direct material cost, direct labour cost, direct expenses, semi-variable cost, factory overhead cost, administrative overhead cost, step fixed cost and fixed cost as the predictor variables. A total of 265 valid cases (98.5%) was analyzed and the full-model significantly predicted the relationship between the cost component and average annual profit of SMEs ($\chi^2$-value 30.270, df = 8 and $p<0.05$), the model accounted for between 10.8 and 24.2% of the variance in average annual profit with 99.2% of the average annual profit successfully predicted (Table 3).

Also, Table 4 shows co-efficient and associated degree of freedom and probability (p-value) for each of the predictor variables (i.e., cost component). The Table 4 shows that only the fixed cost reliably predicted the average annual profit by a factor of 0.099. The value of co-efficient [exp(B)] reveals that decrease in fixed cost is associated with increase in average annual profit.

To formulate the Regression Model, let Direct material = $X_1$, Direct labour = $X_2$, Direct expense = $X_3$, 

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Semi-variable cost = \( X_c \)
Factory overhead = \( X_o \)
Administrative overhead = \( X_a \)
Step fixed cost = \( X_f \)
Fixed cost = \( X_s \)
Constant = \( C \)
Cost component = \( D \)
and Average Annual Profit = AAP. The equation is given as:

\[
AAP = BX + C
\]

\[
AAP = 1.16X_t + 0.187X_c + 0.517X_f + 0.471X_d + 0.109X_s + 0.424X_r - 0.187X_f - 2.309X_c + 13.871
\]

RESULTS AND DISCUSSION

The key summary of the study is that the application of appropriate cost management technique improves business survival and profitability. This position was supported by the results of the hypotheses stated and tested. The result of the first hypothesis reveals that there is a significant relationship between the cost components and the profitability of small and medium scale enterprises. This finding is in consonance with the opinion of Ayinde (2006) on how profit can be improved, Ayinde positioned that profit can be improved either by increasing the sale value or reducing the cost components or both simultaneously. He added that in most of the situations, sale value depends on market forces which can seldom be substantially influenced by managers. Usually, even a real increase in cost cannot be passed on fully to the customers, especially if the demand for the product or service is perfectly elastic and a portion of the cost is borne by the manufacturer. Hence, it is not always possible to improve profit by increasing the sale value. Cost reduction is generally the only alternative for improving the profitability of a product.

The implication of this is that cost as an amount of expenditure incurred on or attributable to a specified thing or activity has a significant effect on profitability of SMEs.

The test of the second hypothesis shows that profitability and survival of SMEs depends on identified Cost Management techniques. In addition, \( p<0.05 \) is an indication that the relationship between the variables is statistically significant. This confirms the position of Anand et al. (2005) that the examination of responses conditional on adopted cost management technique revealed that SMEs who have adopted Kaizen cost management technique are significantly more successful in capturing cost information which leads to survival and profitability vis a vis the enterprise who had not adopted the technique.

CONCLUSION

However, the specific findings from the respondents’ responses to the three specific objectives of the study indicates that the most widely used of all the identified cost management techniques by SMEs in Ogun State is Kaizen costing technique. This implies that though other methods exist, they are not popularly used to enhance profitability of SMEs in the state as continuous improvement.

RECOMMENDATIONS

From the findings followed by conclusion of the study, it is important that for SMEs that wish to improve profitability through the adoption of Kaizen cost management technique must pay more attention to the following recommendations:

- Cost reduction activity should not be undertaking only as a reactive measure to external pressures. It should be considered a part of ongoing business strategy and certainly not part of core growth strategy. However, those SMEs who have made that switch in mindset from reactive cost projects to continuous pro-active cost reduction are those most likely to succeed in both downturns and upturns of the economy.

- Small and medium scale enterprises must be able to link ongoing cost efficiency to profit generation by identifying and applying appropriate cost management techniques for delivering competitive advantage through efficient cost management techniques and market leadership.

- Continuous improvement should be used as a long term effective tool to influence sales growth and market share that lead to profitability and business survival. It can also be used as a weapon in the hand managers to eliminate competition.

REFERENCES


