



Project monitoring, evaluation and communication as factors in performance of community based agricultural projects in Bungoma County, Kenya

Nalianya Remmy Simiyu¹, Dr. Lucy Ngugi², David Minja³

^{1,2} Department of Management Science, Kenyatta University, Kenya

³ Professor, Department of Public Policy, Kenyatta University, Kenya

Abstract

The success of agricultural projects, or any other types of projects, is dependent on many factors, among them market access in the agriculture sector, information access and effective use and the effectiveness of M&E practices. A project is considered successfully completed when all the management practices have been undertaken. The study investigated the influence of project management practices on the performance of agricultural projects by community based organizations in Bungoma County, Kenya. Out of that research, this paper examines how project communication and monitoring and evaluation influence the performance of agricultural projects in Bungoma County. The study used descriptive and explanatory research designs. It targeted 138 community project groups carried out by CBOs registered in Bungoma County. The study used stratified sampling to select 61 project groups from the target population. Primary data was collected using a self-administered questionnaire. Interviews were also conducted with 15 field officers. Descriptive statistics were computed to describe the characteristics of the variables whereas inferential statistics in form of simple and multiple regression were used to establish the nature and magnitude of the relationships between variables. Data analysis was done using SPSS version 22. Qualitative data was analysed through content analysis. On simple regression, project M&E practices were found to influence agricultural project performance. Project communication was insignificant and therefore had no influence on agricultural projects performance. The study recommends that the sponsors and management of agricultural projects develop programmes that integrate all the components of project management practices, including all aspects M&E, to achieve holistic success. The findings of this study can help the Ministry of Agriculture in planning of its activities and financing of agricultural projects in Kenya.

Keywords: monitoring, evaluation, communication, agricultural projects, Kenya, Bungoma

Introduction

Agricultural projects have been recognized for their role and importance in development and growth of economies. The recent years have seen a significant growth in project works across different sectors and industries (Maylor, Brady, Cooke-Davis & Hodgson, 2006) ^[10]. Projects have proven useful as a means to reducing problems of poverty, poor health and unemployment which are predominant in rural set up of many developing countries (International Development Research Centre, 2004). Kenya's economy is heavily dependent on agriculture. The sector also serves as the basis for the development of other sectors (Republic of Kenya, 2002). The agriculture sector makes a direct contribution to Gross Domestic Product (GDP) of 25% and indirectly contributes a further 27% through linkages with agro-based and associated industries (Alila & Atieno, 2014) ^[2]. The sector employs about 75% of the total labour force, generates 60% of export earnings, and provides 75% of industrial raw materials and 45% of Government revenue. As a result, the government of Kenya has placed a lot of emphasis on agricultural projects by among other strategies forming and funding of youth and women to run the projects groups. These project groups, however, have not performed to their optimum due to several challenges ranging from social, economic and technical which

are yet to be addressed by the ministry of agriculture (Ministry of Agriculture, 2011).

Project Monitoring and Evaluation and Performance of Agricultural projects

A United Nations Population Fund report (2004) shows that monitoring provides managers and other stakeholders with continuous feedback on implementation, identifies actual or potential successes and problems as early as possible to facilitate timely adjustments to project operation. Project monitoring is a continuous process in which information is gathered concerning the performance and implementation of a project or a programme. M&E aims to provide regular oversight of the implementation of an activity in terms of input delivery, work schedule, targeted output, among others. The UN report further shows that effective monitoring requires adequate planning, baseline data, indicators of performance, and result and practical implementation mechanisms that include actions such as field visits, stakeholders meetings, documentation of project activities, regular reporting.

In adopting the results-based on M&E framework, care must thus be taken to ensure M&E processes, findings and results form an integral part of the overall project management

system. Crucially important for an effective M&E system is the choice of what to track, document and analyse and who should be involved in this. Concepts for deciding what to monitor and evaluate are: relevance, cost effectiveness, efficiency, results-orientation, and sustainability of the system (UNFPA, 2004). A common mistake in M&E is to gather too much information. This complicates analysis and creates delays, resulting in confusion and non-timely action or no corrective action at all being taken. It should be results-orientated meaning drawing attention to and highlighting successes as well as failures, rather than merely reporting on progress in meeting targets (Monterrey, 2012).

