EFFECT OF TASKS IDENTIFICATION ON SUSTAINABILITY OF GOVERNMENT PROJECTS IN RWANDA

[1*] **Alfred Twahirwa**
alfahirwa@gmail.com

[2**] **Patrick Mulyungi**
mwendandu2017@gmail.com

[1,2] *Jomo Kenyatta University of Agriculture and Technology, Kenya*

Abstract

The general objective of this study was to assess the effect of project formulation process on sustainability of government projects in Rwanda. Specifically, the study intended to determine the relationship between project formulation process of government projects and their sustainability. The study adopted the correlation research design where quantitative methods of data collection and analysis were used. For this study the target population was 62 employees of all categories in the project. According to findings, results of correlation between identification of tasks and their deliverables and Sustained increase of returns to farmers was at the rate of 0. 787, meaning that the act of identifying tasks and their deliverables influences the sustained increase of returns to farmers the level of 78.7%. Findings also demonstrate that the correlation between identification of tasks and their deliverables and empowered capacity for rural farmers was at the rate of 0. 685 revealing that empowered capacity for rural farmers is influenced by identification of tasks and their deliverable.

Keywords: *tasks identification, risks identification, government projects*

BACKGROUND TO THE STUDY

Rwanda has had a decade of rapid growth, development and institutional transformation but poverty reduction remains a huge challenge. Despite high economic growth rates poverty has declined by only four percentage points for the rural population, from 60.4% in 2000 to 56.9% (the last recorded value) in 2006 whilst extreme poverty fell from 41.3% to 36.9% in the same period. Rwandan rural poverty has multiple causes but there is a general agreement that a central explanation lies in the declining land availability per household. The poverty rate is 74% for those households with less than 0.3 ha, 67% for households with up to 1 ha and 54% for those households that have more than 1 ha. Declining soil productivity along with high demographic pressure is a further explanation for poverty as returns from agricultural production decline and economic growth is outstripped by population growth. Agriculture is the main source of income for 80% of the population of 10.4 million and contributes 40% to GDP. Family landholdings averaging 0.76 ha are cultivated through complex mainly rain fed farming systems in which food crops cover 67% of the area, mainly for family consumption. Cash crops, mainly tea and coffee, cover 4% of the area but offer a significant complementary source of income for around 450.000 households growing coffee and 80.000 households growing tea. In addition, more than half of Rwandan households are involved at some level in fruit and vegetable production, increasingly for the market. The main livelihood strategy of the poor is a careful

balance of food and cash crop production to meet family requirements and to seek agricultural labor, which is a growing source of income, when this is not possible.

Defining tasks and their deliverables and project sustainability

Defining tasks and their deliverables is a key part of the project formulation process. According to Jason (2006), to prepare an accurate project format, there is need to estimate many things like how long it will take to do the work, how much the work will cost, how much money the project will save or make, the magnitude of the risk and uncertainty involved and other many aspects of the project. Webster (2004) defines estimating as "determining approximately the size, extent, value, cost or nature of something." As many experienced project managers will gladly say, the operative word in that definition is approximately. The nature of project work is such that even with significant prior experience the uncertainty inherent in projects simply does not allow for absolute precision in estimating.

Managers in charges of single small projects can formulate and schedule the project tasks without much information. However, when the project manager must manage several small projects or large complex projects, a threshold is quickly reached in which the project manager can no longer cope with the detail (Jack et al., 2012). Defining the project scope sets the stage for developing a project plan. Project scope definition is a definition of the end result or mission of your project- a product or service for your clients or customers. Its primary purpose is to define as clearly as possible the deliverables for the end user and to focus project plans. As fundamental and essential as scope definition appears, it is frequently overlooked by most of project managers. Research clearly shows that a poorly defined scope is the frequently mentioned barrier to project sustainability (Larry 2002). In a study involving more than one thousand four hundred project managers in US and Canada, (Larson 2008) found that approximately fifty percent of the formulation process relate to unclear definition of scope and goals. This suggests a strong relationship between project sustainability and clear scope definition.

