Diversity Management and Competitive Advantage In Multinational Firms In Sub-Saharan Africa

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ABSTRACT

In the midst of the disappointing economic performance of most sub-Saharan states, a significant number of multinational organizations have found the region a great economic space to do business. As global enterprises, the issue of diversity management and its effect on competitive advantage remains a thorny issue needing empirical validation. We harnessed the views of human resource managers in selected multinational organizations in Ghana and modeled their responses using a collection of statistical analytical models. We observed that far from being a challenge, effective diversity management can create uncontested competitive space by increasing innovation, enhancing brand equity, customer loyalty, lowering buyer propensity to substitute, increasing supplier and employee solidarity. These factors directly, singly or wholly influence competitive rivalry, bargaining power of buyers, bargaining power of customers, threat of substitutes and threat of new entrants.

Keywords: Diversity, Management, Multinational, Sub-Sahara, Competitive, Advantage

I. INTRODUCTION

In the midst of the disappointing economic performance of most sub-Saharan states, a significant number of multinational organizations have found the region a great economic space to do business [1]. A significant number of iconic countries such as Ghana, Nigeria, South Africa, Kenya, Tanzania, Botswana, and Namibia etc still exist due to collaborated reforms spearheaded by multilateral and bilateral donors to reduce the perceived risk of doing business in this region. Further access to cheaper sources of raw materials, labour and government led incentives to attract foreign direct investments has received some modicum of response from large multinational such as Unilever, Cadbury, KFC, Nestle, Heinz, Shoprite and international financial institutions most of which have set up their operations in one of more countries [2].

Typical of most of these entities, systematic policies are put in place to recruit people from the countries to reduce cost and help reduce unemployment burden while bring expatriates from different parts of the world to help maintain the needed international standardization in their operations [3]. Thus most multinational organizations operating in Sub-Saharan Africa have largely a diversified employee base which comes with its own challenges and benefits to the organisation hence must be managed with great dexterity. The sources of diversified employees are reiterated in a number of studies presented in the existing stock of literature.

According to Hofstede (2003) differences in culture brings about diversity among people of different orientation. This include differences in terms of uncertainty avoidance, power distances, masculinity, individualism and long or short term orientation all of which affects individual attitude and way of life. For example the power distance index is defined as “the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally.” In this dimension, inequality and power is perceived from the followers, or the lower level. A higher degree of the Index indicates that hierarchy is clearly established and executed in society, without doubt or reason[4].
A lower degree of the Index signifies that people question authority and attempt to distribute power. Individualism and collectivism explores the “degree to which people in a society are integrated into groups.” Individualistic societies have loose ties that often only relate an individual to his/her immediate family. They emphasize the “I” versus the “we.” Its counterpart, collectivism, describes a society in which tightly-integrated relationships tie extended families and others into in-groups. These in-groups are laced with undoubted loyalty and support each other when a conflict arises with another in-group[5].

On the other hand, the uncertainty avoidance index is defined as “a society's tolerance for ambiguity,” in which people embrace or avert an event of something unexpected, unknown, or away from the status quo. Societies that score a high degree in this index opt for stiff codes of behavior, guidelines, laws, and generally rely on absolute truth, or the belief that one lone truth dictates everything and people know what it is. A lower degree in this index shows more acceptances of differing thoughts/ideas. Society tends to impose fewer regulations and ambiguity is more accustomed to, and the environment is more free-flowing.

On the other hand [6] suggest that the changing social roles around the world, particularly for women, as well as international support for human rights, are also challenging previously accepted patterns of discrimination on the basis of religion, social class, ethnic origin, disability, and sexual orientation, as well as age and gender. The increasing participation of women in the labour force has been one of the most important aspects of workplace diversity in across the globe. Women’s participation in the labour force has increased as a result of economic and social changes. For example, birth control has allowed women greater control over their lives and opened up opportunities for education and employment [7].

