INFLUENCE OF STRATEGIC VALUE ADDITION ON THE GROWTH OF COFFEE EXPORT PROCESSING FIRMS IN RWANDA

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Abstract

This study investigated the influence of strategic value addition on the growth of coffee export processing firms in Rwanda. Specifically, the study sought to establish the influence of continuous improvement of high quality coffee, high quality coffee and access to the world markets, sensitization of farmers on high quality coffee, and human capital, managerial competence and high quality coffee, on the growth of coffee export processing firms in Rwanda. The target population was 91 people from coffee export processing firms, staff who deal with activities related to coffee export and processing under the National Agricultural Export Development Board (NAEB), the Ministry of Finance and Economic Planning, and the Ministry of Trade and Industry. The sampling techniques were purposive sampling for staff under Ministries and NAEB, and a census for coffee export processing firms; thus the sample size was 91 respondents. A questionnaire was used to collect data. Descriptive and inferential statistics have been used to present and interpret the findings of the study. The key findings revealed that strategic value addition had a positive and significant influence on the growth of coffee export processing firms in Rwanda. The study recommends the adoption of the selected strategic value addition drivers in order to improve the growth of coffee export processing firms in Rwanda.

Keywords: Strategic value addition, high quality coffee, quality control

Significance of the Study

The findings of the study will be useful to coffee export processing firms as they will adopt strategic value addition drivers as a strategy to improve the quality of coffee and get access to the world markets, thereby maximizing the profitability of coffee export processing firms in Rwanda. The findings of the study will assist coffee policy makers as a reference for future policies; the study will provide important information as to how the government of Rwanda through the relevant Ministries, and
Public Institutions like NAEB, can effectively capitalize on the coffee export sector towards the achievement of the national policies like Vision 2020, EDPRS II etc. The findings of the study will provide necessary information which will help farmers in improving the production, productivity and more importantly, the quality of coffee produced. The study will add to the existing body of academic knowledge in the area of strategic management in general, and specifically in the area of strategic value addition in the coffee sector.

INTRODUCTION

Coffee value addition radically enhances the market value of coffee. Coltrain et al., (2000) state that value addition is the process to economically add value to a product by changing its current form to be more preferred in the marketplace. Ochanda (2012) also emphasized that lack of value addition on products usually results in stakeholders getting varying income depending on the market demand for their coffee whereas with value addition, stakeholders are certain to enjoy more stable prices and increased revenues emanating from the value added of that product. McCaffrey et al., (2004) argued that value addition refers to product improvement as a result of growth in knowledge, skills and other attributes the employees have gained due to experience in the respective field over time.

Value addition of coffee goes with improving the quality of coffee. It starts at the very basic level of land preparation, fertilizer application, pests and diseases control and management, primary processing and secondary processing. Quality of coffee is a key factor for Rwanda’s access to the world coffee markets. Belling (2000) highlighted that the price paid for different coffee qualities depends on the type of coffee, bean size, processing, color and taste. Obtaining a price premium thus depends as much on the ability to get a high quality coffee (Ponte, 2002). Thus, quality attributes such as aroma, taste and cleanliness, may be improved through proper production and processing methods (Belling, 2000).

Several researchers emphasized that getting better international markets was linked most strongly to aroma and perceived quality of coffee (Farah et al., 2006), and they found that the processing methods have the largest impacts on coffee quality (Bytof et al., 2000; Knopp, et al., 2006, Arya et al., 2007). Coffee quality is also dependent not only on post-harvest practices but also on picking time. Therefore, farmers should be sensitized on the best time of picking coffee cherries and the timely delivery of coffee cherries to the washing stations before they are spoiled.

