

THE EFFECT OF PRODUCT QUALITY ON COMPETITIVENESS OF SMALL MEDIUM-SIZED ENTERPRISES (SMES) IN SOUTH WESTERN UGANDA

REFLECTION ON KAYONZA GROWERS TEA FACTORY, IN KANUNGU DISTRICT.

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ABSTRACT

The efficiency and profitability of medium-sized businesses (SMEs) in the Kanungu district of southwest Uganda was the subject of the study. It was also guided by its subsequent objectives: To examine the relationship between the quality of the product and the ability of SMEs in South Western Uganda to compete, as well as that relationship between supply chain management and efficiency, that relationship between guaranteeing quality and profitability, and that relationship between the production procedure and rivalry. The findings showed that there was a somewhat strong positive relationship between the two factors. The greater level of efficiency among SMEs were more likely to be associated with enhanced manufacturing methods, according to the positive statistic. The correlation coefficient was exceptionally significant at the 2-tailed 0.01 level with a p-value of 0.000. This suggested that the likelihood of finding such a correlation by accident was extremely low. According to the findings, SMEs ought to concentrate on establishing robust quality control procedures to ensure the same level of quality. This could comprise establishing quality management systems that are compliant with ISO standards, performing routine checks, and establishing up quality management methods. A strong focus on guaranteeing quality can help SMEs decrease faults, ensure uniformity in their products, and please clients.

Key words: product quality and competitiveness of small medium-sized enterprises

Background

In many countries, particularly Uganda, small and medium-sized enterprises (SMEs) are crucial to the expansion of the national economy. Due of resource limitations, these enterprises often find it difficult to compete with bigger, older businesses. One important factor that might help SMEs succeed is the quality of what they sell. In the present piece, the historical analysis of the connection among the quality of merchandise and the business advantage of SMEs in South Western Uganda is focused on the Kayonza Growers Tea Factory in the Kanungu District (Gracious. A, 2023).

More over 70% of Uganda's populace is employed in agriculture, which also contributes roughly 24% of the country's GDP (Mugisha, 2018). The tea business is one of the most important economic sectors in the country, employing approximately 200,000 small-scale cultivators to grow tea on more than 24,000 hectares of land (Nsubuga et al., 2019). Despite the importance of the industry, many tea growers and manufacturers in Uganda face challenging challenges like poor quality control and limited market access (Ronet et al., 2023).

The plant received US\$250,000 from USAID for the development of marketing and marketing initiatives, for the acquisition of tea bag machinery, and other manufacturing needs.

The table below, amplifies growth trends of tea sales in captured in terms of business turnover, cost of sales and distribution costs to portray a “a big picture” in resolute commitment to growth of product sales in 5years from 2006-2020

Kayonza Growers Tea Factory 5year trend product sales and associated Costs in Uganda Shillings (Ugx)

<i>Year</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>
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Turnover In (Ugx.)	15,815,097,834	23,425,208,847	28,399,566,368	23,353,225,878	27,930,892,259
Cost of Sales (Ugx.)	11,038,901,863	17,106,082,582	21,974,938,600	18,510,198,912	21,869,042,486
Distribution Cost (Ugx.)	1,659,161,497	1,673,199,932	1,992,415,447	2,192,687,618	2,471,399,996

Source; Annual Audit Report, dated 21st December, 2021

The company's commitment to product quality has also led to increased revenue and gross profitability. Company's externally audited reports show impressive growth of revenue and gross profitability, which was attributed to the quality of their tea as follows (2019-2020)

Year	2019	2020
Turnover (Revenue) In (Ugx.)	23,353,225,878	27,930,892,259
Cost of Sales (Ugx.)	18,510,198,912	21,869,042,486
Gross Profit (Ugx.)	4,843,026,966	6,061,849,773

The main source of revenue in this primarily rural area is agricultural. By improving livelihoods, supporting economic growth, and generating jobs, SMEs are essential to the region's economy (Gracious. A, 2023). Along with substantial payments to service providers, the selling of leafy green leaf tea by subsistence tea producers generates billions of Ugandan shillings in income each month.

The table below, show 5 years value of green leaf payments to smallholders

Year	2016	2017	2018	2019	2020
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Green leaf payments to smallhol der farmers (Ugx.)	5,196,814, 614	7,862,952, 519	10,862,645, 171	8,725,363, 668	10,284,791, 751
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The reduction in green leaf payments for 2019 and 2020 is due to the current drought; alternatively, farmer incomes increased dramatically from 2016 to 2018, peaking at an unprecedented Ugx 10,862,645,171 (US\$ 2,858,590) in 2018. This excludes payments made to staff members or other suppliers who deliver food, wood for heating, fuel, transport, machinery, spare parts, and other requirements. On average, this region generates roughly US\$ 385,000 (Ugx. 1,450,000,000) yearly.