In addition to control over their reproduction, women have gained access to a broader range of jobs due to the changing nature of work. Automation and technological advances have enabled women to perform many jobs that previously were more physically demanding, dangerous, or required exposure to environments unwelcome to women [8]. A century ago, the workplace was predominantly male and produced mainly agricultural and manufactured goods. Despite the fact that the subject of diversity management has become a topical issue for discussion with different arguments and counter arguments emanating from different researchers and practitioners, it is worth noting that a significant number of these studies have focused on diversity management issues in advanced economies such as Western Europe, Asia and Northern America[9].

For reasons yet to be explored the diversity management in Africa has not become a major topical issue in most Sub-Saharan counties due to the limited numbers of multinational enterprises in the region. However with the potential growth of in the numbers in promising countries such as Ghana, Nigeria, Kenya etc, it is imperative to explore the current issues in diversity management among the existing organizations with the view to developing a more integrated and cultural context approach to diversity management in this part of the world known for its peculiar socio-cultural differences from the rest of the world[10].

Thus this research seeks to explore the current benefits of diversity management to multinational organizations in sub-Saharan Africa and the challenges assailing effective diversity management. Using and collection of statistical analytical models, the study investigate the competitive variables that are affected by effective diversity management in these organizations and the degree to which they influence traditional elements for measuring competitive intensity such as the five forces model proposed by Michael Porter.

Related Works

As observed by [11] diversity in multinational organizations require managers to recognise certain skills that are vital for creating an effective and successful diverse workforce. The managers must understand that discrimination and its consequences can hamper the growth of the organisation hence the need to recognize their own cultural preferences, see diversity as the differences among individuals and support the fact that each individual is unique in a special way ([12]). It is also the contention of [13] that in today’s multinationals, success consists of manager’s readiness to change the organisational culture when needed and learn how to effectively manage the diverse workforce. [14] contends that even though a diversity issue has been with the world of business for nearly three decades, there is still no single formula that a company can apply
to be successful. In most cases, it depends on the managers own ability to figure out what best suits their company based on teamwork and the workplace dynamics. In the opinion of [15] diversity management requires a process change, grass root participation and consciousness of personal awareness on the part of both the managers and the employees about their personal prejudices. In this respect, he context that merely holding a one day session of training is not enough to change people’s mind and behaviours, therefore organizations need to constantly develop, implement, and maintain ongoing training and awareness creation. Nevertheless [13]explains that the ability to develop this attitude or disposition to diversity management will require a clear understanding of the importance or benefits that an organization can gain from effective diversity management strategy. Within the current literature, a lot of evidence is adduced to support the fact that diversity oriented organization can lead to several benefits including productivity, work engagement and enhancement of brand image. [16] contends that proponents of workplace diversity cite studies that indicate diversity can have a positive effect on the company’s bottom line. One of the main advantages to having a diverse workforce is the synergy that occurs between people from different backgrounds, cultures and work values. Collaboration among diverse populations can bring out the creativity in otherwise bland work teams. [14] believes that employees feel good about diversity that occurs naturally, instead of forcing diversity into the workplace.

Where a company enjoys a reputation of fair employment and good business practices, recruiting a diverse pool of applicants is not at all difficult. [17] on the other hand note that greater diversity of both men and women in top management board levels have some significant impact on the performance of the firm. [17] infers that the odds of having a diversified workforce have a greater effect on innovation. Similarly [18] notes that diversity among employees in terms of age, education and nationality and gender were significantly relevant to innovation but these were moderated by other factors such as size of firm, the type of industry, the external cooperation, competition and organizational change. [19] found out that there was a higher likelihood for firms with a highly balanced gender composition to experience innovation relative to those firms where the concentration of a single gender was high.

In the same way it was noted that where the diversity of employees was wide as far as nationality, age, race, ethnic groups, level of education and culture was high, it was a strong precursor to experiencing higher levels of innovation which had a significant impact on the future performance of the firm. [5] analyses the effect of diversity on the performance of firms in selected multinational companies. They noted that customer’s interest was stimulated or increased by gender diversity and helped in attracting new employees to an organization. This was however lower in terms of effect of diversity relative to the impact that diversity had on organization citizenship behavior and higher performance. [7] is another important study that presents the competing prediction of the effect or gender diversity in an organization on the performance of the firm. [1] examines the case using an ensemble of linear prediction approaches (positive and negative linear prediction approach and an inverted U-shaped curvilinear prediction approach).

