

PROJECT MANAGEMENT PRACTICES ON SUCCESS OF AGRICULTURAL PROJECTS AT SONY SUGAR COMPANY

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Abstract: Agricultural projects play a pivotal role in the economic development of Kenya, and their success or failure can have far-reaching consequences for both local communities and the national economy. Effective project management practices are essential in ensuring the achievement of project goals and objectives (Kimalu, 2011). The purpose of this study was to determine the project management practices on success of Sony Sugar Projects. The study's specific objectives for this study were; to determine the effect of project planning on success of Sony Sugar Company Project, to determine the effect of stakeholder participation on success of Sony sugar Company projects and to assess the influence of Monitoring and evaluation on success of Sony Sugar Company. The study was guided by resource based theory. The study adopted a descriptive research design with a target population of 5000 respondents and a sample size of 800 through Yammine formula. The data collection instrument was a structured questionnaire. Piloting was done to test the validity and reliability of the data collection instrument. Data analysis was done. A regression analysis was conducted to establish the correlation between the variables. The findings revealed that project planning has a significant effect on success of Sony Sugar Projects. In conclusion basing on the study findings, the study came up with the following conclusions; a review of the findings also shows that a unit increase in project planning will lead to a 0.434 increase in project success when all other independent variables are held constant. The study recommended that Sony Sugar Company should have a clear plan on setting up of their objectives in readiness for proper implementation at each point in time and to work on budgetary allocation for each activity. Project supervisors should ensure that all activities planned are done and completed as planned and that there are periodic reviews on progress of projects and budgetary allocations.

Keywords: Project Planning, Project Success.

1. INTRODUCTION

Project management practices are those fundamental issues inherent in the project, which must be maintained in order for team working to take place in an efficient and effective manner. This chapter will highlight the project management practices at a global, regional and locally for success of projects in the sugar sector. In this global environment of intense competition, to realize and sustain competitive advantage, organizations must place importance on how they practice project management (PM). Specifically, it is critical, in the context of global projects and geographically dispersed project teams, to integrate information technology (IT) tools and manage cultural differences in dealing with project risk and complexity with a focus on improving efficiency, effectiveness, and innovation. (Anatmula 2019)

A company's strategy is management's action plan for running the business and conducting its operations. Crafting of a company's strategy represents a managerial commitment to pursue a particular set of actions in growing the business, attracting and pleasing customers, competing successfully, conducting operations and improving the company's financial and market performance. Strategy on service delivery is thus an important element of this management process. For global business market acceleration, business must respond to customers faster than ever with value added products and services, while they struggle to maintain temporary competitive advantage. According to Hambrick, D.C. & Cannella (2003) strategic management has evolved over the years to the point that its primary values are helping organizations operate successfully in a dynamic and complex environment.

According to (Aosa 2017), the key to gaining competitive advantage is the willingness and ability of employees to share their knowledge, skills and attitudes in the work process. The internal and external environment of an organization is important for its success. This means that the organization monitoring, evaluation and dissemination of information from both external and internal environment is undertaken to stakeholders. This helps the organization to identify strategic factors that can be used to develop the future business plan. As business industries search for new and better means of achieving competitive advantage, the capacity of every functional area to improve organisational performance is under scrutiny. The agriculture sector has also not been left behind.

Today, agriculture industries and organisations manage projects within increasingly complex environments. Under sharp focus are key business deliverables such as integrated workflow, coordination of functional units and business intelligence reporting are very vital to the success of an industry. In this regard, implementation practices of projects in business enterprises are undertaken through various project management practices carried out by various project managers daily. The project management practices are those fundamental issues inherent in the project, which must be maintained in order for team work to take place in an efficient and effective manner. They require day to day attention and operate through the life of the project. It is interesting to find out whether project managers in the agriculture sector are aware of the project management practices and how the factors under their control impact on the success of the company (Kimalu ,2011).

Agriculture industry can be compared with a complex model of supply chain usually applied to business organizations who continuously strive to reduce risk by supplementing with knowledge as much as possible. Agriculture market unlike the stable manufacturing industries also operates with numerous unorganized variables. (Haruna, 2017) Assessment of demand for farm input, quantification of cultivation area as well as supply of different input are difficult due to (a) lack of knowledge (b) unsound analysis & formulation of problem for investment decision. Limitation existing on the logistics for transportation causes further complications in planning for marketing and storage.