The project scope document focuses on the project purpose throughout the life of the project for the customers and project stakeholders. The scope should be developed under the direction of project managers and project customers. The project manager is responsible for seeing that there is agreement with the owner on project objectives, deliverables at each stage of the project, technical requirements and so forth. The project scope definition is a document that will be published and used by project owner and project participants for planning and measuring project success and sustainability. Scope describes what you expect to deliver to your customers when the project is completed.

The project scope document should define the results to be achieved in specific, tangible and measurable terms (Harold 2001). Once the scope and deliverables have been identified, the work of the project can be successively subdivided into smaller and smaller work elements. The outcome of this hierarchical process is called the Work Breakdown Structure (WBS). The Work Breakdown Structure is the roadmap of the project. Use of WBS helps to ensure project managers that all products and work elements are identified to integrate the project with the current organization and to establish basis for control (James 2005). Normally, the Work Breakdown Structure is an outline of the project with different levels of details. Major project work deliverables or systems are identified first, and then the sub deliverables necessary to accomplish the larger deliverables are identified.

The process is repeated until the sub deliverables detail is small enough to be manageable and where one person can be responsible. This sub deliverable is further divided into work packages. Because the lowest sub

deliverable usually includes several work packages, the work packages are grouped by the type of work. These groupings within a sub deliverable are called cost accounting. This grouping facilitates a system for monitoring progress by work, cost and responsibilities (Joseph 2012). The Work Breakdown Structure defines all elements of the project in a hierarchical framework and establishes their relationships to the project items. Think of the project as a large work package that is successively broken down into smaller work packages; the total project is the summation of all smaller work packages.

This hierarchical structure facilitates evaluation of cost, time and technical performance of the project at all levels over the entire life of the project (Kerzner 2007). Apart from that, the WBS also provides management with information appropriate to each level. For example, the top management deals with the major deliverables, while first-line supervisors deal with smaller sub deliverables and work packages. Each item in the WBS needs a time and cost estimate. With this information it is possible to plan, schedule and budget your project (Garry 2002). It also serves as a framework for tracking cost and work performance. The WBS is the cornerstone of an affective project management plan since it identifies all the tasks and activities that must be accomplished for a project to succeed. Essential to a good WBS are detailed requirements that identify the features and functionality of the product. The WBS can then be deconstructed staring with the product and continuing to sub deliverables and necessary tasks and activities.

Statement of the Problem

In Rwanda, especially in field of agriculture and livestock, there is a significant increase in projects aimed at improving the agricultural production. However most of them failed to achieve their objectives due to ineffective formulation process where some key aspects are overlooked. Therefore the researcher is eager to identify the gap as even when the project formulation process is well undertaken in these projects, we still have a lot of projects failing to achieve their expected results. Therefore, this research aims at investigating the effect of project formulation process on sustainability of government projects in Rwanda by survey the Project for Rural Income through Exports (PRICE). It also intends to highlight issues that affect sustainability of Government projects in Rwanda and introduces tools which can be used to enhance sustainability at project formulation stage.

Objectives of the Study

The general objective of this study is to investigate effect of project formulation process on sustainability of government projects in Rwanda. The specific objectives of this study is to establish the effect of tasks identification on sustainability of government projects in Rwanda.

Scope of the study

The study will be conducted in PRICE with the main objective of investigating the effect of project formulation process on sustainability of government projects in Rwanda. The study will focus on the project formulation process and its effects on sustainability of PRICE.

RESEARCH METHODOLOGY

The The study adopted the correlation research design where quantitative methods of data collection and analysis were used. For this study the target population was 62 employees of all categories in the project. A sample size of 54 respondents was determined from a total population of 62 individuals. The primary data were collected using questionnaires. The data were collected, examined and checked for completeness and comprehensibility. The study findings, revealed that Identification of tasks and their deliverables within Price

was mainly done by putting in place a well detailed work breakdown structure or a list of all tasks that will be performed from the start to completion according to all research participants, identifying of all deliverables attached to each task in the WBS to be performed from start to completion of the project as it was reported by 88.9% of the respondents, results of correlation between identification of tasks and their deliverables and sustained increase of returns to farmers was at the rate of 0.787 meaning that the act of identifying tasks and their deliverables influence the sustained increase of return to farmers at the level of 78.7%.