Rwanda's coffee is processed in ‘wet’ form. For coffee to be processed in ‘wet’, coffee farmers need to supply their coffee in fresh red-berries of a certain level of ripeness. They should deliver the red-berries to washing stations within 10-12 hours of harvesting. Coffee washing stations were established in Rwanda in 2000 with two (2) washing stations, and currently Rwanda has more than 245 coffee washing stations, and there is an increased interest from the private sector and cooperatives to establish more washing stations. At the current pace, Rwanda targets to produce 71 percent of fully washed coffee by the year 2018 (NAEB Annual report, 2015). Rwanda has also been conducting the Cup of Excellence competition since 2008 and the competitions are very much related to the quality of Rwanda's coffee; firms enter their coffee into the
competitions and a panel of international coffee buyers tastes the coffee under competition and ranks them according to their quality attributes. The winning coffee is sold on auction where they have previously fetched up to USD $55 per kilogram of coffee. Rwanda’s coffee uniqueness in quality should therefore be emphasized so that the country creates a visual identity for its coffee at regional and international markets.

2013, along with the processing methods (Arya et al., 2007), as the largest impacts on coffee quality. Coffee quality is also dependent not only on post-harvest practices but also on picking time (Bytof et al., 2000). Belling (2000) also highlighted that the price paid for different coffee qualities depends on the type of coffee, bean size, processing, color, and taste.

Authors like Muthaih and Venkatesh (2012) suggest that many factors contribute to the organization’s growth. Thus, being aware of the inherent benefits of value addition to coffee, stakeholders in the sector would work towards ensuring that they enhance the value of this important export commodity before availing it to the world market. Exemplary quality coffee has a high intrinsic value with a fine or unique cup, and is usually of quite limited availability. Thus, Rwanda’s coffee uniqueness in quality should be emphasized in order to create a visual identity for its coffee at regional and international markets.

This study therefore, sought to address the gap by studying the influence of strategic value addition on the growth of coffee export processing firms in Rwanda.

Research Objectives

The general objective of the study was to investigate the influence of strategic value addition on the growth of coffee export processing firms in Rwanda. The specific objectives of the study were to:

1. Determine the influence of continuous improvement of high quality coffee on the growth of coffee export processing firms in Rwanda;

2. Determine the relationship between high quality coffee and access to the world markets and its influence on the growth of coffee export processing firms in Rwanda;

3. To establish how sensitization of farmers on high quality coffee has an influence on the growth of coffee export processing firms in Rwanda;

4. Establish the relationship between human capital, managerial competence and high quality coffee and its influence on the growth of coffee export processing firms in Rwanda.

LITERATURE REVIEW

This section gives an overview of important theories related to the study. It also provides a conceptual framework that was used in regard to both independent and dependent variables in the study.

Theoretical Framework

The study was guided by the following theories;

Resource-Based View Theory-Fahy (2000) has reasoned that the principal contribution of the resource-based view of the firm has been a theory of competitive advantage. Bowman (2003) states that firm resources include all assets, capabilities,
organizational processes, firm attributes, information, knowledge, etc. that enable the firm to conceive and implement strategies that improve its efficiency and effectiveness.

**Dynamic Capabilities Theory**-Helfat et al., (2007) state that dynamic capability is the capacity of an organization to purposefully create, extend, or modify its resource base. Similarly, Eisenhardt and Martin (2000) also suggest that dynamic capabilities involve adaptation and change as it builds, integrates, or reconfigures other resources and capabilities in order to gain and release resources that match and even create the market change. Zollo and Winter (2002) define dynamic capabilities as learned and stable pattern of collective activity through which organization systematically changes its operating routines in pursuit of improved effectiveness.

**Stakeholder Theory**-Friedman and Miles (2006) argued that organizations should consider the interests of its stakeholders because they influence the performance of firms in various ways. Furthermore, managing stakeholders and their interests enhances organizational profits (Parmar et al., 2010). Moreover, stakeholder theory mainly states that a business’s survival is dependent on the management of stakeholder relationships, of which business is made up and act in the interest of stakeholders. A business’s job is to maximize value for its stakeholders (Friedman and Miles, 2006; Thomsen et al., 2006). Adopting stakeholder relationships as a unit of analysis enhances the organization’s effectiveness.