Agriculture sector is leading in Kenya's economy accounting for 26% of the country's Gross Domestic Product (GDP) and 27% indirectly through connections with agro-based and associated industries (KESREF, 2009). The agricultural sector engages over 50% of the employment force and is led by small scale farmers who account for about 75% of total agricultural production. The sugar sub-sector is the third most important contributor to the GDP after tea and coffee and supports 6 million Kenyans directly or indirectly. The sub-sector is a source of income for around 200,000 small scale farmers in Kenya (KSB, 2008). In Kenya, the sugar is not exempted from tax like other food items and therefore attracts a VAT of 16 per cent. Sugar development Levy is also charged on the sugar millers at a rate of 4%. Most of the farm inputs are imported and tax is levied on them as well.

Kenyan sugar cane farmers do not receive subsidies from the government as is the practice in countries like Egypt. This leads to high cost of production resulting to high prices of domestically produced sugar. There have been claims of double taxation in which tax is levied on inputs used in sugar production and excise duty is levied on locally produced sugar before it is allowed into the market. The double taxation has been identified as the cause of high prices for local sugar. Suggestions have been made to classify sugar as a food item like maize and other food crops for it to be zero rated (Monroy et al, 2013). The success of projects in the ministry of agriculture relies on conceptualization of the appropriate project per region/geographical location. The concept should be able actualized and followed through to the final end product (Global Agriculture and Food Security Programme (GAFSP)-2016-2022).

Sugarcane is one of the most important crops in the economy alongside tea, coffee, horticulture and maize. The largest contribution of the sugarcane industry is its silent contribution to the fabric of communities and rural economies in the sugar growing areas. Farm house holds and rural businesses depend on the injection of cash derived from the sugar industry. The

survival of small towns and market places around the cane growing areas is also dependent on the incomes from the same (Pearce & Robinson, 2017). Kenyan sugar factories are high cost producers of sugar. This has reduced competitiveness of the industry (KSB 2007). The cost of sugar production in Kenya is currently estimated at USD 870 per Metric Tonne which is twice the cost of production in other COMESA competing countries. This is very high compared to Zimbabwe (USD 300), Malawi (USD 350), Swaziland (USD340), Sudan (USD 340), and Zambia (USD 400), (Kenya National Assembly, 2015).

The sugar industry is constrained by low production capacities, lack of clear harvesting schedules, huge debts, managerial inefficiency, cane poaching, unreliable and fluctuating weather conditions, outdated technology, old equipment & machinery resulting to an planned repairs and maintenance. The factories continue to operate at low capacities due to low levels of technical efficiency and managerial inefficiencies (KSI, 2009 and KSB, 2010). Sony sugar is not an exception to the challenges ailing the sugar sector. But among the critical challenges was the overall management of its agricultural projects before the project outcomes are transferred to permanent operations (Production). Through project planning, monitoring and evaluation, extension officers and project managers are required to guide farmers on soil test analysis and provide the correct cane variety. Since this is not done, harvested cane usually have low sucrose content and low recovery rate. Lack of a farmers register makes it difficult to know the exact number of cane growers, farm inputs provided due to poor stakeholder participation and communication. Cane maturity timelines is not accurately determined and in some instances, there are excess volumes of cane that matures almost at the same time than milling capacity. This is largely due to lack of proper monitoring of progress and communication to stakeholders. Most of these challenges exist due to poor project management practices that would guide the company management in its agricultural projects. The study sought to determine the effect of project planning on success of Sony Sugar Company Project.

2. PROJECT PLANNING

Planning is a very important part of a project regarding project performance and project success. It is a continuous process throughout the delivery of a project. (Idoro, 2012). Numerous empirical studies of project management success factors suggested planning as one of the major contributors to project success (Murphy et al., 1974; Slevin & Pinto, 1987; Aronson, & Lechler, 2009). All the project managers are required to prepare a solid project plan and follow this plan all the way to success. (Dvira, Razb & Shenhar, 2002)