DESCRIPTIVE FINDINGS AND ANALYSIS

Relationship between identification of tasks and their deliverables on sustainability of government projects in Rwanda

The study findings, revealed that Identification of tasks and their deliverables within Price was mainly done by putting in place a well detailed work breakdown structure (WBS) or a list of all tasks that will be performed from the start to completion according to all research participants, identifying of all deliverables attached to each task in the WBS to be performed from start to completion of the project as it was reported by 88.9% of the respondents. 59.2% of the respondents revealed that Identification of tasks and their deliverables within PRICE is implemented through identification of all milestones signifying the important decision making points in the entire life cycle of the project. Lastly, 100% of respondent confirmed that Identification of tasks and their deliverables is done by identifying the technical requirements that were needed in each task to be performed within PRICE project.

Table 1: Identification of tasks and their deliverables within Price

Identification of tasks and their deliverables	Frequency	Percentage
Detailed WBS	54	100
Identification_of_deliverable_activity_WBS	48	88.9
Identification of milestones	32	59.2
Identification of technical requirements	54	100
Total	**54**	**100**

Correlation of Relationship between identification of tasks and their deliverables and Sustained increase of returns to farmers

This section describes the Relationship between identification of tasks and their deliverables and Sustained increase of returns to farmers.

Table 2: Correlation between identification of tasks and their deliverables and Sustained increase of returns to farmers

Identif of task	Pearson Correlation	1	.787**
	Sig. (2-tailed)		.006
	N	54	54
Sustained increase of returns of farmers	Pearson Correlation	.733**	1
	Sig. (2-tailed)	.006	
	N	54	54

According to findings in the above table, results of correlation between identification of tasks and their deliverables and Sustained increase of returns to farmers was at the rate of 0.787 meaning that the act of identifying tasks and their deliverables influences the sustained increase of returns to farmers at the level of 78.7%. Therefore, the researcher concluded a strong relationship between identification of tasks and their deliverables and Sustained increase of returns to farmers. By considering the level of significance which is 0.05, there is a significant relationship between identification of tasks and their deliverables and Sustained increase of returns to farmers as their p-value (0.006) is statistically significant at 5% level of significance.

Correlation between identification of tasks and their deliverables and Empowered capacity for rural farmers

Table 3: Correlation between identification of tasks and their deliverables and Empowered capacity for rural farmers

Identif of task	Pearson Correlation	1	.685**
	Sig. (2-tailed)		.005
	N	54	54
Empowered capacity for rural farmers	Pearson Correlation	. 685**	1
	Sig. (2-tailed)	.005	
	N	54	54

Findings in the above table, demonstrate that the correlation between identification of tasks and their deliverables and empowered capacity for rural farmers was at the rate of 0. 685 revealing that empowered capacity for rural farmers is influenced by identification of tasks and their deliverable at the level of 68.5%. This proves the high correlation between identification of tasks and their deliverables and empowered capacity for rural farmers. Furthermore, by considering the level of significance which is 0.05, there is a significant relationship between identification of tasks and their deliverables and empowered capacity for rural farmers due to their p-value (0.005) which is statistically significant at 5% level of significance.

Correlation between identification of tasks and their deliverables and Sustained increase of economic opportunities for poor farmers

This section describes the correlation between identification of tasks and their deliverables and Sustained increase of economic opportunities for poor farmers

Table 4: Correlation between identification of tasks and their deliverables and Sustained increase of economic opportunities for poor farmers

Identif of task	Pearson Correlation	1	.858**
	Sig. (2-tailed)		.009
	N	54	54
Increase of eco opport for famers	Pearson Correlation	.858**	1
	Sig. (2-tailed)	.009	
	N	54	54

The result of correlation between identification of tasks and their deliverables and Sustained increase of economic opportunities for poor farmers as shown in the above table, was at the rate of 0. 858. This reveals a strong correlation between identification of tasks and their deliverables and Sustained increase of economic

opportunities for poor farmers. Therefore a change in identification of tasks and their deliverables is highly correlated with change in the sustained increase of economic opportunities for poor farmers in this project.

