INFLUENCE OF STRATEGIC HUMAN CAPITAL ON THE PERFORMANCE OF COFFEE EXPORT PROCESSING FIRMS IN RWANDA

1* Uwizeye Odette
uwizeveode@yahoo.fr

2** Prof. Gregory Simiyu Namusonge
gsnamusonge@jkuat.ac.ke

3*** Dr. Fred Mugambi Mwirigi
fmugambi@gmail.com

4**** Dr. Kule Julius Warren
kulewarren@gmail.com

1* PhD Student, Jomo Kenyatta University of Agriculture and Technology
2** Lecturer, Jomo Kenyatta University of Agriculture and Technology
3*** Kenya Revenue Authority
4**** University of Tourism, Technology and Business Studies

Abstract

The purpose of this study was to investigate the influence of strategic human capital on the performance of coffee export processing firms in Rwanda. Specifically, the study sought to establish the influence of intellectual capital, managerial skills and experience, training and development, and hiring and retaining best employees, on the performance of coffee export processing firms in Rwanda. The target population was 91 people from coffee export processing firms, staff 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 which were used were purposive sampling for staff under Ministries and NAEB, and a census for coffee export processing firms; thus the sample was 91 respondents. A questionnaire was used to collect data. Descriptive statistics were used for preliminary tests and inferential statistics were used for further analysis. The key findings revealed that strategic human capital had a positive and significant influence on the performance of coffee export processing firms in Rwanda. The study recommends the adoption of the selected strategic human capital drivers in order to enhance the performance of coffee export processing firms in Rwanda.

Keywords: Strategic human capital, intellectual capital, training and development, hiring and retaining best employees, employee performance

INTRODUCTION

As the world is becoming more competitive, organizations are striving to gain competitive advantage at all costs and are turning to innovation sources through strategic human capital practices (Brewster et al., 2005). The changing business environment in a knowledge-based economy has also made the adoption of strategic human capital practices imperative for competitive advantage and for the success of organizations. Several studies
have found a positive influence between strategic human capital practices and organization performance (Becker & Huselid, 2001; Chang & Kuo, 2002; Jackson et al., 2012; Paauwe & Boselie, 2008; Sang, 2005). Nyambegera (2005) and Okumbe (2001) observed that organizations with good strategic human capital practices are able to not only retain its talented employees, but also able to attract the best employees from the labour market. Strategic human capital practices are very crucial to the attainment of organizational goals (Apospori et al., 2009). Managerial skills are considered to be an important element of human capital and the most important source of sustainable competitive advantage (Ashour & Bontis, 2004). Thus, organizations which are results oriented must put in place good strategic human capital practices (Petrovsky, 2009; Smith et al., 2004).

Other scholars (Ruta, 2009; Yang & Lin, 2009) argued that strategic human capital development has the potential to contribute to organizational profitability.

**Statement of the Problem**

The coffee sector in Rwanda represents a vital part of the economy, being the source of various economic contributions through the generation of income, stimulating competition and providing job opportunities. Other studies have tested the relationship between strategic human capital practices and firms’ performance with generally supportive results that strategic human capital practices affect organizational performance (Boselie et al., 2001; Collins & Clark, 2003; Graham et al., 2003). Best human capital practices are also considered by some authors such as Agarwala (2003) and Tan & Nasurdin (2010) to constitute the basic factors of knowledge management success. Similarly, Salisbury (2003) identified that strategic human capital practices such as selection methods, compensation strategies and career systems seem to have an influence on the flows of knowledge which is seeking to maximize employee performance that would results in the overall organization performance. Other scholars such as Brewster et al. (2000), and Paauwe and Boselie (2005) who have conducted empirical studies noted that the main purpose of strategic human capital practices should be to enhance organizational performance.