**Growth Theory**-Firms must grow continuously if they want to sustain their competitive position within an environment where other rival firms may be growing at a faster pace (Johnson et al., 2008). Kazmi (2002) found out that firms can be encouraged to embrace the growth strategy especially when pursuing the profitability and wealth objectives. King et al., (2002) suggest that the strongest companies are those that recognize and understand the importance of both innovation and improvement. High growth firms make use of external relations (Lechner et al., 2006). Namusonge, (2010) identified strategies used by businesses during the growth process, and identified barriers and incidents which facilitate or hinder the growth of Small and Micro Enterprises during the growth process.

**Conceptual Framework**

The conceptual framework of this study includes six independent variables and one dependent variable. The study therefore seeks to determine how the independent variables influence the dependent variable.

**Figure 1. Conceptual Framework**

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Continuous improvement of high quality coffee

High quality coffee and access to the world markets

Sensitization of farmers on high quality coffee

Human capital, managerial competence and high quality coffee

Growth of coffee export processing firms
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**Independent Variables**  **Dependent Variable**

Coffee quality has to be considered as the main selection criterion for coffee improvement. Roasting coffee is the most critical stage during post-harvest handling of coffee (Van der Vossen, 2001). Coffee processing and storage is a very important activity and plays a crucial role in quality determination. Alemayehu et al., (2008) highlighted that inadequate processing methods are responsible for the widespread failure to maintain the inherent quality of coffee. Behailu et al., (2008)
also indicated that the final quality of coffee is greatly dependent upon the fermentation process which is done in the coffee washing stations. A study by Behailu et al., (2008) indicated that coffee washing stations play an important role in improving the quality of coffee at different levels. To be effective, a quality enhancement strategy would need to be comprehensive and be applied throughout the entire coffee production chain from harvest to post-harvest. In order to benefit from the expanding opportunities, producers must adhere to the stringent quality and safety standards and regulations on international markets (Ponte, 2004; Daviron and Ponte, 2005). The employees are thus trained and encouraged to maximize their potential so that organizations can maximize their effectiveness (Hodgkinson & Sparrow, 2002).

RESEARCH METHODOLOGY

The study adopted descriptive research design. The design was deemed appropriate as it provided an in-depth investigation on the influence of strategic value addition on the growth of coffee export processing firms in Rwanda. The target population of the study included managers of 78 coffee exporters and processors, and 13 staff dealing with coffee export and processing; one (1) staff representing the Ministry of Finance and Economic Planning, two (2) staff representing the Ministry of Trade and Industry, and ten (10) staff from the National Agricultural Export Development Board (NAEB).

Sampling was done through purposive sampling for staff from the two (2) mentioned Ministries and NAEB, while for coffee export processing firms, the sample was done through a census. Therefore, the sample comprised 91 respondents. The inferential statistics were done by use of ANOVA, regression analysis and Pearson correlation, to test the relationship between the study variables. Primary data was collected using questionnaires which had both closed and open-ended questions.

Data were analyzed using frequency distribution tables, percentages, and a regression model was used to establish the relationships between the independent and dependent variables.

RESEARCH FINDINGS AND DISCUSSION

The study sought to investigate the influence of strategic value addition on the growth of coffee export processing firms in Rwanda. Descriptive and inferential statistics have been used to present and interpret the findings of the study.

Descriptive Analysis

A total of 91 questionnaires were distributed to the sample population. This consisted of coffee export processing firms with a total of 78 respondents (85.7%), NAEB with a total of ten (10) respondents (11.0%), MINICOM with a total of 2 (two) respondents and Minescofin with 1 (one) respondent (3.3%). The reason why these groups of respondents have been chosen is because they have most reliable information related to coffee processing and coffee export activities.

Table 1. Continuous improvement of high quality coffee

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate extent</td>
<td>2</td>
<td>2.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Great extent</td>
<td>23</td>
<td>25.3</td>
<td>27.5</td>
</tr>
<tr>
<td>Very great extent</td>
<td>66</td>
<td>72.5</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>91</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

The study investigated whether continuous improvement of high quality coffee can influence the growth of coffee export processing firms in Rwanda. The descriptive statistics of the study in table 1 indicated that 2.2% of the respondents were in the category of moderate extent, 25.3% of respondents confirmed to a great extent that
continuous improvement of high quality coffee influences the growth of coffee export processing firms in Rwanda, while 72.5% of respondents indicated to a very great extent that continuous improvement of high quality coffee influences the growth of coffee export processing firms in Rwanda.

