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Abstract: Projects are generally undertaken because they are part of the plans to meet organizational needs and charter to new levels of performance; therefore, project success requires an effective quality management process. The general objective of this study was to analyze the influence of quality management process on success of agribusiness projects in Rwanda by taking into consideration the case of Post-Harvest and Agribusiness Support project in Southern province of Rwanda. The researcher adopted descriptive research design where quantitative methods of data collection and analysis were used. The study population included the project staff and beneficiaries of the Post-Harvest and Agribusiness Support project in Southern province of Rwanda which is equal to 1184 people and 8 project staff. The study used a sample size of 120 respondents. Since data were collected from the questionnaires, the researcher scrutinized the completed research instruments to identify and minimize errors, incompleteness and gaps in the information obtained from the respondents. Having the cleaned data, the Statistical Package for Social Sciences software was used to analyze data where independent and dependent variables were grouped to determine if there is a relationship between them (correlation). Based on the information drawn from findings the researcher concluded that the influence of quality planning process on success of Post-Harvest and Agribusiness Support Project is significant. It was found out that the project could not succeed without a clear quality plan, the increase of one unit in quality planning influences the project success by .975 which prove a significant relationship between quality planning process and success project. This study demonstrated that there is a significant relationship between quality assurance process and success of Post-Harvest and Agribusiness Support Project. It showed that the increase of one unit in quality assurance would increase the success of Post-Harvest and Agribusiness Support project by .693 units if other variables remain constant. Moreover the study concluded that quality assurance is a very important factor to the project success. The study demonstrated that there is a significant relationship between quality control process and success of Post-Harvest and Agribusiness Support project. If the researcher considers the level of significance which is 0.09, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 9% level of significance. The researcher recommends that project managers must put in place the quality management plans that serve as quality guidelines to ensure project success. Project managers and their project staff have improve their ways and methods of quality auditing and improve quality audit strategies so as to keep their projects on track and on expected quality. Given the fact that quality control is a very important factor for project success, the issues of identification of quality non-compliance and its effects, suggesting corrective and preventive actions, recommending quality improvement, validating procedure for fault elimination, reviewing the results of corrective actions and producing quality control reports should be taken with seriousness by all project actors especially by the quality control department.

Keywords: Quality, Quality Management Process, Success of Agribusiness Project

1. Introduction

According to Dale et al (2012), quality management is not an event - it is a process, a consistently high quality product or service cannot be produced by a defective process. Quality management is a repetitive cycle of measuring quality, updating processes, measuring, updating processes until the desired quality is achieved. Quality Management focuses on improving stakeholder’s satisfaction through continuous and incremental improvements to processes, including removing unnecessary activities; it achieves that by the continuous improvement of the quality of material and services provided to the beneficiaries. It is not about finding and fixing errors after the fact, quality management is the continuous monitoring and application of quality processes in all aspects of the project (Hill, 2008). The process of quality management can be viewed from Quality Planning, to Quality Assurance, to Quality Control then to quality improvement (Dahlgaard, 2012). Globally, a number of organizations and projects have adopted quality initiatives. Toyota company for instance developed the philosophy of “customer first” and “quality first”. They set up quality assurance systems across various divisions and departments (Omware, 2013). They introduced statistical quality control (SQC) in 1949 followed by Total Quality Management initiatives based on the unchanging principles of “customer first” and “quality first”. Through their quality initiatives, they won the Deming Application Prize in 1965 and the Japan Quality Medal Award in 1970 (Union of Japanese Scientists and Engineers, 2006).

The Government of Rwanda and International Fund for Agriculture Development (IFAD) have set up new partnership to support agriculture production processing operations to help developing an efficient post-harvest system driven by the private sector to reduce post-harvest losses and ensure food security of staple crops in Rwanda. The USD 85.862 million, funded by a loan and grant from IFAD, the government of Rwanda, private sector and beneficiaries, intended to benefit 32,400 rural households comprising poor smallholder farmers either engaged in production and primary processing in the priority CIP crops
and dairy, including poor farmers with some production potential and members of cooperatives who own small land plots, and smallholders who supplement their income through agricultural wage work including some privately owned SMEs.

2. Statement of the Problem

Most of IFAD funded projects are reported to be of poor quality delivery (IFAD, 2012), whereby most of them fail to meet the proposed schedule, budget and quality expectations. Many critics have been directed to the governments especially to the managers that they don’t put their efforts in quality management process (Kubal, 2009). In Rwanda the failure rate of agricultural projects was at the rate of over seventy percent (World Bank, 2013). Post-Harvest and Agribusiness support project in southern province is failing to meet its objectives as intended (MINAGRI, 2016). From this failing more and more critics reflect to poor quality management process adopted by the PASP management team; while others go so far to blame the project sponsors and government to exclude the beneficiaries at the project planning stage, therefore this creates confusions to what is the real issue behind the failure of Post-Harvest and Agribusiness support project in southern region of Rwanda compared to the Northern and Eastern regions (Fabian, 2016).