In this longitudinal study where the authors used an archival quantitative data solicited from the service and manufacturing industry, their findings partially supported the effect of diversity on performance. The results help reconcile the inconsistent findings of past research. The findings also show that industry context can strengthen or weaken gender diversity effects. On the other hand opponents of diversity management in the workplace have valid arguments against diversity management [20]. The common claim is that employees tire of being continually reminded of diversity through peer groups, work teams and recruiting methods. When diversity is the primary concern, members of nonminority groups sometimes feel excluded, and that minority groups are receiving preferential treatment. Another claim is the misconception that diversity and affirmative action are the same.

Affirmative action can be voluntary or mandatory. However, mandated affirmative action is for government contractors required to achieve a diverse workforce through test outreach methods and other ways to reach a diverse pool of applicants. On the other hand [21] asserts that the opposition to diversity management manifests itself in many ways. The most detrimental is an employee who is resentful concerning diversity. Some employees believe that mandatory diversity training is not a panacea for the workforce, and therefore, any type of training is useless.
II. METHODS AND MATERIAL

As a quantitative research study, data was collected using a questionnaire administered to selected respondents from 10 multinational organizations operating in Ghana. Initially a total of 60 respondents were targeted but the final count of valid questionnaires returned were 534 giving the study a 90% response rate. The questions administered to the respondents were collated from previous efforts to explore the benefits and challenges of diversity management in developed countries by other researchers. This was necessary in order to broaden the frontiers of knowledge and to compare the consistency of the diversity management issues in developed and sub Saharan African countries. The selection of respondents was done by convince sampling or companies whose representative were willing and able to participate in the study. The inclusion criterion was targeted at managers and supervisors within the human resource management divisions in the organization. A two-way process was developed to test the validity and reliability of the instrument and data collected. Firstly a pre-test was conducted for 7 research sample. When the data was collected, it was analysed to refine the wording ensure that the questionnaire collected the same data even if it was administered at different places and at different times. Additionally the completed data was tested with the SPSS software for internal consistency. The Cronbach alpha test was conducted to ensure that all the items on the scale were more than the 0.7 threshold.

ANALYTICAL MODEL

To establish the importance of diversity management on brand equity, customer loyalty, buyer propensity to substitute, supplier solidarity, employee solidarity and innovation, a simple one sample t-test analytical model was designed to analyse the data. The objective was to evaluate whether the population mean is equal to a specified value \( \mu_0 \) using the statistic:

\[
t = \frac{\overline{X}_1 - \overline{X}_2}{S_{\overline{X}_1 - \overline{X}_2}}
\]

where \( \overline{X}_1 \) is the sample mean, \( S_{\overline{X}_1 - \overline{X}_2} \) is the sample standard deviation of the sample determined by:

\[
S_{\overline{X}_1 - \overline{X}_2} = \sqrt{\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}}
\]

Since we usually don’t know \( \sigma \), we estimate it from the sample:

\[
\text{Estimated standard error: } S_{\overline{X}_1 - \overline{X}_2} = \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}
\]

The degrees of freedom used in this test are \( n - 1 \). Although the parent population does not need to be normally distributed, the distribution of the population of sample means is assumed to be normal. By the central limit theorem, if the sampling of the parent population is independent then the sample means will be approximately normal.

Secondly, to establish the effect of brand equity, customer loyalty, buyer propensity to substitute, supplier solidarity, employee solidarity and innovation, a feed forward supervised multilayer perceptron neural networks was constructed. In supervised learning, a feed forward neural network is trained with pairs of input-output examples. For each input, the network produces an output. The accuracy of the response is measured in terms of an error \( E \) defined as the difference between the current \( o_p \) and desired \( t_p \) output.

\[
E = \frac{1}{2} \sum (t_p - o_p)^2
\]

Weights are changed to minimise the overall output error calculated by the above Equation. The error \( E \) is propagated backwards from the output to the input layer. Appropriate adjustments are made, by slightly changing the weights in the network by a proportion \( \delta \) of the overall error \( E \). After weights have been adjusted, examples are presented all over again. Error is calculated, weights adjusted, and so on, until the current output is satisfactory, or the network cannot improve its performance any further. A summarized mathematical description of the backpropagation learning algorithm extracted from (Rumelhart:86a, Aleksander:90) is presented as follows.