Now that Rwanda is moving from a production-based economy to a knowledge-based economy, and in order to survive in a competitive environment, there is still a gap in coffee export processing firms, and there is therefore a need to strategically think about its human capital. This gap is in relation with Earl's study (2001) which revealed that knowledge management mediates the relationship between an organization's culture, structure and employee effectiveness. Rashid Alshekaili’s study (2001) also reveals that knowledge management mediates the relationship between human capital and innovation performance. There is still few literature on how strategic human capital can influence the performance of coffee export processing firms in Rwanda, thus, the importance of this study.
Objectives of the Study

The general Objective of the study was to investigate the influence of strategic human capital on the performance of coffee export processing firms in Rwanda. The specific objectives of the study included;

1. To establish the influence of intellectual capital on the performance of coffee export processing firms in Rwanda;
2. To determine the influence of managerial skills and experience on the performance of coffee export processing firms in Rwanda;
3. To establish the influence of training and development on the performance of coffee export processing firms in Rwanda;
4. To establish the influence of hiring and retaining best employees on the performance of coffee export processing firms in Rwanda.

LITERATURE REVIEW

Over the past decade, the way in which people are managed and developed at their workplace has come to be recognized as one of the primary factors in achieving improvement in organizational performance (Marchington & Wilkinson, 2008; Gruman et al., 2011). From the review of existing literature, it is acknowledged that successful organizations share a fundamental philosophy of valuing and investing in their employees (Rose, & Kumar (2006). In fact, several research studies have described strategic human capital as a means of achieving competitive advantage (Waker, 2001).

Theoretical Framework

The study was guided by the following theories;

Resource-Based View Theory - The resource-based view of the firm predicts that certain types of resources owned and controlled by firms have the potential and promise to generate superior firm performance (Ainuddin et al., 2007).

Human Capital Theory - Schultz (1961) in an article entitled “Investment in Human Capital”, introduced his theory of Human Capital and argued that both knowledge and skills are a form of capital, and that this capital is a product of deliberate enterprise growth. Schuler et al., (2000) suggests that the general message in persuasive skills, knowledge and competence are key factors in determining whether organizations and firms will prosper or not. According to Hessels and Terjesen (2008), human capital refers to an individual’s knowledge, skills and experiences.

Knowledge Management Effectiveness - The study by Tung (2008) revealed that knowledge management mediates the relationship between an organization's culture, structure and employee effectiveness. Rashid Alshekaili’s study (2011) also revealed that knowledge management mediates the relationship between human capital and innovation performance.

Conceptual Framework

The conceptual framework of this study includes four independent variables and one dependent variable. The independent variables in the study consisted of intellectual capital, managerial skills and experience, training and development, and hiring and retaining best employees, which are aspects of strategic human capital practices. The
dependent variable is firm performance. The study therefore seeks to determine how the independent variables influence the dependent variable in coffee export processing firms in Rwanda.

Intellectual capital has been identified as a key resource and driver of organizational performance (Marr, Needly & Schuma, 2004). Managerial skills generate innovation and improve business process (Bontis et al., 2000; Webster, 2000). Lyles (2004) evaluated managerial competences as measured by the education of the founder, managerial experience, entrepreneurial experience, start-up experience and functional area experience versus firm performance. Training is the management strategy in improving staff knowledge and skills for effective productivity (Minbaeva, 2005). Studies conducted by Kamoche and Kamoche (2004) shows that applicants will be attracted by the organization when they see it as a good match for them, or what in literature is known as "Person-Organization fit". Njanja et al., (2013) observes that reward is concerned with the formulation and implementation of strategies and policies that aim to reward people fairly, equitable and consistently in accordance with their value to the organization.

**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 human capital on the performance 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 (MINECOFIN), two (2) staff representing the Ministry of Trade and Industry (MINICOM), 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 test the relationships between variables; to establish the relationships between the independent and dependent variables. The model was as follows:
Y = β₀ + β₁X₁ + β₂X₂ + β₃X₃ + β₄X₄ + ε where; Y = Performance of Coffee Export Processing Firms
X₁ = Intellectual Capital; X₂ = Managerial Skills and Experience; X₃ = Training and Development
X₄ = Hiring and Retaining Best Employees; β₀ = Intercept of the model; β₁ . β₄ = Regression coefficient of each independent variable; ε = Random or Stochastic Term

RESEARCH FINDINGS AND DISCUSSION

Descriptive and inferential statistics have been used to present and interpret the findings of the study.