Risk is considered as the major concern for professional dealing with projects, especially after financial crisis that shook world in 2008 (Junior & Carvalho, 2013). Project risk is usually used to indicate unfavourable state of project. (Zhang, 2007). There are no guarantees on any project, the most carefully planned project can also run into trouble even the simplest activity can turn into unexpected problems anything that might occur to change the outcome of a project activity, no matter how well you plan, your project can always encounter unexpected problems (Parker & Mobey, 2004). Project risk management is also seen as a process that accompanies the project from its definition through its planning, execution and control phases up to its completion and closure (Raz & Michael, 2001). Decision milestones are used to anticipate outcomes, risk management is done to prevent disasters and sequential iteration is employed to ensure that the desired facilities are available, yet projects still end up with schedule delays, budget overruns and compromised specifications (Meyer et al., 2002). Organizational cultures also have varying impacts on employee performance at motivational levels (Ashkanasy, Wilderom & Peterson, 2011). Cultural differences are likely to have an increase affect in countries where cultural norms supersede organizational structure. (Hovav & Arcy, 2012). Most researchers have studied institutional Influences at the organizational level. However, institutional pressures could also affect individual behavior which could affect project success (Bevort & Suddaby, 2016). Project success is one of the most important topic in project management (Prabhakar, 2009). Importance of the project success varies by the contract of the project, type of project and individual role of personality in project also (Muller & Jugdev, 2012). Project success comprises of two parts. First is success of project management and other is success of product (Baccarini, 1999). Previous studies suggested that organization should improve the performance by focusing the planning (Lemma, 2014). Culture has significant effect on performance and is strongly related with project success (Ahmed, 2012). Recent studies suggest that organization which implements such management practices that include planning, risk management and culture fit have strong organizational culture which positively affects project management plan (Ahmed, 2012). The current study focuses on the impact of project planning on performance by addressing the influence of variables on project success. Project success is not addressed as before with risk management and organizational culture support. Many papers have discussed project planning and risk management as a key variable in

project success but no one has discussed the impact of project planning and project risk management on project success with the moderating role organizational culture.

Planning and determination of the ideal project life cycle for the project being embraced can significantly affect the success of that project (Rahrovani, Chan, & Pinsonneault, 2014). Project planning is the process of deciding ideal strategies, arrangement and timing of project exercises, and obliged assets to boost the possibility for a Successful Projects. Extend planning viability can be conceptualized as the degree to which a project accomplishes its arranged targets. (Galvin, Gibbs, Sullivan & Williams, 2014). Choices taken amid the planning procedure have been found to affect the plausible result of a project (Syal et al., 2022). There is wide divergence of opinions in this field; the only agreement seems to be the disagreement on what constitutes project success. (Murphy 2011); (De Wit 2008) and other writers, distinguish between project success (measured against the overall objectives of the project) and project management success (measured against the widespread and traditional measures of performance against cost, time and quality). The second distinction is also important that is, the difference between success criteria (the measures by which success or failure of a project or business will be judged) and success factors (those inputs to the management system that lead directly or indirectly to the success of the project or business). In this case, aspects such as Project planning, Monitoring and Evaluation, communication, risks, project control among others. (De wit 2008). Rockart (2009) developed a three step procedure for determining which factors contribute to meeting organizational goals. The three main steps in the process are: Generate critical success factors, Refine critical success factors objectives and identify measures of performance.

Rowe, Mason and Dickel (2012) say that Key result areas (KRAs) and critical success factors (CSFs) provide clues that help to answer the question of whether the organization is able to effectively mobilize its resources where there are conflicting sub goals, environmental uncertainty, and internal politics and constraints. Verma (2016) writes that communication, teamwork, and leadership are vital components of effective management of project human resources and are necessary to accomplish project objectives successfully. Crawford (2002) describes project success as a perception and that the project meets the technical performance specifications and/or mission to be performed, and if there is a high level of satisfaction concerning the project outcomes. Cleland (2016) suggests that project success is meaningful only if considered from two vantage points: the degree to which the project's technical performance objective was attained on time and within budget; the contribution that the project made to the strategic mission of the enterprise.

There is also a general agreement that although schedule and budget performance alone are considered inadequate as measures of project success, they are still important components of the overall construct. Quality is intertwined with issues of technical performance, specifications, and achievement of functional objectives and it is achievement against these criteria that will be most subject to variation in perception by multiple project stakeholders. The study there sought to examine the effect of project planning on success of sony sugar company.