Problem Statement

The continuous growth and development of the economy of many countries, particularly Uganda, depends on the success of small and medium-sized enterprises (SMEs). But SMEs in Uganda face a number of challenges that have an effect on their profitability, including limited access to funding, inadequate facilities, and poor quality of products. Kayonza Growers Tea Factory is a SME that has effectively increased its market share by enhancing the quality of its products. Due to the company's track record for manufacturing high-quality tea that is renowned both locally and internationally, the company competes with big tea producers. In Uganda, particularly within South Western Uganda, there is a dearth of empirical study on this topic, despite the importance of product quality in enhancing SMEs' competitive edge. This study aims to fill this gap in the scientific literature by examining the effects of the quality of the products on the local small and medium-sized enterprises using Kayonza Growers Tea Factory in Kanungu District as a case study (Gracious. A, 2023). Furthermore, considering the area's huge population of small

businesses and their substantial economic impact, the lack of attention of SMEs in South Western Uganda has been a problem. However, they encounter other difficulties, such as a lack of technology, facilities, and financial resources. These issues have hampered the development and competitiveness of SMEs in the area, thus it's important to find solutions and comprehend how improving product quality may boost small and medium-sized enterprises in South Western Uganda (Gracious. A, 2023).

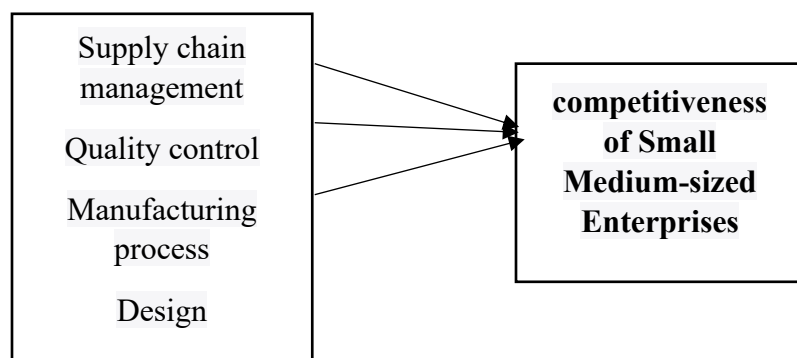
Specific Objectives

- 1. To assess the relationship between product quality and the competitiveness of SMEs in South Western Uganda.*
- 2. To evaluate the relationship between Supply chain management and the competitiveness of SMEs in South Western Uganda.*
- 3. To evaluate the relationship between Quality control and the competitiveness of SMEs in South Western Uganda.*
- 4. To evaluate the relationship between Manufacturing process and the competitiveness of SMEs in South Western Uganda.*

Research Questions

- 1. What is the relationship between product quality and the competitiveness of SMEs in South Western Uganda.*
- 2. What is the relationship between Supply chain management and the competitiveness of SMEs in South Western Uganda.*
- 3. What is the relationship between Quality control and the competitiveness of SMEs in South Western Uganda.*
- 4. What is the relationship between Manufacturing process and the competitiveness of SMEs in South Western Uganda.*

Conceptual Framework



Methodology

Research Design

The study used a design that was cross-sectional in nature. A cross-sectional approach can be used to study the demographic being studied at a specific moment and compare the distinctions between different categories within the neighborhood (Cooper & Schindler, 2003). Best and Khan (2009) claim that cross-sectional research describes and examines occurrences and is concerned in the conditions or relationships that exist, the beliefs that individuals hold, the procedures that are occurring, the consequences that are apparent and the patterns that are developing.

Study Population

According to Byomire (2014), a sample is a subset of a population chosen to take part in a study. The sampling strategy for this study began with the identification of individuals, i.e., the population of 144 those involved, which comprised executives, farmers, and executive directors.

Instance Size

Using the table from Krejcie and Morgan (1970) (see appendix V), the sample size was calculated. According to Morgan Table, 144 people were taken from an overall population of 230. 144 participants make up the study's representative sample.