Joe and Nay (2004) assert that monitoring in general sense is used to describe a systematic framework to collect and analyse information on events associated with implementation policy with the view to improving the management. The findings of their study show that while perceptions as to the role and function of M&E may vary, its role as a key element of the project cycle is incontrovertible. The Project Cycle Management Guidelines (2002), for example, emphasizes the use of M&E results for programming and project identification, as part of a structured process of feedback and institutional learning. Woodhill (2007) ^[16], in a study conducted on M&E as learning, with a special focus on rethinking the dominant paradigm, observes that M&E is at the heart of managing for impact. This project management perspective is meant to respond to changing circumstances and increased understanding. It is marked by adaptive management to ensure the project is more likely to achieve its intended impacts.

According to the World Bank (2006), monitoring and evaluation systems are designed “to inform project management of whether implementation of the project is going as planned or corrective action is needed.” The World Bank argues that Findings in the study revealed that a well-designed M&E system provides data on the progress of a project and whether it is meeting objectives. These data may indicate what adjustments are required in the project to take into account different circumstances in the local environment. M&E expenditure should be distinct from other management costs and should provide detailed budget items for staffing, training, workshops and equipment, including computer hardware and software related to the MIS (World Bank, 2006). Being results-based entails giving particular attention to providing timely information to management and other project stakeholders on whether and why the project is succeeding or failing. The scope of M&E also extends to examining the significance and relevance of activities completed and outputs produced, i.e. also addressing questions of ‘so what’ and ‘then what’. Therefore, focusing solely on either ends of the results chain is inappropriate.

Muller-Praefcke, Lai and Sorrenson (2010) ^[11] have examined the use of monitoring and evaluation in agriculture and rural development projects in the USA. The study revealed that while monitoring and evaluation (M&E) is recognized as a key element in understanding and effectively tracking and documenting the results of development interventions, it is also admitted that there is a general need to improve M&E in development work. M&E methods and guidelines have received much international attention, but the problems of

putting M&E into practice and drawing lessons from field experience have been less studied. The findings show that as far as completed projects are concerned, with very few exceptions, M&E systems have been poorly developed and implemented at the field level. Weaknesses in M&E are traced back to the design of the M&E system, particularly the absence of clearly identifiable monitoring indicators and a lack of ownership and participation by the stakeholders. M&E systems often reflect shortcomings in the description of project objectives, components and implementation arrangements.

According to Ndagi, Mugo, Keiyoro, Iribe and Rambo (2016) ^[12], in a study on the influence of M&E planning on sustainability of agricultural food crop projects in Kenya, M&E planning meetings or field visits are not conducted regularly by management. This implies that it might be a challenge to enhance experience sharing among the farmers hence hindering monitoring and realization of sustainability of food crop projects. The involvement of the members of a project is critical in monitoring and evaluation. The findings of their study show that the absence of a link between farmers and officers might deny farmers knowledge, information, experiences and technologies required to boost productivity and sustainability. The theory of change contributed to several indicators in the planning level, like monitoring and evaluation meetings for stakeholders, training seminars for the farmers, field visits and use of available resources relevant to the utilitarian theory and this is critical to enhancement of sustainability.

Project Communication and Performance of Agricultural Projects

A Republic of Kenya (2006) ^[2] paper targeting rural areas in Kenya conducted by Ministry of Agriculture reveals that lack of information as regards marketing facilities in institutions are some of the constraints to increased agricultural production. Due to these constraints, farmers are subjected to high transportation costs due to dilapidated roads, improper handling, poor storage facilities and wastage. This results in fluctuations in both productions and incomes. For livestock marketing, limited cattle holding grounds and meddling with stock-routes has limited access to markets.