3. METHOD

The research design that is selected is descriptive research design. The target population was approximately 5,000 households and 1000 workers of Sony Sugar Company. The choice of this target population is because they are involved in the whole value chain and therefore relevant to subject of study. Based on the target population indicated, the sampling of the target population was both stratified and systematic sampling procedure. Data collection instrument was questionnaire which had both closed and open-ended questions. Pilot test was conducted to establish whether the respondent had the same understanding of the questions and thus would offer the information required. Data collected using questionnaires was entered and analyzed using Statistical Package for Social Science (SPSS) software. In addition, inferential statistics that include Analysis of variance, Pearson correlation and multiple regression analysis was used establishing the nature and extent of relationship between variables. To ascertain the relationship between the independent variables and the dependent variable, a regression model was used.

4. DISCUSSION

The results relating to the descriptive statistics of determining the effect of project planning on success of Sony Sugar Company Project are presented in Table 4.1. According to the results, 60.2% of the respondents either agreed or strongly agreed that the project has a plan which has clear objectives. This indicated a moderate level of affirmation by the respondents which was confirmed by the mean of 3.4568. Additionally, 75.0% of the respondents either agreed or strongly agreed that the written plans indicate agronomic plans to be implemented at each point in time. This was a reflection that

the majority of the respondents agreed with this statement. The strong mean score of 4.2202 reinforced this view and corroborated.

Further, 94.1% of the respondents either agreed or strongly agreed the plan shows budgetary allocation for each activity. This, along with the high mean score of 4.5083 indicated a very high affirmation by the respondents. Additionally, 70.3% of the respondents either agreed or strongly agreed that total farm inputs required are available in the plan. The mean of this statement was 4.1354 indicating that most of the respondents agreed with it.

The results also showed that 47.4% of the respondents either strongly disagreed or disagreed, while 12.7% were uncertain that Project managers/supervisors train farmers in timely and regular basis. The mean score of the statement was 2.9908 indicating a very moderate level of agreement. Lastly, 75.4% of the respondents either agreed or strongly agreed that the plan indicates possible risks such as drought, security or floods and shows the mitigation measures for the risks in case they occur. This statement also had a high mean score of 3.1743 indicating that there a high level of agreement with it. The standard deviations for the all statements were between 0.60114 and 1.72700 indicating that there was not much variation between the each of the responses and the average responses.

Table 4.1: Descriptive Statistics of Project Planning

Statements On project planning	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
The project has a plan which has clear objectives.	22.7%	11.2%	6.9%	5.0%	54.2%	3.4568	1.73800
The written plans indicate agronomic plans to be implemented at each point in time.	7.9%	0.0%	16.6%	29.0%	46.0%	4.2202	1.09219
The plan shows budgetary allocation for each activity	0.0%	0.0%	5.9%	47.3%	46.8%	4.5083	0.60114
Total farm inputs required are available in the plan	0.0%	0.0%	29.7%	38.1%	32.2%	4.1354	0.78948
Project managers/supervisors train farmers in timely and regular basis.	30.5%	16.9%	12.7%	12.8%	27.1%	2.8898	1.61607
The plan indicates possible risks such as drought, security or floods and shows the mitigation measures for the risks in case they occur.	0.0%	13.6%	11.0%	39.8%	35.6%	3.9746	1.00819

4.1 Inferential Statistics

4.1.1 Pearson Correlation Coefficient Analysis

According to Benesty, Chen, Huang and Cohen (2009), Pearson correlation coefficient refers to the extent to which two or more variables have a linear association. The number (r) is always between -1 and 1. The Pearson correlation coefficients of this study are illustrated in Table 4.2. According to the results, the three independent variables, project planning, respectively with the dependent variable, success of Sony Sugar Company, Kenya. Thus, a change in project planning by one unit will lead to a corresponding change of 0.721 in the dependent variable; a change in stakeholder participation by one unit will lead to a corresponding change of 0.793 in success of Sony Sugar Company, Kenya;

Further, an assessment of the p-values showed that all the independent variables had p-values that were below 0.05 indicating that there a statistically significant relationship between all of them and the dependent variable. This affirmed that in instances where there are confidence intervals of 95%, p-values are supposed to be below 0.05 so that the observed differences between groups are not likely to be down to chance and, as such, statistically significant.