1. Present the input-output pair \( p \) and produce the current output \( o_p \).
2. Calculate the output of the network.
3. Calculate the error $\delta_{pj}$ for each output unit $j$ for that particular pair $p$. The error is the difference between the desired $y_{pj}$ and the current output $o_{pj}$ times the derivative of the activation function $f'(net_{pj})$, which maps the total input to an output value.

$$\delta_{pj} = (y_{pj} - o_{pj})f'(net_{pj})$$

4. Calculate the error by the recursive computation of $\delta$ for each of the hidden units $j$ in the current layer. Where $w_{kj}$ are the weights in the $k$ output connections of the hidden unit $j$, $\delta_{pk}$ are the error signals from the $k$ units in the next layer and $f'(net_{pj})$ is the derivative of the activation function. Propagate backwards the error signal through all the hidden layers until the input layer is reached.

$$\delta_{pj} = \sum_k \delta_{pk} w_{kj} f'(net_{pj})$$

Finally to explore the differences in the challenges confronting multinational organization as far as effective implementation of diversity plans is concerned, an analysis of variance (ANOVA) is used. At the heart of any analysis of variance is the ANOVA Table. The formulas for the sums of squares in ANOVA are simplified if the $k$ samples are all of the same size $n_s$. In the interests of simplicity, therefore, the following discussion assumes that all $k$ samples contain the same number of observations $n_s$.

- The index $i$ represents the $i^{th}$ population or treatment, where $i$ ranges from 1 to $k$
- The index $j$ represents the $j^{th}$ observation within a sample, where $j$ ranges from 1 to $n_s$
- $n$ is the total number of observations from all samples
- $y_{ij}$ is the value of the $j^{th}$ observation in the $i^{th}$ sample
- $\bar{y}_i$ is the mean of the $i^{th}$ sample
- $\bar{y}$ (read “y double-bar”) is the mean of all $n$ observations, $\bar{y} = \frac{1}{n} \sum_{i=1}^{k} \sum_{j=1}^{n_s} y_{ij}$, or the mean of the sample means (hence the “double-bar” in the name),

$$\bar{y} = \frac{\bar{y}_1 + \bar{y}_2 + \cdots + \bar{y}_k}{k}$$

Where;

**Sum of Squares for Treatments**,

$$SSR = n_s \sum_{i=1}^{k} (\bar{y}_i - \bar{y})^2$$

is the “Between Group” variation, where the $k$ “groups” or populations are represented by their sample means. If the sample means differ substantially then SST will be large.

**Sum of Squares for Error**, $SSE = \sum_{i=1}^{k} \sum_{j=1}^{n_s} (y_{ij} - \bar{y}_i)^2$ is the “Within Group” variation and represents the random or sample-to-sample variation

**Total Sum of Squares**, $SST = \sum_{i=1}^{k} \sum_{j=1}^{n_s} (y_{ij} - \bar{y})^2$ is the total variation in the values of the response variables over all $k$ samples. (Note: SST is the same as in regression)

### III. RESULTS AND DISCUSSION

#### DATA ANALYSIS

**Table 1: Benefits of Diversity Management on Competitive Variables**

<table>
<thead>
<tr>
<th></th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Equity</td>
<td>.000**</td>
<td>2.91</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>.000**</td>
<td>3.01</td>
</tr>
<tr>
<td>Buyer Propensity to</td>
<td>.000**</td>
<td>3.21</td>
</tr>
<tr>
<td>substitute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier Solidarity</td>
<td>.000**</td>
<td>3.11</td>
</tr>
<tr>
<td>Employee Solidarity</td>
<td>.000**</td>
<td>2.87</td>
</tr>
<tr>
<td>Innovation</td>
<td>.000**</td>
<td>2.99</td>
</tr>
</tbody>
</table>