The findings collaborate with those of Belling (2000) who observed that quality attributes may be improved through proper production and that the processing methods are important in improving the quality of coffee. According to Bytof et al., (2000) and Knopp et al., (2006), the maintenance and improvement of quality are crucial to sustain the quality of coffee in the long run and add value to the product. Belling (2000) also stated that the price paid for different coffee qualities depends on the type of coffee, bean size, processing, color, and taste. Obtaining a price premium thus depends as much on the ability to get a quality coffee (Ponte, 2002). The results also relate with the research by Arya et al., (2007) on coffee quality which has focused on coffee processing methods and quality control. The findings by Alemayehu et al., (2008) highlighted that inadequate processing methods in washing stations are responsible for the wide spread failure to maintain the inherent quality of coffee produced.

Table 2. High quality coffee and access to the world markets

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate extent</td>
<td>4</td>
<td>4.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Great extent</td>
<td>13</td>
<td>14.3</td>
<td>18.7</td>
</tr>
<tr>
<td>Very great extent</td>
<td>74</td>
<td>81.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 indicates that 4.4% of respondents are in the category of moderate extent, 14.3% of respondents are in the category of great extent and the majority of respondents are in the group of very great extent represented by 81.3%.

The findings by Bertrand et al., (2001) confirmed that coffee quality has to be considered as a main selection criterion to access international markets. The results by Behailu et al., (2008) also indicated that it has been repeatedly mentioned at various forum that providing good quality coffee is the only way out and viable option to get into the world market and to remain competitive.

Table 3. Sensitization of farmers on high quality coffee

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate extent</td>
<td>5</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Great extent</td>
<td>44</td>
<td>48.4</td>
<td>53.9</td>
</tr>
<tr>
<td>Very great extent</td>
<td>42</td>
<td>46.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Results from table 3 show that 5.5% of respondents are in the category of moderate extent, 48.4% are in the category of great extent while 46.1% are in the category of very great extent.

The findings collaborate with those of Leroy et al., (2006) who emphasized that the harvesting method itself affects coffee quality. Therefore, farmers need to be sensitized about how they should take care of their coffee trees and the quality of cherries that should be harvested. Researchers like Bytof et al., (2000) and Knopp et al., (2006) emphasized that each step of the processing methods is important.
Table 4. Human Capital, Managerial Competences and High Quality Coffee

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate extent</td>
<td>12</td>
<td>13.2%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Great extent</td>
<td>51</td>
<td>56.0%</td>
<td>69.2%</td>
</tr>
<tr>
<td>Very great extent</td>
<td>28</td>
<td>30.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>91</strong></td>
<td><strong>100.0%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 4 shows that 13.2% of respondents are in the category of moderate extent, 56.0% are in the category of great extent and 30.8% of respondents are in the category of very great extent. This shows that majority of respondents representing 86.8% are in agreement that human capital, managerial competences and quality coffee have an influence on the growth of coffee export processing firms.

The findings relate with those of Dreier (2002) who postulates that managerial competences are very important as everything in the current market environment relies on the individual’s ideas, knowledge and skills. It is also asserted that the human capital and the managerial competences in an organization are the most important intangible asset, especially in terms of innovation.

Inferential Statistics

The inferential analysis which follows indicates the relationship between the independent variable which is strategic value addition and the dependent variable which is the growth of coffee export processing firms.

Table 5. Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>21.175</td>
<td>1</td>
<td>21.175</td>
<td>637.4</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>2.957</td>
<td>89</td>
<td>.033</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24.132</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Strategic value addition

Table 5 indicates that continuous improvement of high quality coffee, high quality coffee and access to the world markets, sensitization of farmers on high quality coffee, and human capital, managerial competence and high quality coffee (independent variables) explain 87.7% of the variation in the growth of coffee export processing firms (dependent variable) while 12.3% is explained by other variables not considered in the study.

