GENDER OF RESPONDENTS AND PERFORMANCE OF FUNCTIONAL AREAS OF MILK PROCESSING FIRMS IN KENYA

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Abstract

Milk processing firms have significant economic and nutritional contribution to the economy. The industry's performance is however impended by high costs resulting in low profitability, declining output as well collapse and retarded growth of some firms. Firms in the industry have resorted to cost leadership strategy to address performance challenges through adoption of economies of scale, economies of scope and operational efficiency. Studies done in other sectors suggest a correlation between cost leadership strategy and firm performance. Resource Based View theory posits that decisions on strategic orientation are made by the firm's human resources of which gender is an important aspect. This study therefore was an investigation of whether gender is associated with the functional areas involved in making decisions on costs among milk processing firms in Kenya. Self-administered questionnaires were used to collect data from the firms and analysis done using contingency tables and Chi-square test. The study concluded that males were a majority in most of the functional areas but the association was not statistically significant. The study thus recommends that milk processing firms exercise liberty in employing males or females subject to other factors like legislation on workforce gender distribution.

Keywords: Cost Leadership Strategy, Milk Processing Firms in Kenya, Gender, Functional Area

INTRODUCTION

The milk processing industry is a constituent of the larger food processing sector which Kyengo Muathe and Kinyua (2019) posited was a significant contributor to Kenyan economic development. According to the Government of Kenya (2020), the industry is among those providing services currently categorized as essential under the measures implemented to combat the outbreak of COVID-19. Apart from economic contribution through direct and indirect employment, the industry also plays a significant role in diverse nutritional aspects (Wambugu, Kirimi & Opiyo, 2011; Mwangi & Gakobo, 2018). In recognition of these important roles by the milk industry, the government has instituted several supportive reforms and policies like tax reliefs and tax exemption on raw materials (Ministry of Agriculture, Livestock and Fisheries, 2013).

However despite huge potential for growth within the industry, the milk processors continue to record poor performance indicated by low profitability (Bebe, Rademaker, Lee, Kilelu & Tonui, 2017). Chege and Oloko (2017) on the other hand observed dropping milk uptake by the industry while Mwangi and Gakobo (2018) noted that some processors had collapsed while others showed retarded growth both attributable to waning performance. In addition, the food processing sector overall contribution to the economy has slackened (Kyengo *et al.*, 2019). Complications have further arisen from the severe disruptive effects on the economy as a result of COVID-19 pandemic.

According to the Kenya Dairy Board - KDB (2019), the Kenyan milk industry is made up of 29 firms. Competition in the industry is stiff requiring production at low costs for a hugely poor customer base. Import of milk products from Europe further aggravates the local competition. Based on the foregoing, the milk processors key strategic decision and performance objective focuses on lowering costs to improve their performance. Such decisions relate to choice of appropriate approaches to address cost challenges.

Elif and Şengül (2015) viewed the approaches as the strategies that firms adopt to guide their operations towards set performance objectives. Cost leadership strategy has been found to positively and significantly influence firm performance (Hilman & Kaliappen, 2014). Atikiya, Mukulu, Kihoro and Waiganjo (2015) argued that firms gain low cost positions from the strategy hence better defensive ability. Further, cost leadership is the dominant choice among pure strategy firms and contributes significantly among firms pursuing hybrid strategy (Spanos, Zaralis & Lioukas, 2004; Hansen, Nybakk & Panwar, 2015). Cost leadership strategy can be estimated through measures summarized by Atikiya *et al.* (2015). These are economies of scale, economies of scope and operational efficiency.

The objective of economies of scale is to reduce costs through increased efficiency (Mosheim & Lovell, 2009). Scale economies characterize reducing average unit cost as volume rises (Barney & Hesterly, 2009). Conversely, economies of scope focus on combining production activities rather than increasing quantity. Zahavi and Lavie (2013) posited that economies of scope result in efficient multi-tasking of related resources/skills, using existing resources optimally, synergized business activities and mobility of resources. Finally, operational efficiency is a bi-product of cost control in addition to other factors. It focuses on operating efficiently leading to higher output from same input, same output from lower input, managing operating risk and lowering costs of operations (Gill, Singh, Mathur & Mand, 2014).