The benefits of diversity management have been discussed in several instances in this research. It has been stated that how management understands the benefits of diversity determines their commitment to diversity management in the organization. To that extent the information in this part of the study is the one sample t test on management’s value of diversity based on its importance. The managers of MNCs were therefore asked to rank specific benefits of diversity management to their organization which has been tested. Regarding the belief that diverse employees more accurately identify the needs of our customers, the mean response value was 2.91000 and this is statistically significant. On the other hand managers also believe that diverse employees are valuable because they have a wide variety of skills.
The mean response value of this is 3.01000 and the statistical significance is also evident in the value of $p$ which is lower than 0.5 at 95% confidence interval. Another important benchmark used in evaluating the importance management attaches to diversity was to find out their belief that diverse employees are valuable because they offer wider recruitment opportunities. In this case also the mean response value was 3.21000 and statistically significant while managers also believe that diverse employees keep them on the right side of equal opportunities legislation. The mean response value was 3.11000. Further the study also found out that the managers of MNCs understands the having diverse employees enhance innovation with fresh ideas and this is represented by the 2.87000 mean response value recorded. This is similar to their belief that diverse employees make team working a richer experience which also recorded a mean response value of 2.87000. Finally the notion that diverse employees improve the public image of our organization and improve internal morale was also accepted by the managers at MNCs with 3.18000 mean response value.

This means that each of the independent variables have a significant effect on the five competitive forces and since these forces as are explained by Porter (2010) as the main sources of competitive advantage, it means that the benefits of diversity includes effect on competitive advantage. The statistical value of this effect is further analysed based on the summary of the model shown in table 2.

**Table 2: Model Summary of Effect of Competitive Variables on Porters Five Forces**

<table>
<thead>
<tr>
<th>Model Summary</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Entropy Error</td>
<td>21.64%</td>
</tr>
<tr>
<td>Average Percent Incorrect Predictions</td>
<td>17.86%</td>
</tr>
<tr>
<td>Threat of New Entrants</td>
<td>18.6%</td>
</tr>
<tr>
<td>Threat of Substitutes</td>
<td>12.1%</td>
</tr>
<tr>
<td>Bargaining of Power of Suppliers</td>
<td>22.3%</td>
</tr>
<tr>
<td>Percent Incorrect Predictions</td>
<td></td>
</tr>
<tr>
<td>for Categorical Dependent</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
</tr>
<tr>
<td>Bargaining of Power of Customers</td>
<td>19.3%</td>
</tr>
<tr>
<td>Competitive Rivalry</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stopping Rule Used</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Training Time</td>
<td>0.00000039</td>
</tr>
<tr>
<td>Cross Entropy Error</td>
<td>23.374</td>
</tr>
<tr>
<td>Average Percent Incorrect Predictions</td>
<td>19.64%</td>
</tr>
<tr>
<td>Threat of New Entrants</td>
<td>19.2%</td>
</tr>
<tr>
<td>Threat of Substitutes</td>
<td>21.0%</td>
</tr>
<tr>
<td>Bargaining of Power of Suppliers</td>
<td>17.7%</td>
</tr>
<tr>
<td>Percent Incorrect Predictions</td>
<td></td>
</tr>
<tr>
<td>for Categorical Dependent</td>
<td></td>
</tr>
<tr>
<td>Testing</td>
<td></td>
</tr>
<tr>
<td>Bargaining of Power of Customers</td>
<td>19.4%</td>
</tr>
<tr>
<td>Competitive Rivalry</td>
<td>21.2%</td>
</tr>
</tbody>
</table>

On the other hand the information in table 2 shows the summary of the model in terms of their prediction accuracy. Generally the information suggests a positive outlook of the model and confirms the fact that the independent variables influence the each of the five dependent forces of competitive advantage. In the training set it is observed that the effect of the independent variables is 81.4% accurate in predicting threat of new entrants and it is 87.9% accurate in predicting threat of substitutes. On the other hand the independent variables are 77.7% accurate in predicting high supplier solidarity, high employee solidarity and innovation which are validated values of diversity management all maps unto the five main competitive forces. These forces are competitive rivalry, bargaining power of buyers, bargaining power of customers, threat of substitutes and threat of new entrants.