Dwyer *et al.* (2007) ^[6] posit government, through appropriate policy making, is often interested in enhancing the performance of agriculture. Government policies on agriculture indicate that performance must be predicated upon research which provides evidenced-based recommendations drawn from holistic analysis of contemporary top project performance in different agricultural sectors. These scholars recommend that more research be done on improving ways of obtaining information from the farming press, electronic media, specialist advisers and training open days to gain information in respect to new developments in the farms. According to ILO (2002) ^[9], promoting marketing of agricultural produce will require that holding grounds, watering points, stock-routes and livestock markets be developed; the private sector be encouraged to invest in slaughter houses and cold storage; local authorities in collaboration with the private sector invest in storage facilities; the government provides all-weather rural access

roads, improve communication facilities and market information systems among others. The two sets of interventions, in enhancing agricultural productivity and marketing systems, as recognized too by the SRA (2004), will lead to agricultural growth.

Thong (2009) ^[14] conducted a study in Singapore on resource constraints and information systems in project performance. The study explains why rural inhabitants are not reaping from the fruits of the enormous wealth the country has. Lack of resources and required expertise are assumed to be a major reason that hinders the adoption of innovations by small scale farmers. Information services that will greatly enhance their productivity, transform their community into a lively and enlightened one, and empower their economic base, is not effective and relevant, and the service is not fashioned towards the set objectives due to infrastructural problems, corruption by officials in allocation of funds, unstable political and economic policies breeding insecurity, and unstable power supply. The findings of Thong's study show that in the rural areas, there is an acute shortage of information services. This makes the rural community incapacitated and makes it difficult to associate with other communities to develop and make progress. The study recommended the need to set up an information facility in which consolidated price information for all of the different markets is sent by mobile phone Short Message Service (SMS) to many of the same people, who posted it on information boards in local markets.

According to Burrell and Matovu (2008) ^[5], in a study on information use by smallholder farmers done in Uganda, access and use of information and communication technologies (ICTs) by the smallholder rural farmer is envisaged to improve their welfare due to increased need for access to information about prices, new farming methods and markets. The findings show that a number of ICT-based projects have emerged in the last one decade in many developing countries to help the farmer's access relevant information. These projects use new and old generation ICT tools to provide market information to farmers in an attempt to resolve information access problems. However, the cost and availability of telecommunications determines the extent to which the ICTs are used and these access costs are often higher in poor countries.

Ochora (2008) conducted a study on internet development in Kenya. The study reveals that the rapid development and applications of the Internet and other forms of ICTs in the agricultural sector have presented a whole new dimension in the transfer and access of agricultural information. This information was previously difficult and expensive to obtain. While many projects mainly use electronic broadcast technologies like TV and radio in the beginning, internet and mobile based technologies have emerged during the last two decades. ICT now includes computer-based applications and communication tools, such as social media, digital information repositories (online or offline), digital photography and video, as well as mobile phones (Balaji, Meera & Dixit 2007) ^[4]. The improvement in ICT has led to formation of a large number of IERD projects that seek to provide farmers with the information they need in order to adapt their decision-making to increase knowledge in projects related agricultural sector. However, for ICTs to improve the provision of agricultural

information, other inputs and/or conditions such as skill development, policy and regulatory framework, and improved infrastructure are necessary.

Abissath (2008) ^[11], in a study on ICTs to rural people in Ghana, found that rural development has been central to the development effort, but rural poverty persists, funding is low and this calls for a new approach. The study emphasized that rural areas are changing, particularly with respect to demography, diversification, and strengthening links to national and global economies. For example, Ghana, like Malaysia, Singapore and other technology-minded countries, is gradually but steadily taking ICTs to rural communities so as to bridge the digital divide between the urban dwellers and the rural folks in the country. This will go a long way to improve marketing information access in the country. One strategy the Ghanaian government has adopted to achieve this feat is the establishment of Community Information Centres (CICs) in districts throughout the country.

Muto and Yamano (2009) ^[13], in their study on the role of effect of new generation ICT tools on project performance, found that the use of ICT-based information increases the use of high yielding seed varieties and also the margins earned by farmers. The study also revealed that the expansion of mobile phone coverage increase market participation by farmers. Use of mobile phones reduces transportation and other transaction costs suggesting that the improved participation in the market likely arises from the savings in transportation and transaction costs.