REVIEW OF LITERATURE

Theoretical Review

This study was anchored on the Resource Based View (RBV) theory. RBV can be traced back to Penrose (1959) works and views firm performance as being contingent on resource possession. The theory dominates debates in strategic management as an explanation for differences in firm performance. Armstrong and Baron (2004) posited that the theory's value is in the realization that superior performance accrues from pursuit of unique business orientation. Consequently, firms that use unique approaches in implementing cost leadership strategy have better performance outcomes. Here, resources give firms a basis upon which beneficial strategies are formulated and implemented.

RBV advocates two cardinal principles. The principle of resource heterogeneity gives unique distinction between firms (Barney, 1991) and consequently ability for each firm to implement a distinct strategy. The principle of resource immobility on the other hand, views resources as static among firms hence enduring heterogeneity. The theory can be extended to the implementation of cost leadership strategy based on variations in the human resource possessed. Apart from the unique definition of a firm based on the extent and nature of its resources and hence strategic distinctiveness, the human resource is a central feature in making decisions on strategic orientation.

Empirical Review

Different scholars have empirically sought to establish performance outcomes of decisions to pursue various cost leadership approaches. A study by Kasman (2012) sought to establish how technological growth is influenced by cost-efficiency and economies of scale. The author noted that organizations make varying strategic decisions which affect their operations. Decision to pursue economies of scale was found to positively influence profitability of Turkish commercial

banks. The study adopted non-probabilistic sampling and used financial metrics only to assess performance. Economic performance of a firm could be predicted by its size (Matejova, Placek, Krapek, Pucek & Ochrana, 2014). In their study, the authors observed contradicting conclusions relating to how size influenced per capita expenditure of firms. The scholars surveyed schools in Czech municipalities. Size was found to have a u-shaped performance effect. Only secondary data was utilized in the study.

A study by Growitsch and Wetzel (2009) sought to determine whether it was more efficient to produce jointly and separately. Their study focused on European railways and observed that economies of scope emerging from integrated activities lead to operational advantages. The authors concluded that joint production positively influences performance. The study measured performance using financial indicators only. Hartarska, Parmeter and Nadolnyak (2011) examined rural microfinance institutions (MFIs) decision to pursue economies of scope. The study argued that such decision to expand into related business areas could lead to cost efficiencies. The study's conclusion showed that economies of scope were on average positive. The study was based on several countries hence the risk of industry variability.

High operational efficiency has been argued to be a precursor for superior performance (Sporta, Ngugi, Ngumi & Nanjala, 2017). A study based on Kenyan commercial banks affirmed the hypothesis by concluding that financial performance was explained by the level of operational efficiency. The context of the study was service industry. Efficiency was also found to predict firm performance by Azad, Raza and Zaidi (2018). The authors hypothesized that operational efficiency could lead to reduction in costs and tested the assertion based on data from four Pakistani oil companies. The study found that operational efficiency positively impacted profitability of the companies.

The reviewed studies indicate that cost leadership strategy has significant explanatory power on firm performance, meaning that firms consciously choose and implement certain drivers of cost leadership with an aim of improving their performance. These decisions as postulated by the RBV are made by the firms' human resources. It is therefore important to investigate whether gender as an aspect of the human resource is associated with the functional areas involved in making decisions on costs. Consequently, the study hypothesizes that:

H_{01}: There is no significant association between gender of respondents and performance of functional areas of milk processing firms in Kenya.

RESEARCH METHODOLOGY

The study was both descriptive and explanatory in design. It surveyed all the 29 milk processors in KDB's register as at June 2019. The processors formed the units of analysis while heads and deputies of different functional areas formed the units of observation. The study's sample was drawn through proportionate stratified random sampling approach. Relevant functional areas were purposively identified with resultant respondents totaling 194 divided into two groups. The identified functional areas were executive, operations, production, finance and marketing. Samples of proportionate sizes were consequently randomly selected from the two groups with a final sample of 168 subjects. Muathe (2010) and Field (2013) recommended large sample sizes to better estimate the population as well as lower confidence intervals. The study used self-administered semi-structured questionnaires to collect data which was subsequently analyzed through descriptive statistics. To establish the association between gender of respondents and functional areas in the firm, cross tabulation was conducted. Cross-tabulation was recommended by Byrne (2007) as a quick visual analysis tool of relatedness while Johnson (2014) posited that the approach can also give an indication of the strength of the association.