**Descriptive Analysis**

**Table 1. Intellectual capital**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>90</td>
<td>98.9</td>
<td>98.9</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>1.1</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 indicated that 98.9% of respondents confirmed that intellectual capital has an influence on the performance of coffee export processing firms, and 1.1% were against this statement. This is in agreement with Bontis et al., (2000) who emphasized that the importance of intellectual capital on organizational success has become crucial in the context of what has become known as the knowledge-based economy. The findings also concur with those of Marr (2008) who postulated that intellectual capital should be seen as key factors for company success and important levers for value creation.

**Table 2. Impact of having experience**

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>90</td>
<td>98.9</td>
<td>98.9</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>1.1</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>

Basing on the descriptive results, 98.9% of respondents are in agreement that experience has an influence on the performance of coffee export processing firms, while 1.1% of respondents did not agree with the statement. Similar results have been obtained by other authors like Brenton et al. (2005), Kor & Sundaramurthy (2009) who confirmed that experience is very important and has an influence on firm performance. These results also complement the findings of Millán et al. (2013) who stated that experience matters.

**Table 3. Importance of technical skills and qualifications**

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great extent</td>
<td>29</td>
<td>31.9</td>
<td>31.9</td>
</tr>
<tr>
<td>Very great extent</td>
<td>62</td>
<td>68.1</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>

Results indicated that 100% of respondents confirmed that technical skills and qualifications are of great importance. The findings relate with those of Swart et al. (2005) who stated that bridging the performance gap refers to implementing a relevant training intervention for the sake of developing particular skills and abilities of the employees and enhancing employee performance. This is also supported by Wright et al., (2007) who explained that employee competencies change through effective training programs.

**Table 4. Workforce, a competitive advantage for high performance**

<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>48</td>
<td>52.7</td>
<td>57.1</td>
</tr>
<tr>
<td>Very great extent</td>
<td>39</td>
<td>42.9</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>

From the results, 95.6% of respondents confirmed that the workforce is a competitive advantage for
organization's high performance, while 4.4% did not agree with the statement. In order to create a sustainable competitive advantage, organizations must continually improve their business performance. Findings are in agreement with the result of Dhanaraj & Beamish (2003) who explained that the resource-based view suggests that human resource systems should contribute to sustained competitive advantage through facilitating the development of competencies that are firm specific. The results are also in agreement with Brewster et al. (2005) who confirmed that the sustained superior performance of many companies has been attributed to unique capabilities for managing human resources to gain competitive advantage.

Findings illustrate that 100% (34.1% in great extent and 65.9% in very great extent) of respondents confirmed the importance of short term trainings for employees of coffee export processing firms. These findings are in agreement with the ones of Evans, Pucik and Barsoux (2002) who explained that firms are facing increased competition due to globalization, changes in technology and economic environments, and therefore, prompting these organizations to train their employees is one of the ways to prepare them to adjust to their workplace and thus enhance the firm performance. Research by Afshan, Sobia, Kamran and Nasir (2012) also highlighted that it should be in every organization's responsibility to enhance the job performance of their employees and certainly implementation of training and development is one of the major steps that most companies need to achieve.

### Table 5. Importance of short-term trainings

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great extent</td>
<td>31</td>
<td>34.1</td>
<td>34.1</td>
</tr>
<tr>
<td>Very great extent</td>
<td>60</td>
<td>65.9</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>

Results indicated that 33% of respondents confirmed the above statement at a great extent while 67% confirmed it at very great extent. According to Khan (2014b), the development and implementation of effective marketing strategies are particularly important for firms pursuing the global market expansion. Dynamic capabilities' theory as stated by Newbert (2007), Zott (2003), Eisenhardt & Martin (2000), Makadok (2001), Teece & Al-Aali (2011), confirmed that firm performance over time is primarily determined by the firms' capabilities of acquiring and deploying resources to match their market environment.