Table 6. ANOVA results

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>21.175</td>
<td>1</td>
<td>21.175</td>
<td>637.4</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>2.957</td>
<td>89</td>
<td>.033</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24.132</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Strategic value addition

b. Dependent Variable: Growth of coffee exporting processing firms

ANOVA test was carried out to determine the variations of significance in the perception of strategic value addition on the growth of coffee export processing firms. The results of the ANOVA indicated a high positive and significant influence on the growth of coffee export processing firms because the sign value of 0.000 is less than 0.05 acceptable threshold. In addition, F-statistic (F=637.429) is greater than the P-value (0.000), hence a confirmation that strategic value addition has an influence on the growth of coffee export processing firms in Rwanda. Furthermore, the residual value (2.957) is less than the regression value (21.175) which indicates that all independent variables put together have an influence on the
growth of coffee export processing firms in Rwanda.

### Table 7. Coefficients showing strategic value addition measures

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.808</td>
<td>.151</td>
<td>5.36</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Strategic value addition</td>
<td>.832</td>
<td>.033</td>
<td>937</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>25.2</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>47</td>
<td>0</td>
</tr>
</tbody>
</table>

a. Dependent Variable: growth of coffee exporting processing firms

A further test on coefficients indicates that the constant $\alpha = 0.808$ is significantly greater than zero. The coefficient $\beta = 0.832$ is significantly different from zero with p-value of 0.000. The results specify that for each unit increase in the independent variable, there is an expected increase of 0.832 in the dependent variable. An examination of the t-value (25.247, with p-value = 0.000 < 0.05) emphasizes that strategic value addition contributes to the growth of coffee export processing firms.

This implies that strategic value addition has a positive and significant influence on the growth of coffee export processing firms. Thus with the results in the table 9, the regression equation can be written as:

$$GCEPF = 0.808 + 0.832SVA$$

where GCEPF: Growth of coffee export processing firms, and SVA: Strategic Value addition.

### Table 8. Correlations showing strategic value addition measures

<table>
<thead>
<tr>
<th></th>
<th>Growth of coffee exporting processing firms</th>
<th>Strategic value addition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.937**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>** Correlation is significant at the 0.01 level (2-tailed)</td>
</tr>
</tbody>
</table>

From the results in table 8, Pearson correlation coefficient, ($r=0.937$) indicates that there was a positive and significant relationship (sig=0.000) between the strategic value addition and the growth of coffee export processing firms. Therefore, the result shows that there is a strong positive correlation between the strategic value addition and the growth of coffee export processing firms in Rwanda. This implies that an increase in strategic value addition leads to an increase in the growth of export processing firms.

The model used in the regression analysis was expressed in the general form as:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

where; $Y =$ Growth of Coffee Export Processing Firms; $X_1 =$ Continuous improvement of high quality coffee; $X_2 =$ High quality coffee and access to the world markets; $X_3 =$ Sensitization of farmers on high quality coffee; $X_4 =$ Human capital, managerial competence and high quality coffee; $\beta_0 =$ Intercept of the model; $\beta_1, \beta_4 =$ Regression coefficient of each independent variable; $\varepsilon =$ Random or Stochastic Term.
Table 9: Model Regression Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.948</td>
<td>.313</td>
<td>.969</td>
<td>.002</td>
</tr>
<tr>
<td>Continuous Improvement of high quality coffee</td>
<td>.337</td>
<td>.064</td>
<td>.384</td>
<td>.002</td>
</tr>
<tr>
<td>Access to the world markets</td>
<td>.432</td>
<td>.075</td>
<td>.0376</td>
<td>.422</td>
</tr>
<tr>
<td>Sensitization of farmers</td>
<td>.328</td>
<td>.039</td>
<td>.0216</td>
<td>.000</td>
</tr>
<tr>
<td>Human capital and managerial competence</td>
<td>129</td>
<td>.066</td>
<td>.0324</td>
<td>.673</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Growth of coffee exporting processing firms.