FINDINGS AND DISCUSSION

From the 168 questionnaires administered, 148 were completed and usable. This represented 88.1% response rate categorized as excellent by Mugenda and Mugenda (2003). The study used contingency tables to show the association between gender of respondents and functional areas in the firm. The cross tabulation results are shown in Table 1.

Table 1. Gender of Respondent * Functional Area in the Organization Cross-tabulation

			Functional area in the Organization					
			Executive	Operations	Production	Finance	Marketing	Total
Gender of respondent	Male	Count	23	19	22	11	15	90
		% within Gender of respondent	25.6%	21.1%	24.4%	12.2%	16.7%	100.0%
		% within Functional area in the organization	74.2%	63.3%	62.9%	47.8%	51.7%	60.8%
		% of Total	15.5%	12.8%	14.9%	7.4%	10.1%	60.8%
	Female	Count	8	11	13	12	14	58
		% within Gender of respondent	13.8%	19.0%	22.4%	20.7%	24.1%	100.0%
		% within Functional area in the organization	25.8%	36.7%	37.1%	52.2%	48.3%	39.2%
		% of Total	5.4%	7.4%	8.8%	8.1%	9.5%	39.2%

Total			31	30	35	23	29	148	Table 1…
	Count	31	30	35	23	29	148	
	% within Gender of respondent	20.9%	20.3%	23.6%	15.5%	19.6%	100.0%	
	% within Functional area in the organization	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	20.9%	20.3%	23.6%	15.5%	19.6%	100.0%	

From Table 1, the results indicate that there were generally more male respondents than females. In executive, males were 15.5% of total respondents while females were 5.4%. In operations, males were 12.8% of total respondents while females were 7.4%. There were 14.9% males out of the total respondents in production while females accounted for 8.8%. In finance, female respondents surpassed the males at 8.1% of the total compared to 7.4% males. In marketing, male respondents accounted for 10.1% of total respondents and females were 9.5%. Overall, male respondents accounted for 60.8% while females accounted for 39.2%. The results of Chi-square test are presented in Table 2.

Table 2. Chi-square Goodness of Fit

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.103[a]	4	.277
Likelihood Ratio	5.176	4	.270
N of Valid Cases	148		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.01.

From Table 2, the frequency of cells less than 5 = 0% < 20% meaning that it is possible to draw inferences about the population. Further, $\chi2\ (4) = 5.103$, $p = .277$ which is greater than .05. This signifies that the association between gender of the respondents and functional area in milk processing firms in Kenya was not statistically significant. The results of symmetric measures are presented in Table 3.

Table 3. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.186	.277
	Cramer's V	.186	.277
N of Valid Cases		148	

From Table 3, the values of both Phi and Cramer's V tests show that the strength of association between gender of the respondents and functional area is very weak.

CONCLUSIVE REMARKS

Conclusion

This study sought to establish the association between gender of respondents and performance of functional areas of milk processing firms in Kenya. This was important because decisions on cost leadership approaches pursued by the firms are made by human resources of which gender distribution is a vital element. RBV postulates that uniqueness of firm resources significantly determines the strategic orientation it takes. The study concluded that male respondents were the majority in most functional areas but there was no significant association between gender and functional area.

Policy Recommendations

The study thus recommends that milk processing firms exercise liberty in employing either males or females in the functional areas concerned with cost leadership decisions. However, the firms should take into consideration other factors including legislation that may require certain percentages of males and females in their workforce.

Limitations and Future Research

This study used cross-tabulation and Chi-square only to establish the association between gender of respondents and performance of functional areas of milk processing firms in Kenya. Further studies in the area should adopt other approaches of testing the relationship including correlation and regression analysis for comparison of findings.

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