The investigator applied the calculations that followed and compounded what emerged to each target demographic to obtain the appropriate sample size from each faculty.

$$\text{Sampling fraction} = \frac{144}{230} = 0.62$$

Table 1: Quantitative Sample Size

Faculty	Target Population		Sample Size		Sampling Technique
	Students	Instructors	Students	Instructors	
farmers	30	10	20	1	Simple Random
Heads of department	40	10	34	1	Simple Random
Executive managers	60	10	35	1	Simple Random
Store keepers	30	10	20	1	Simple Random
Sub Total	190	40	109	4	
Grand Total		230		113	

Sampling Strategy

Simple random sampling was used to avoid bias. The investigation team also used simple random sample based on the educators who she managed to locate inside the facility. On the opposite end of the spectrum, purposeful sampling was used to select educators and pupils due to their deep knowledge about the study's subject. In the words of Neuman (2005), this kind of sample is often employed when working with very tiny samples and when the researcher wants to highlight particular instances that are especially helpful.

Data Analysis

A survey was taken out of storage, the relevant data was collected, and IBM SPSS, version 22.0, was used to analyze the data for review (nelson.K, 2022). In this process, the data underwent three stages: data altering, which consisted of verifying survey responses for any errors or omissions; data coding, which present allocating a code to each examine item or parameters for use when putting the data into the computer; and ultimately, data entry into a personal computer for evaluation. The investigator error-checked the data by looking for values outside of the permitted range before conducting an analysis.

RESULTS

CORRELATION ANALYSIS**Table 2: showing the relationship between the Supply chain management and the competitiveness of SMEs in South Western Uganda**

		competitiveness of SMEs	Supply chain management
competitiveness of SMEs	Pearson Correlation	1	0.235**
	Sig. (2-tailed)		0.0014
	N	113	113
Supply chain management	Pearson Correlation	0.235**	1
	Sig. (2-tailed)	.0014	
	N	113	113

Source: Primary data 2023

The correlation between supply chain administration and small and medium-sized businesses is 0.235. This shows a relationship among the two variables, although a very weakly positive one. The positive result suggests that higher levels of supply logistics monitoring and greater competitiveness among SMEs may be related.

The Pearson correlation is highly significant at the 2-tailed 0.01 level with a p-value of 0.0014. This suggests that the likelihood of finding such a correlation by accident is quite low. The association between supply chain management and the business benefits of SMEs in South Western Uganda thus makes sense, it would seem. The table also provides information on the number of observations (N), which is 113 for both variables. This indicates that the correlation analysis was performed using data from 113 SMEs in South Western Uganda.

Table 3: showing the relationship between Quality control and the competitiveness of SMEs in South Western Uganda.

	competitiveness of SMEs	Quality control
competitiveness of SMEs	1	-0.769*
Pearson Correlation		
Sig. (2-tailed)		0.564
N	113	113
Quality control	-0.769*	1
Pearson Correlation		
Sig. (2-tailed)	0.564	
N	113	113

Source: Primary data 2023

A -0.769 correlation coefficient has been found between quality control and SME profitability. This shows that there is a strong negative correlation between the two factors. The fact that the value is negative suggests that SMEs are less economical and that they have more stringent quality assurance procedures.

However, it ought to be emphasized that the value of the correlation coefficient is not highly significant at the standard level of significance ($p > 0.05$). The p-value is 0.564, which is greater than the significance threshold of 0.05. This shows that there could potentially genuinely be a relationship between inspections for quality and small- and medium-sized enterprises in South Western Uganda, and the apparent relationship may just be a coincidence.

Table 4: showing the relationship between Manufacturing process and the competitiveness of SMEs in South Western Uganda.

		competitiveness of SMEs	Manufacturing process
competitiveness of SMEs	Pearson Correlation	1	0.645
	Sig. (2-tailed)		0.000
	N	113	113
Manufacturing process	Pearson Correlation	0.645	1
	Sig. (2-tailed)	0.000	
	N	113	113

Source: Primary data 2023

The competitive advantage of SMEs and the manufacturing process are correlated by 0.645. This shows a fairly good correlation between the two factors. The fact that the value is positive suggests that improved manufacturing practices and increased levels of SME profitability may be related. The correlation coefficient is extremely significant at the 2-tailed 0.01 level with a p-value of 0.000. This suggests that the likelihood of finding such a correlation by coincidence is quite low. It follows that the relationship between the manufacturing process and the edge in competition of SMEs in South Western Uganda makes sense.

The total amount of occurrences (N), which is 113 for both characteristics, is also listed in the table. This indicates that the correlation analysis was performed using data from 113 SMEs in South Western Uganda.

Regression analysis.

Table 5 shows the regression analysis between Supply chain management and the competitiveness of SMEs in South Western Uganda.