Effect of Diversity Management on Firm Competitiveness

Figure 1 is the output of the multiplayer perceptron model indicating the relationship between the dependent variables and independent variables. The model shows that the independent variables; enhanced brand equity, customer loyalty, low buyer propensity to substitute,
bargaining power of customers while predicting accuracy of bargaining power of suppliers by the independent variable is 80.7%. Finally the independent variables are 83% accurate in predicting competitive rivalry. Overall the incorrect prediction is 17.86%. Testing models are inflation adjusted of the training and helps but the results equally gives and impressive prediction of the independent variables on the Porters five forces. For example, the testing model shows that the effect of the independent variables is 80.8% accurate in predicting threat of new entrants and it is 79% accurate in predicting threat of substitutes. On the other hand the independent variables are 82.3% accurate in predicting bargaining power of customers whiles the prediction accuracy of bargaining power of suppliers by the independent variable is 80.9%. Finally the independent variables are 78.8% accurate in predicting competitive rivalry. Overall the incorrect prediction is 19.64%.

Table 3: Analysis of Variance of Challenges to Diversity among MNCs

In table 3 an analysis of variance (ANOVA) of differences in factors affecting diversity management among MNCs are analysed. The extant literature suggests that many challenges assail the diversity management challenges of business organizations irrespective of their location. More importantly the study noted that these challenges emanate from both the external and the internal environment of the organisation to thwart the diversity management plan of these organizations. For example there are challenges with time availability, money to employ diverse groups and funds to manage equality and diversity issues. Others that were identified include quality skills to employ diverse groups, quality skills to manage equality and diversity issue, wariness of upsetting the balance of the workforce and the fact that diverse groups have not been beneficial in the past has stalled any attempt to intensify diversity management initiatives.

Since the organization under investigation operated in different industries, it was necessary to find out the extent to which differences exist in the challenges that faces MNCs in their quest to implement their diversity management plan. The analysis suggests minimal differences between the factors that constrict effect implementation of diversity management plans among the different companies operating in the different sectors. The evidence is shown by the more than 0.5 significant value for all categories of challenges at 95% confidence interval.

IV. DISCUSSION AND CONCLUSIONS

In today’s global competitive arena, successful companies capitalize on diversity and inclusion as a source of competitive advantage. The target market of the company is far from homogeneous. Likewise, the workforce comes from different backgrounds, skills and aptitudes. Far from being a challenge, the analysis suggest that diversity can create competitive advantage by increasing innovation, enhancing brand equity, customer loyalty, lowering buyer propensity to substitute, increasing supplier and employee solidarity. Significantly these factors have been determined to directly, singly or wholly influence competitive rivalry, bargaining power of buyers, bargaining power of customers, threat of substitutes and threat of new entrants. From the responses collected from practitioners, it is argued that customer expectations about the way the company should work are diverse, and the best way to gain acceptance of customers is to reflect the diversity of the customer base.

For example, providing multilingual service and support improves customer satisfaction and opens up opportunities in different sectors of the market. It is also noted that diversity is not simply about having a heterogeneous workforce. With regard to innovation, it
is noted that companies employ the concept in developing new products, services and business concepts. Managers increasingly realize that diversity of experience, opinion and background help conceive new ideas. Additionally, a diverse workforce ensures that product and service concepts do not conflict with different cultural values.

Successful commercialization of innovative products and services is a vital route to competitive advantage. The study also implies that to build a competitive advantage based on diversity, the concept should pervade all operations and processes of the company. Diversity does not apply just to hiring processes; it is also relevant to promotions, decision making, product development and other organizational processes. Managers can develop diversity goals and conduct a gap analysis to compare company's current situation with the desired state.

V. REFERENCES