Aingwire and Okello (2011) ^[3], in a study on agricultural innovation, found that technological resources like computers, telephone lines plus Internet play an important role in the integration of new technologies in any set up. However, many organizations often do not have sufficient physical resources and human to adopt this important sector in rural development. This is a major obstacle to the integration of new technologies in project development in developing countries. The study also revealed that while studies on impact of ICT-based tools such as mobile phones continue to grow, there has been very little focus in the literature on the performance of projects that use ICT-based applications and tools used to provide market information services to farmers.

According to Aingwire and Okello (2011), ^[3] in Uganda, access and use of information and communication technologies (ICTs) by the smallholder rural farmers is envisaged to improve their welfare due to increased access to input and output markets. The paper draws from a case study of two local organizations ICT-based projects namely, Busoga Rural Open Source Development Initiative (BROSDI), and Women of Uganda Network (WOUGNET). The findings of the study further reveal that constraints identified include lack or poor to ICT tools, poor ICT infrastructure, inadequate resources and high levels of poverty, low levels of literacy, inappropriate modes of information transfer, socio-cultural dynamics and sustainability issues. The paper argues that reaching the poor illiterate smallholder farmers requires redesigning the information content and delivery modes so that the information comes in audio form and in ICT tools that do not require literature. Also the government and private sector need to work hand in hand to ensure access and usability of ICT tools in rural areas by the former investing

more in making electricity available in rural communities and the latter extending network boosters to remote rural areas (Aingwire & Okello, 2011) [3].

Statement of the Problem

Project failure rates in Kenya are high and the costs involved in starting and running them are equally high (Kenya Agriculture Research Institute, 2012). The findings of an impact assessment on community-funded projects showed that only 5 out of 36 project groups in Bungoma County funded in 2007 were partially active, while the rest had become defunct and could not be traced after cessation of funding (Wabwoba & Wakhungu, 2013) [15]. Despite the Ministry of Agriculture report on smallholder horticulture marketing programme (2014) recommendations through the NALEP service extension group to increase the number of community based organizations and improve skills of farming, there is still persistent food insecurity and poverty among the rural communities in some Counties like Bungoma having 53% of its population still suffering from intense poverty and malnutrition (Youn, 2013).

A study done by Muller-Praefcke *et al.* (2010) [11], on monitoring and evaluation strategies in agriculture, points out that practicing and drawing lessons from field experience in M&E have been studied but the extent of their success needs more addressing. Elisante (2012) [7] has assessed the effect of use of mobile phone services by customers on project performance; however, he does not address the whole aspect of project communication in agricultural projects. The study therefore sought to uncover the impact of communication and M&E on the performance of agricultural projects initiated by CBOs in Bungoma County.

Materials and Methods

The study used both descriptive and explanatory research designs. Descriptive research design affords the researcher an opportunity to capture a population’s characteristic and test hypothesis, The target population of this study consisted of all 138 agricultural project groups and 24 field officers carried out by CBOs in Bungoma County. The project groups targeted were varied ranging from horticulture, maize, bees and poultry. The study used stratified random sampling. The agricultural projects representing each sub-county were then selected using proportionate sampling basing on similarity and variability of projects. A statistical formula was used to

determine the sample size as suggested by Fisher, Laing, Stoeckel and Townsend (1985) [8]. At 95% confidence level, a sample of 61 out of 138 was selected. Data from the study was collected using both semi-structured questionnaire and an interview guide. The questionnaire included both closed, open-ended and matrix questions to allow variety of responses from respondents. The interview schedule was mainly used to collect information from field officers. The interview consisted of questions designed to allow sufficient explanation from the respondents. Qualitative data was analysed based on the content matter of the responses. Responses with common themes or patterns were grouped together into coherent categories. Quantitative data was analysed by use of both descriptive and inferential statistics. Descriptive statistics such as frequencies, percentages, mean and standard deviations were computed to describe the characteristics of the variables of interest in the study.