Model	R		R Square	Adjusted R Square	Std. Error of the Estimate
1	.567		.758	.749	.6962
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.585	.243		10.658	.000
Supply chain management	0.209247	.069	.180	2.700	.007

Source: Primary data 2023

The R Square coefficient of predictability for the regression model is 0.758. This shows that the logistics administration variable in the model might account for about 75.8% of the disparity in the reactivity of SMEs. This suggests a connection among the management of their supply networks and the competitiveness of SMEs. The model's adjusted R Square, which accounts for the number of predictors, is 0.749. This illustrates that the value of the supply chain supervision variable continues to strongly influence to the range of SME profitability despite the complicated nature of the model. The estimate's standard error is 0.6962.

Table 6 shows the regression analysis between Quality control and the competitiveness of SMEs in South Western Uganda.

Model	R		R Square	Adjusted R Square	Std. Error of the Estimate
1	.396		.157	.153	.49662
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.041	.128		15.939	.000
Quality control	.395	.041	.544	9.585	.000

Source: Primary data 2023

The regression model's coefficient of determination (R Square) is 0.157. This suggests that the model's quality management variable can explain around 15.7% of the variation in SMEs' percentage of the market. This shows that there is only a shaky link between quality control and the ability of SMEs to make a profit. The corrected R Square of the model, which takes into consideration the number of indications, is 0.153. This demonstrates that, given the complexity of the model, the control variable's standards still just partially explain the variation in SME performance. The average error of the prediction is 0.49662. This demonstrates the typical disparity between the actual financial viability of SMEs and the prediction made by the regression model. A worse fit of the model to the data is indicated by higher values of the standard error. The connection between the variable used as a predictor (quality management) and the outcome variable (SMEs' profitability) is revealed by the regression coefficients.

Table 7 shows the regression analysis between Manufacturing process and the competitiveness of SMEs in South Western Uganda.

Model	R		R Square	Adjusted R Square	Std. Error of the Estimate
1	.584		.341	.332	.44099
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.369	.140		16.945	.000
Manufacturing process	.264	.042	.396	6.361	.000

Source: Primary data 2023

The regression model's coefficient of determination (R Square) is 0.341. This suggests that the model's manufacturing method variable can explain roughly 34.1% of the variance in SMEs' competitive advantage. This implies a mediocre relationship between SMEs' financial sustainability and their production method. The corrected R Square for the model, which takes into account the number of predictive factors, is 0.332. This demonstrates that the process of production variable still explains a sizable portion of the variation in SME profitability notwithstanding the model's complicated structure. The standard error of the estimate is 0.44099. This demonstrates the typical difference between the competitive edge of SMEs as it is and what the regression model forecasts

it will be. The association among the factor that predicts (the production of process) and the outcome variable (competitiveness of SMEs) is revealed by the coefficients of the regression analysis. When the production procedure variable is set to zero, the constant term, which is equal to 2.369, represents the anticipated productivity of SMEs.

Test for reliability and validity of data

Durbin Watson test.

Table 8: represents test for validity and reliability of data

<i>Test for spurious</i>	
<i>Number of gaps in sample</i>	<i>1</i>
<i>Durbin-Watson d-statistic (4,156)</i>	<i>1.115981</i>
<i>Content validity index (C.V.I)</i>	<i>0.098</i>

Source: Primary data 2023

A value of 2 or less for the Durbin-Watson statistic denotes the absence of autocorrelation. The residuals in this case have a value of 1.115981, which increases the possibility of positive autocorrelation and raises the possibility that the model might not adequately capture the connections in the data. The content validity index (C.V.I) has a value of 0.098. The C.V.I measures how effectively a study's questions or parameters capture the key idea under investigation. A higher C.V.I rating denotes stronger content validity. In this case, the number of 0.098 shows fairly insufficient validity, suggesting that the queries or features might not precisely reflect the concept being studied.

Conclusion

Customer happiness is directly influenced by product quality improvement. Customers are more likely to be pleased with what they bought when SMEs provide high-quality goods, which promotes positive word-of-mouth, repeat business, and loyalty among consumers. Long-term profitability of SMEs may be increased as a result.

Recommendation

SMEs should invest in training initiatives to increase the workforce's knowledge and abilities in areas related to merchandise quality. This could comprise receiving education in customer needs understanding, quality control practices, and product evaluation approaches. Employers encouraged workers to participate to the maintenance and enhancement of the item's quality by giving them the necessary training and knowledge.

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