Even if project quality concerns have become a topic of debate for many years ago and a number of studies have been done in the area of quality management; most of them have focused on the factors inside total quality management and the critical factors for implementation of total quality management (Aspin wall, 1999). Also it is important to note that most of them have been carried out in manufacturing, construction and service delivering industries. That’s why in this study; the researcher aimed at analyzing the influence of quality management process on success of agribusiness projects in Rwanda by taking into consideration the case of Post-Harvest and Agribusiness Support project in Southern province of Rwanda.

3. Objectives of the Study

3.1 General Objective

The general objective of this study was to analyze the influence of quality management process on success of agribusiness projects in Rwanda.

3.2 Specific objectives

1) To examine the influence of quality planning process on success of Post-Harvest and Agribusiness Support project
2) To assess the influence of quality assurance process on success of Post-Harvest and Agribusiness Support project
3) To assess the influence of quality control process on success of Post-Harvest and Agribusiness Support project

4. Conceptual Framework of the Study

5. Research Methodology

- **Research Design**: The researcher adopted descriptive research design where quantitative methods of data collection and analysis were used
- **Target Population**: the population included the project staff and beneficiaries of the Post-Harvest and Agribusiness Support project in Southern province of Rwanda which is equal to 1184 people since they had enough information on quality management process and its influence
- **Sample Size**: During this research, the sample size equaled to 120 respondents
- **Data collection instruments**: For this study, the primary data were collected by using questionnaires.
• Data processing and analysis: Since data were collected from the questionnaires, the researcher scrutinized the completed research instruments to identify and minimize errors, incompleteness and gaps in the information obtained from the respondents. Where the gaps were found, the data collected were recalled the information from a certain respondent. Having the cleaned data, the Statistical Package for Social Sciences software was used to analyze data where independent and dependent variables were grouped to determine if there is a relationship between them (correlation). Apart from the Pearson correlation model, descriptive and inferential statistics were also used during data analysis process.

6. Summary of Research Findings

Examination of the influence of quality planning process on success of Post-Harvest and Agribusiness Support project

Table 1: Descriptive Statistics on quality planning process and success of Post-Harvest and Agribusiness Support project

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality management plan</td>
<td>120</td>
<td>1</td>
<td>4</td>
<td>2.42</td>
<td>1.192</td>
</tr>
<tr>
<td>Quality baseline</td>
<td>120</td>
<td>2</td>
<td>5</td>
<td>2.93</td>
<td>1.143</td>
</tr>
<tr>
<td>Quality metrics and measures</td>
<td>120</td>
<td>1</td>
<td>5</td>
<td>2.87</td>
<td>1.622</td>
</tr>
<tr>
<td>Quality checklists</td>
<td>120</td>
<td>1</td>
<td>5</td>
<td>3.50</td>
<td>1.665</td>
</tr>
<tr>
<td>Quality training requirements</td>
<td>120</td>
<td>2</td>
<td>5</td>
<td>3.50</td>
<td>1.123</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data (2018)

The findings from the Table 1 show that the mean values for the first, second, third, fourth and fifth statements is 2.42 which is respectively rounded off to 2 (the code for agree), 2.93 and 2.87 are respectively rounded off to 3 (the code for neutral) while 3.50 is respectively rounded off to 4 (the code for disagree). The standard deviation for all statements is above 0.5 meaning that respondents’ answers on these statements were far different from the mean, in other words, their answers to the statements were heterogamous. This means that respondents’ views on the above statements were varied.

Table 2: Correlation between quality planning process and success of Post-Harvest and Agribusiness Support Project

<table>
<thead>
<tr>
<th>Variables</th>
<th>Quality Planning</th>
<th>Project Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Planning</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
<tr>
<td>Success Project</td>
<td>Pearson Correlation</td>
<td>.975**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: Field Data (2018)

The findings in Table 2 revealed that the results of correlation between quality planning process and success support project was at 0. 975 meaning that planning process influence project success at the level of 97.5% which prove a significant relationship between quality planning process and success project. If the researcher considers the level of significance which is 0.09, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 9% level of significance.

6.2 Assessment of the influence of quality assurance process on success of Post-Harvest and Agribusiness Support project

Table 3: Descriptive Statistic on quality assurance process on success of Post-Harvest and Agribusiness Support project

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of quality Assurance plan</td>
<td>120</td>
<td>1</td>
<td>5</td>
<td>3.21</td>
<td>1.613</td>
</tr>
<tr>
<td>Auditing project quality</td>
<td>120</td>
<td>2</td>
<td>5</td>
<td>3.58</td>
<td>1.192</td>
</tr>
<tr>
<td>Analyzing project quality</td>
<td>120</td>
<td>1</td>
<td>5</td>
<td>3.46</td>
<td>1.478</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data (2018)

The findings from Table 3 indicate that the mean values for the first and third statements are approximately equal to the code of neutral and the second statement mean is approximately equal to the code of disagree. Their standard deviation is above than 0.5 meaning that respondents’ answers on these statements were far different from the mean, in other words their answers to the statement were heterogeneous.