### Table 6. Capabilities and skills to market Rwandan coffee

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great extent</td>
<td>30</td>
<td>33.0</td>
<td>33.0</td>
</tr>
<tr>
<td>Very great extent</td>
<td>61</td>
<td>67.0</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>

Findings indicated that 100% of respondents confirmed that the competence of managers is of great importance. Findings are in agreement with the results from Smallbone and Welter (2001), and Hisrich and Drnovsek (2002), who found that managerial competencies as measured by education, managerial experience, start-up experience and knowledge of the industry positively impact on the growth of organizations. Chetty et al., (2006) highlighted that a firm's top
management might be an especially crucial factor to be considered.

**Table 8. Hiring and retaining best employees**

<table>
<thead>
<tr>
<th>Response Rate</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great extent</td>
<td>45</td>
<td>49.5</td>
<td>49.5</td>
</tr>
<tr>
<td>Very great extent</td>
<td>46</td>
<td>50.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Findings indicated that 49.5% of respondents confirmed that hiring and retaining best employees are of great importance and 50.5% of respondents confirmed the statement at a very great extent. These results are in agreement with the results from Backhaus and Tikoo (2004) who stated that attracting skilled people (human resources) is equally as important as acquiring the technological resources that are required to build competitive advantage. Research by Cable and Graham (2000), Lievens et al., (2005) emphasized that the recruitment perspective, remuneration, compensation and benefits, training and development, promotion opportunities and job security represent basic motivations.

**Inferential Statistics**

The inferential analysis which follows indicates the relationship between the independent variable which is strategic human capital and the dependent variable which is the performance of coffee export processing firms.

**Table 9. 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>18.785</td>
<td>1</td>
<td>18.785</td>
<td>312.6</td>
<td>.00</td>
</tr>
<tr>
<td>Residual</td>
<td>5.347</td>
<td>89</td>
<td>.060</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 human capital
b. Dependent Variable: performance of coffee exporting processing firms

ANOVA test was carried out to determine the variations of significance in the perception of strategic human capital on the performance of coffee export processing firms. The results of the ANOVA indicated a high positive and significant influence on the performance of coffee export processing firms because the sign value of 0.000 is less than 0.05 acceptable threshold. In addition, F-statistic (F=312.681) is greater than the P-value (0.000), hence a confirmation that strategic human capital has an influence on the performance of coffee export processing firms in Rwanda. Furthermore, the residual value (5.347) is less than the regression value (18.785) which indicates that all independent variables put together have an influence on the performance of coffee export processing firms in Rwanda.
Table 11. Coefficients showing the strategic human capital 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>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.466</td>
<td>.178</td>
<td>8.2</td>
<td>.00</td>
</tr>
<tr>
<td>Strategic human capital</td>
<td>.697</td>
<td>.039</td>
<td>.882</td>
<td>17.6</td>
</tr>
</tbody>
</table>


A further test on the beta coefficient showed that the constant $\alpha = 1.466$ is significantly greater than zero. The coefficient $\beta = 0.697$ is significantly different from zero with p-value of 0.000. The results indicated that for each unit increase in the independent variable, there is an expected increase of 0.697 in the dependent variable. An examination of the t-value (17.683, p-value = 0.000 < 0.05) indicates that strategic human capital contributes to the performance of coffee export processing firms. This implies that strategic human capital has a positive and significant influence on the performance of coffee export processing firms. Thus with the results in the table 11, the regression equation can be written as:

$$PCEPF = 1.466 + 0.697 \times SHC$$

where $PCEPF$: Performance of Coffee Export processing firms, and $SHC$: Strategic Human Capital.