Results and Discussion

Project Monitoring and Evaluation

The respondents were asked to indicate whether or not they were aware of the presence of a constitution that governs project members. Their responses were as shown in Table 1 below.

Table 1: Presence of a Constitution that Governs Project Members

Responses	Frequency	Percentages
No	4	7.5
Yes	44	83
Missing	5	9.4
Total	53	100

The results in Table 1 show that 83% of the respondents confirmed that there was a constitution that helped to monitor the members’ performance while only 7.5% said the project groups had no constitution. This implies that many of the project groups had a written document to monitor the performance of all the activities in the projects initiated.

The respondents were asked to rate the project monitoring and evaluation practices on a scale of 1-5, where 5=Very great extent; 4=Great extent; 3=Moderate extent; 2=Low extent, and 1=Very low extent. The percentage means and standard deviations for the variable were computed and presented as shown in Table 2 below.

Table 2: Responses on Monitoring and Evaluation Practices

Statement	Very low extent	Low extent	Moderate extent	Great extent	Very great extent	Mean	Std. Dev.
	%	%	%	%	%		
The project is checked regularly by managers	9.4	20.8	26.4	9.4	34.0	3.38	1.390
There are clear records on farming activities kept in the project group	9.4	7.5	22.6	17.0	43.4	3.77	1.339
The project coordinators regularly report the progress of the project to senior management	7.8	3.9	13.7	33.3	41.2	3.36	1.199
The supervisors ensure that the planned farming activities are all done at the planned time	5.7	11.3	15.1	22.6	45.3	3.31	1.260
There are always ways in which the management saves on expenditure	11.3	15.1	11.3	28.3	34.0	3.58	1.393
Any member who miss appropriate funds or farm materials is reported to management for disciplinary action to be taken against them as given in the constitution	26.4	9.4	24.5	17.0	22.6	3.00	1.506
Aggregate						3.4	1.347

Source: Survey Data (2017)

Results in Table 2 above show that the respondents, to a moderate extent, agreed that there was regular monitoring of projects by managers (mean of 3.38). This implies that respondents moderately agreed that management did monitor project groups. The opinions sought on whether there were clear records on farming activities and if there are ways in which the management saves on expenditure had respective means of 3.77 and 3.5. This implies that to a great extent respondents agreed that there were clear records in agricultural projects. Opinions on whether the project coordinators regularly report the progress of the project to senior management and whether the supervisors ensure that the planned farming activities are all done at the planned time had means of 3.36 and 3.31 with standard deviations of 1.26 and 1.199, respectively. Results also indicated that respondents to a moderate extent agreed that members who misappropriate funds or farm materials were reported to management for disciplinary action to be taken against them as given in the constitution which had respective means of 3.00 with the standard deviation of 1.506. This implies that the monitoring systems are not yet well implemented in agriculture project organizations in Bungoma Ccounty. The ground rules for many farmers were not also adequately practiced which may finally affect agricultural project performance.

The aggregate mean score for monitoring and evaluation was 3.4 and standard deviation was 1.347. The aggregate mean score round off to a score of 3 on the five point Likert scale adopted by the study implies that on a moderate extent respondents felt that there was effective project monitoring associated with performance of agriculture projects in the county. The findings point on the need of effective monitoring and evaluation systems which should be improved to promote project performance. This observation is in agreement with what Woodhill (2007) [16] confirms that a well-designed project monitoring and evaluation systems provide important data on project progress. Unfortunately, sometimes the process of M&E has been abused by management in many

cases in the sense that those judged with the supervision of the project from the fields don't give exact reflections of what was observed and therefore misreport the project progress.

Project Communication

The study was also interested in determining how Project communication influences the Performance of agricultural projects by community based organizations in Bungoma County, Kenya. First the respondents were asked to indicate the means by which they communicated with other members outside the project group. Their views were as documented in Table 3 below.