Correlation between identification of tasks and their deliverables on sustainability of government projects in Rwanda

This section describes the correlation between identification of tasks and their deliverables on sustainability of government projects in Rwanda.

Table 5: Identification of tasks and their deliverables on sustainability of government projects in Rwanda

Identif of tasks	Pearson Correlation	1	.941**
	Sig. (2-tailed)		.017
	N	54	54
Project sustainability	Pearson Correlation	.841**	1
	Sig. (2-tailed)	.017	
	N	54	54

The findings in the above table, revealed that the result of correlation between identification of tasks and their deliverables on sustainability of government projects in Rwanda was at the rate of 0.941 meaning that the identification of tasks and their deliverables influences on sustainability of government projects at the level of 94.1% hence a significant relationship between identification of tasks and their deliverables on project sustainability. On the other hand, when the researcher consider the level of significance which is 0.05, there is a significant relationship between identification of tasks and their deliverables on sustainability of project because their p-value (0.017) is statistically significant at 5% level of significance.

Table 6: Estimate parameters between identification of tasks and their deliverables on project sustainability

Model	Unstandardized Coefficients			95% Confidence Interval for B	
	B		Sig.	Lower Bound	Upper Bound
Constant (β_0)	3.224		.000	1.859	2.587
Identif of task and deliv (X)	.112		0.017	-.376	.183

Dependent Variable (Y): project sustainability

Regarding to the information from the above table, if: Y= Project sustainability and X= Identification of tasks and deliverables, project sustainability will change in function of Identification of tasks and deliverables, Therefore, if identification of tasks and deliverables is equal to one unite and constant (β_0) is zero (0), project sustainability will increase 0.112 times Identification of task and delivery. Hence, Y=3.224+0.112X. There is a significant relationship between identification of tasks and their deliverables on project sustainability because their p-value (0.017) is statistically significant at 5% level of significance with lower bound of -3.76 and upper bound of .183.

Summary of the Study

The relationship between identification of tasks and their deliverables on sustainability of government projects in Rwanda

According to findings, results of correlation between identification of tasks and their deliverables and Sustained increase of returns to farmers was at the rate of 0. 787, meaning that the act of identifying tasks and their

deliverables influences the sustained increase of returns to farmers the level of 78.7%. Findings also demonstrate that the correlation between identification of tasks and their deliverables and empowered capacity for rural farmers was at the rate of 0. 685 revealing that empowered capacity for rural farmers is influenced by identification of tasks and their deliverable at the level of 68.5%. The result of correlation between identification of tasks and their deliverables and Sustained increase of economic opportunities for poor farmers as shown in the above table, was at the rate of 0. 858. Regarding to the information from the above table, if: Y= Project sustainability and X= Identification of task and deliverables, project sustainability will change in function of Identification of tasks and deliverables, Therefore, if Identification of tasks and deliverables is equal to one unite and constant (β_0) is zero (0), project sustainability will increase 0.112 times Identification of task and delivery. Hence, Y=3.224+0.112X. There is a significant relationship between identification of tasks and their deliverables on project sustainability because their p-value (0.017) is statistically significant at 5% level of significance with lower bound of -3.76 and upper bound of .183.

Conclusions

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

The collected and analyzed data during the course of this study showed that the effect of the variables like identification of tasks and their deliverables, estimating resources needed to perform tasks, identification of the anticipated and known risks in executing the project, identifying stakeholders, their involvement and contribution are important to the project sustainability.

Identification of tasks and their deliverables important in project sustainability, the correlation between identification of tasks and their deliverables on sustainability of government projects in Rwanda was at the rate of 0.941 meaning that the identification of tasks and their deliverables influences on sustainability of government projects at the level of 94.1% there is a significant relationship between identification of tasks and their deliverables on sustainability of project because their p-value (0.017) is statistically significant at 5% level of significance. while Estimate parameters between identification of tasks and their deliverables on project sustainability were according to findings Y= Project sustainability and X= Identification of tasks and deliverables, project sustainability will change in function of Identification of tasks and deliverables, Therefore, if Identification of tasks and deliverables is equal to one unite and constant (β_0) is zero (0), project sustainability will increase 0.112 times Identification of task and delivery. Hence, Y=3.224+0.112X. There is a significant relationship between identification of tasks and their deliverables on project sustainability because their p-value (0.017) is statistically significant at 5% level of significance with lower bound of -3.76 and upper bound of .183.