Table 4: Correlation between quality assurance process and success of Post-Harvest and Agribusiness Support Project

<table>
<thead>
<tr>
<th>Variables</th>
<th>Quality Assurance Process</th>
<th>Project Success</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality Assurance Process</td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
<tr>
<td>Project Success</td>
<td>Pearson Correlation</td>
<td>.693**</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>120</td>
</tr>
</tbody>
</table>

Source: Field Data (2018)

The findings from Table 4 revealed that, the results of correlation between the quality assurance process and success of Post-Harvest and Agribusiness Support project was at 0. 693 mean that quality assurance process influence success of Post-Harvest and Agribusiness Support project at the level of 69.3% which prove a significant relationship between quality assurance process and success of Post-Harvest and Agribusiness Support project. If the researcher considers the level of significance which is 0.09, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 9% level of significance.

6.3 Assessment of the influence of quality control process on success of Post-Harvest and Agribusiness Support project
The findings from the Table 7 demonstrated that the mean values for all statements is approximately equal to the code of agree and their standard deviation is above 0.5 meaning that respondents’ answers on these statements were far different from the mean, in other words their answers to the statement were heterogeneous.

### 6.5 Estimated parameters for Quality planning, Quality Assurance and Quality control processes with the success of Post-Harvest and Agribusiness Support Project

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.977*</td>
<td>.954</td>
<td>.953</td>
<td>.272</td>
</tr>
</tbody>
</table>

Source: Field Data (2018)

### 6.4 Success of Post-Harvest and Agribusiness Support Project

The findings from Table 8 demonstrated a significant relationship between the quality planning process and project success supporting Project with a positive coefficient of determination of 0.977.
which indicates that there is a strong and positive correlation between quality control, quality assurance, quality control processes and success of Post-Harvest and Agribusiness Support Project. The coefficients of independent variables $\beta_1, \beta_2$ and $\beta_3$ are respectively 0.964; 0.028 and 0.044 with a statistical significance ($p = 0.00$). Therefore, the model equation derived is: $y = 0.209 + 0.964x_1 + 0.028x_2 + 0.044x_3 + e$. The positive coefficient further demonstrates that a 1% increase in the quality control process is attributed to 0.964% improvement in success of Post-Harvest and Agribusiness Support Project and the t-statistic value (0.000) indicates that the effect is statistically significant at 91% confidence level. An increase of 1% at quality assurance will increase success of Post-Harvest and Agribusiness Support Project given by 0.028% at the t-statistic value (0.421) indicates the effect is statistically significant at 91% confidence level while a positive coefficient demonstrates that a 1% increase at quality control will increase 0.044% on success of Post-Harvest and Agribusiness Support Project with t-statistic value (0.439) indicates the confidence level of 91% the effect is statistically significant.

7. Conclusions and Recommendations

7.1 Conclusions

According to the interpretation of collected and analyzed data during the course of this study; the researcher came up with the following conclusions:

Based on the information drawn from findings the researcher concluded that the influence of quality planning process on success of Post-Harvest and Agribusiness Support project is significant. It was found out that the project could not succeed without a clear quality plan, the increase of one unit in quality planning influences the project success by .975 which prove a significant relationship between quality planning process and success project.

This study demonstrated that there is a significant relationship between quality assurance process and success of Post-Harvest and Agribusiness Support project. It showed that the increase of one unit in quality assurance would increase the success of Post-Harvest and Agribusiness Support project by .693 units if other variables remain constant. Moreover the study concluded that quality assurance is a very important factor to the project success.

As per the third objective this study demonstrated that there is a significant relationship between quality control process and success of Post-Harvest and Agribusiness Support project. If the researcher considers the level of significance which is 0.09, there is therefore a significant relationship between them because their p-value (0.000) is statistically significant at 9% level of significance.

7.2 Recommendations

After analysis and interpretation of data, the researcher came up with the following recommendations To Whom It May Concern especially to project funders and managers. Project managers and their project staff have improve their ways and methods of quality auditing and improve quality audit strategies so as to keep their projects on track and on expected quality.

Given the fact that quality control is a very important factor for project success, the issues of identification of quality non-compliance and its effects, suggesting corrective and preventive actions, recommending quality improvement, validating procedure for fault elimination, reviewing the results of corrective actions and producing quality control reports should be taken with seriousness by all project actors especially by the quality control department.

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