Table 3: Communication with other Members outside the Project Group

Media of communication	Frequency	Percent
Phone	43	81.1
Letters	1	1.9
Email	1	1.9
Media	4	7.5
System	4	7.5
Total	53	100

Source: Survey Data (2017)

The results in Table 3 below show that 81.1% of the respondents communicated using phones while very few of them used other means with media at 7.5%. Communication through letters and email both stood at 1.9%. This implies that most of the communication among the members within the project groups was done through phones. This should have enhanced communication across the project managers and the farmers.

The respondents were asked to rate the project communication characteristics on a scale of 1-5, where: 5=Very great extent; 4=Great extent; 3=Moderate extent; 2=Low extent and 1=Very low extent. The percentage means and standard deviations for the variable were computed and presented as shown in Table 4 below.

Table 4: Response on Project Communication

Statement	Very low extent	Low extent	Moderate extent	Great extent	Very great extent	Mean	Standard Deviation
Project communication with the group has improved due to use of phones and local libraries	3.8		7.5	43.4	45.3	4.26	.902
Farmers experience communication problems when using mobile phones due to network breakdown and lack of electrical power to charge the phones	15.1	17.0	24.5	26.4	17.0	3.13	1.316
Members of the project group have required skills of using modern information gadgets like computers to get marketing information	34.0	22.6	24.5	7.5	11.3	2.40	1.335
Farmers have ways of making their produce known to buyers through putting adverts about their produce in near centres or advertise by radio	39.2	23.5	25.5	9.8	2.0	2.12	1.107
Farmers sell their products locally to middle men due to lack of clear marketing information	18.0	6.0	10.0	32.0	34.0	3.58	1.472
Aggregate						3.098	1.226

Source: Survey Data (2017)

The research results in Table 4 shows that many respondents to a great extent agreed that Project communication within the group had improved due to use of phones and local libraries with an average mean score of 4.268 and had standard deviation of 0.902. However, the respondents to a moderate extent agreed that farmers experience problems with

communication when using mobile phones due to network breakdown and lack of electrical power to charge the phones with a mean of 3.13 and standard deviation of 1.316. The opinions presented by respondents on whether or not project group members had required skills of using modern information gadgets like computers to get marketing

information were also agreed to a low extent with a mean of 2.40 and standard deviation 1.335. This indicated that a number of respondents are still having poor methods of communication within project organizations.

The above findings supported those by Thong (2009) ^[14] who points out that information services that will greatly transform the community into a lively and enlightened one is not effective and relevant in many project organizations. The services are not fashioned towards the set objectives due to infrastructural problems, corruption by officials in allocation of funds, unstable political and economic policies growing insecurity, and unstable power supply.

The study results also indicated that respondents to a low extent agreed that there were ways of making their produce known to buyers through putting adverts about their produce in near centres or advertise by radio which had an average mean score of 2.12 and standard deviation of 1.22. This points out that there are still poor marketing methods of farm products. The aggregate mean score for project communication is 3.098 and standard deviation is 1.226. The aggregate mean score round off to a score of 3 on the five point Likert scale adopted by the study, implies that to a moderate extent project communication methods are sufficient for better agriculture project performance among many project organizations in Bungoma County. The results show that to a moderate extent, management has not done much to improve communication among the agricultural projects in Bungoma County. These findings are in agreement with those by Aingwire and Okello (2011) ^[3] who observe that lack of ICT tools, poor infrastructure and low level of literacy has contributed to inappropriate information transfer.

Conclusion and recommendations

The study established that the project M&E practices do influence agricultural project performance by community based organizations. Moreover, project communication has no influence on agricultural project performance through simple regression. However, when jointly regressed, project communication does influence agricultural project performance. Based on these findings, it is recommended that the sponsors of projects and management should evaluate projects to help them assess the weakness and strength of the performed projects. This will greatly assist in the planning of the future projects which will be based on the past records. The government and NGOS should increase their extension services to help in giving knowledge and skills to farmers in community based organizations for better production. They should increase their interaction time with the farmers and expose them through bench marking, baseline survey and issues of product marketing apart from field visits and trainings done.

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