Table 4.2: Pearson Correlation Coefficients

		Project planning	Success of Sony Sugar Company Projects
Project planning	Pearson Correlation	1	0.762
	Sig. (2-tailed)	0.001	0.022
	N	800	800
success of Sony Sugar Company	Pearson Correlation	0.721	1
	Sig. (2-tailed)	0.000	0.002
	N	800	800

4.1.2 Multiple Regression Analysis

Regression is a statistical technique that deals with the determination of linkages between one or more independent variables and a dependent variable by fitting a line of best fit through a series of observations (Mooi & Startstedt, 2014). The summary of the study's multiple regression model is presented in Table 4.3. These results show that the R-Square value for all the variables was 0.722 indicating that the model explained 72.2% of any changes in the dependent variable, project success whenever there is a one percent change in the independent variables. This means that the model managed to reach the 0.7 threshold for significance of the R Square value as recommended by Hamilton, Ghert and Simpson (2015). This demonstrates a fairly strong goodness-of-fit of the regression model.

Table 4.3: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.836 ^a	0.722	0.701	0.324511

a. Predictors: (Constant), Project Planning,

4.1.3 Analysis of Variance (ANOVA)

Sawyer (2009) affirmed that the Analysis of Variance (ANOVA) is a statistical procedure that attempts to find out existing differences between experimental group means in situations where there are one or more independent variables and a dependent variable. The results of the ANOVA of the study are presented in Table 4.4. The results indicate that the ANOVA F-test score, calculated value $F_{0.05}$ at 5% level of significance is equivalent to 22.725, which is greater than the F critical value (F_{crit}) of 2.45 indicating that there is a significant relationship between all the independent variables and the dependent variable of project success. The p-value of 0.000 is less than 0.05 indicating that there is a statistically significant relationship between each of the independent variables and project success. This demonstrates the goodness of fit of the model.

Table 4.4: Analysis of Variance ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.801	3	2.601	22.725	0.000 ^b
Residual	21.268	797	.108		
1 Total	32.069	800			

a. Dependent Variable: Project success

b. Predictors: (Constant), Project Planning,

4.1.4 Beta Coefficient Analysis

Beta Coefficients are unknown constants that are projected from the data which are connected to particular independent variables (Peterson & Brown, 2005). These coefficients enable the measurement of the size of change in an independent variable and the manner in which this affects the dependent variable when the rest of the independent variables are held constant. The results of the Beta Coefficients of the study variables are shown in Table 4.5. The values of the constants and coefficients enabled the generation of the following multiple regression model:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

$$= 31.203 + 0.434 X_1$$

According to the equation, taking all the independent variables to be zero, project success will be a constant equivalent to 31.203. A review of the findings also shows that a unit increase in project planning will lead to a 0.434 increase in project success when all other independent variables are held constant. Lastly, the p-values for all the variables are all below 0.05, which indicates that they are all statistically significant.

Table 4.5: Beta Coefficients

Model	Coefficients ^a				
	Unstandardized Coefficients	Standardized Coefficients		t	Sig.
	B	Std. Error	Beta		
(Constant)	31.200	0.511		7.233	0.000
1 Project planning	0.434	0.063	0.563	0.601	0.000

a. Dependent Variable: Project Success

5. CONCLUSION AND RECOMMENDATION

According to the results, revealed that the project has a plan which has clear objectives. Additionally, the findings implied that the written plans indicate agronomic plans to be implemented at each point in time and that the plan shows budgetary allocation for each activity. Further, the findings indicated that total farm inputs required are available in the plan and that Project managers/supervisors train farmers in timely and regular basis. Lastly, the findings revealed that the plan indicates possible risks such as drought, security or floods and shows the mitigation measures for the risks in case they occur.

In conclusion basing on the study findings, the study came up with the following conclusions; a review of the findings also shows that a unit increase in project planning will lead to a 0.434 increase in project success when all other independent variables are held constant.

The study recommended that Sony Sugar Company should have a clear plan on setting up of their objectives in readiness for proper implementation at each point in time and to work on budgetary allocation for each activity.

Project supervisors should ensure that all activities planned are done and completed as planned and that there are periodic reviews on progress of projects and budgetary allocations.

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