Table 9 above presents the model regression coefficients of correlation (Beta) in establishing the contribution of each variable in the study. It was therefore established that all independent variables significantly and positively influence the growth of coffee export processing firms at the significance level of 0.05, hence the model translates to:

\[ Y = 0.948 + 0.337X_1 + 0.432X_2 + 0.328X_3 + 0.129X_4 \]

Summary of Findings

The aim of the study was to determine the influence of strategic value addition on the growth of coffee export processing firms in Rwanda. Results of descriptive and inferential analysis revealed that majority of the respondents did agree that each independent variable (continuous improvement of high quality coffee, high quality coffee and access to the world markets, sensitization of farmers on high quality coffee, and human capital, managerial competence and high quality coffee) statistically and significantly had an influence on the growth of coffee export processing firms. This is justified by the overall descriptive statistics of strategic value addition whereby 44% of the respondents were in the category of moderate extent, 37.4% were in the category of great extent while 58.2% were in the category of very great extent. This implies that majority of respondents confirmed that strategic value addition has a significant and positive influence on the growth of coffee export processing firms in Rwanda.

The results of the ANOVA indicated a high positive and significant influence of strategic value addition on the growth of coffee export processing firms because the sign value of 0.000 is less than 0.05 acceptable threshold. In addition, F-statistic (F=637.429) is greater than the P-value (0.000), hence a confirmation that strategic value addition has an influence on the growth of coffee export processing firms in Rwanda. Furthermore, the residual value (2.957) is less than the regression value (21.175) which indicates that all independent variables put together have an influence on the growth of coffee export processing firms in Rwanda. An analysis of the t-value (25.247, p-value = 0.000 < 0.05) emphasizes that strategic value addition contributes to the growth of coffee export processing firms. Pearson correlation coefficient, (r=0.937) indicates that there was a positive and significant relationship (sig=0.000) between the strategic value addition and the growth of coffee export processing firms.

The linear regression equation was expressed as: GCEPF=0.808+0.832SVA; while the multiple regression equation was: \[ Y = 0.948 + 0.337X_1 + 0.432X_2 + 0.328X_3 + 0.129X_4 \]. All these findings confirmed that strategic value addition has a positive and significant influence on the growth of coffee export processing firms in Rwanda. The results were in agreement with the research by Arya et al., (2007) which indicated that coffee processing methods and quality control were very important in the development of the coffee sector. The results by Behailu et al., (2008) also indicated that providing high quality coffee was the only way out and viable option to get into the world markets and to remain competitive. Belling (2000) highlighted
that the price paid for different coffee qualities depends on the type of coffee, bean size, processing, color and taste. Belling (2000) also found out that quality attributes such as aroma, taste and cleanness may be improved through proper production and processing methods. Ponte (2002) emphasized that obtaining a price premium depends as much on the ability to get a quality coffee.

**Recommendations**

The study concluded that strategic value addition influences the growth of coffee export processing firms in Rwanda. This leads to a recommendation that Rwanda should put more efforts in developing a national coffee brand that will defines Rwanda's coffee uniqueness, and quality, hence create a visual identity for Rwanda's coffee on the regional and international markets. Deliberate efforts should be put in place to continuously improve the quality of Rwanda's coffee; the Department in charge of quality at NAEB should always focus on coffee quality control with a key objective of continuously improving the quality of coffee, which in turn facilitates the coffee marketing system to be standard based. It is the prerogative of the government to create an enabling environment in which production, processing and marketing of Rwanda's coffee can thrive optimally for maximum return on investment.

A sustainable strategy for the coffee sector can enhance coffee quality and productivity, profitability, competitiveness of Rwanda's coffee, and high value-added towards the international markets opportunities. Exporting high quality coffee should be a requirement for success in the specialty coffee markets. The interdependence between market and supply chain efficiency, however, suggests that systemic treatment of both aspects at a policy level is imperative to the effective implementation of sustainability in the coffee sector. Technical support is particularly needed to help producers move forward. The effect of high competitiveness and improved production and certification mechanisms will be higher quality product; this, in turn, will increase demand and hence profitability of coffee export processing firms in Rwanda.

**REFERENCES**