REFERENCES

Ananda, J. and Herath, G. (2003) *Incorporating stakeholder values into regional forest planning*: a value function approach, Ecological Economics, 45, 75-90.

Andler N. 2008: Andler, Nicolai; *Tools for Project Management, Workshops and Consulting: a must have compendium of essential tools and techniques*; Erlangen: Publicis Corporate Publishing, 2008

APM (Association for Project Management) 2006, *The APM Body of Knowledge*, 5th ed., Association for Project Management.

Araujo, L.M. and Bramwell, B. (1999) *Stakeholder assessment and collaborative tourism planning:* the case of Brazil's Costa Dourada Project, Journal of sustainable Tourism, 7(3/4), 356-378.

Argyris C. 2005: Argyris, Chris; Double Loop Learning in Organizations: *a Theory of action Perspective*; in: Smith, Ken; Hittl Michael; Great Minds in Management: *the Process of Theory Development;* Oxford: Oxford University Press, 2005

Barr S. 2008: Barr, Stewart; *Environment and society: sustainability, policy and the citizens*; Aldershot: Ashgat, 2008

Binder J. 2007: Binder, Jean; *Global Project Management: Communication, Collaboration and Management Across Boarders*; Hampshire: Gower Publishing, 2007

Bryson, J.M. (2004) *What to do when stakeholders matter: stakeholder identification and Analysis techniques*, Public Management Review, 6(1), 21-53.

Chen, Z., Li, H. & Turner, R. 2007, Managing the environment, i n J.R. Turner (ed.) , *Gower Handbook of Project Management* 4th ed., Gower Publishing, Aldershot, UK.

Claud, G.M. (2006). *Project Sustainability and Participatory Planning Approach*. A Case of Rural Water Supply and Health Project In Marginal Areas, Kondoa District., Dodoma, Tanzania.

David, H. and Joseph, N. (2001). *Agricultural Project Planning Approach in Tanzania*: A handbook on Cycle and Sequencies: Mzumbe University, Tanzania Development and Project Centre, University of Bradford, UK.

Doppelt B. 2003: Doppelt, Bob; *Leading change towards sustainability: a change management guide for business, government and civil society*; Sheffield: Greenleaf Publishing, 2003

Eid, M. 2002, *A sustainable approach to the project management odyssey*, paper presented at the PMI Research Conference 2002: Frontiers of Project Management Research and Application, Seattle, WA.

El-Gohary, N.M., Osman, H. and El-Diraby, T.E. (2006) *Stakeholder management for public private partnerships*, International Journal of Project Management, 24, 595-604.

Epstein, M.J. 2008, *Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental, and Economic Impacts*, Berrett - Koehler Publishers, San Francisco, CA.

Erik, W.L., & Clifford, F.G. (2001). *Project Management. The Managerial Process (5th ed)* Mc Graw-Hill, Irwin.

Gerard, M.H. (2010). *Complete Project Management Methodology and Toolkit 2010*. Taylor and Francis Group, LLC.

Hampton, J. (2006). *Risk pro knows value of networking. Business Insurance* 40, no 45:5

Harold, K. (2001). Strategic *Planning for Project Management using a Project Management Maturity Model.* John Wiley & Sons, Inc.

Joseph, H. (2012). *Fundamentals of Project Management* (4thed). American Association of Management

Kerzner, H. (2003). Project Management: *A system Approach to Planning, Scheduling, and Controlling (8th ed).* Indianapolis: John Wiley and Sons, Inc.

Larry, R. (2002). *Successful Project Management (3rded).* American Management Association

PMI (Project Management Institute) 2006, *The Standard for Program Management*, Project Management Institute, Newtown Square, PA.