Table 12. Regression Coefficients

<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>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>6.989</td>
<td>.521</td>
<td>21.7</td>
<td>.000</td>
</tr>
<tr>
<td>Intellectual Capital</td>
<td>.420</td>
<td>.043</td>
<td>.384</td>
<td>3.96</td>
</tr>
<tr>
<td>Managerial Skills and Experience</td>
<td>.283</td>
<td>.004</td>
<td>.353</td>
<td>2.32</td>
</tr>
<tr>
<td>Training and Development</td>
<td>.118</td>
<td>.020</td>
<td>.175</td>
<td>.806</td>
</tr>
<tr>
<td>Hiring and Retaining best Employees</td>
<td>.275</td>
<td>.052</td>
<td>.306</td>
<td>.968</td>
</tr>
</tbody>
</table>


From table 12, the following regression equation was generated:

$$Y = 6.989 + 0.420X_1 + 0.283X_2 + 0.118X_3 + 0.275X_4 + \epsilon$$

Table 12 shows that there is a significant positive relationship between intellectual capital, managerial skills and experience, training and development, hiring and retaining best employees and the performance of coffee export processing firms in Rwanda.

Summary of Findings

The aim of the study was to determine the influence of strategic human capital on the performance 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 (intellectual capital, managerial skills and experience, training and development, hiring and retaining best employees) statistically and significantly had an influence on the performance of coffee export processing firms. The results of the ANOVA indicated a high positive and significant influence on the performance of
coffee export processing firms because the sign value of 0.000 is less than 0.05 acceptable threshold. In addition, F-statistic (F=312.681) is greater than the P-value (0.000), hence a confirmation that strategic human capital has an influence on the performance of coffee export processing firms in Rwanda. Furthermore, the residual value (5.347) is less than the regression value (18.785) which indicates that all independent variables put together have an influence on the performance of coffee export processing firms in Rwanda. The linear regression equation was expressed as: PCEPF=1.466+0.697SHC; while the multiple regression equation was:

\[ Y=6.989+ 0.420+0.283X_2+0.118X_3+0.275X_4+\epsilon. \]

All these findings confirmed that strategic human capital has a positive and significant influence on the performance of coffee export processing firms in Rwanda.

The results were supported by Shury et al., (2008) who argued that people should be seen as the main agents in business. Furthermore, several researchers found out that firm-specific experience are particular valuable to improve the firm performance of newly founded firms (Klepper, 2001, Agarwal et al., 2004, Dahl & Reichstein, 2007, Filatotchev et al., 2009). Likewise, skills and experience help the firms to grow faster (Kor & Sundaramurthy, 2009).

**Recommendations**

The study concluded that intellectual capital influences the performance of coffee export processing firms in Rwanda. This leads to a recommendation that the management of coffee export processing firms should institute intellectual capital as one of the important variables to enhance their performance. In the same way, the study concluded that managerial skills and experience influences the performance of coffee export processing firms. This leads to a recommendation that coffee export processing firms should take advantage of having strong managers with experience in order to enhance the performance of coffee export processing firms. The study also concluded that training and development influences the performance of coffee export processing firms; thus this leads to a recommendation that coffee export processing firms should invest in its staff training and development of their staff because this will have a positive and significant effect on the performance of coffee export processing firms. The same applies to putting in place strategies for hiring and retaining best employees who will help coffee export processing firms to prosper. The findings of the study revealed that coffee export processing firms should undertake strategic human capital practices which are aimed at helping coffee export processing firms to achieve their goals. Coffee export processing firms should appreciate the fact that they cannot be able to achieve their desired objectives if effective strategic human capital practices are not put in place. In adopting those best practices, they aim at attracting and retaining the most qualified employees, continuously develop them and motivate them as well. When good strategic human capital practices are enhanced in an organization, it improves employees’ productivity, thus the achievement of organizational goals. Therefore, the overall recommendation is that there is a need for coffee export processing firms to adopt and consistently implement appropriate strategic human capital components, in order to deliver on their mandates.

**REFERENCES**


Sang, C. (2005). Relationship between HRM practices and the perception of organizational performance, roles of management style, social capital, and culture: comparison between manufacturing firms in Cambodia and Taiwan, National Cheng Kung University, Taiwan, Taiwan.


