Influence of Community Participation on Projects Implementation in Arid and Semi-Arid Regions: A Case of Road Construction Projects in Garissa County, Kenya

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Abstract

The purpose of the study was to examine the influence of community participation on projects implementation in arid and semi-arid regions; a case of road construction projects in Garissa County, Kenya. This is due to the fact that numerous roads development projects are either failed or stalling due to poor community participation. The objectives of the study included examining the extent to which community decision making, community human resources mobilization, community involvement in conflicts resolution, and communal projects resources providence influences the implementation of roads construction projects in arid and semi-arid Kenya. The study tested both the null and alternative hypotheses. This study was guided by two theories i.e the Community Development Theory and the Logical Framework Model. This study adopted a descriptive research design. The total target population was 3242 respondents. The sample size was 369 respondents as guided by the Krejcie and Morgan table of 1970. The instrument of data collection was a questionnaire. Pilot testing of the research instruments was conducted using contractors from the Marsabit County, since it had a similar setting. This study used content validity whereby the questionnaire was subjected to the university supervisor, three university lecturers and two students who had defended their masters theses effectively and graduated in the same course. After data was collected, the responses to the close-ended items in the data collection instrument were assigned codes and labels. Frequency counts of the responses were then obtained, to generate descriptive information about the respondents that participated in the study and to illustrate the general trend of findings on the various variables that were under investigation (as facilitated by the use of SPSS version 24.0). This involved the use of percentages and frequency tables because, according to Mugenda and Mugenda (2003), they help to summarize large quantities of data whilst making the report reader friendly. The Chi-square was used to test the hypothesis. Results indicate that majority of the respondents (90%) supported the idea that participation in roads construction decision making influences the implementation of roads projects in Garissa County. Equally, majority of the respondents (76%) supported the idea that participation by the community in human resources mobilization influences the implementation of roads projects significantly in Garissa County. In relation to the argument that community participation in conflicts resolution influences the implementation of roads projects, majority of the respondents supported the idea that community involvement in solving conflicts influences the implementation of the roads construction projects in the locality. Finally, majority of the respondents strongly supported the idea that the community plays a role in providing communal project resources like land and other raw materials (sand and stones).

Key words: *Decision Making; Human Resource Mobilization; Conflicts Resolution; Communal Project Resources*

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1. Introduction

Economic development is measured by critically analyzing the number of development projects that a given government has initiated, implemented and handed them to the final users (community members) (OECD, 2017). Major pronounced development projects in the world are the transport systems (projects) that include: roads, railway line, airports, water ways (ports), pipeline etc (OECD, 2017). These projects normally are rated on terms of how well they have helped solve the problems of a given group of people or the community members in the society. Therefore, World Bank (2017) asserts that for development to take place in any given country, the citizens (community members) must be in the position of enjoying the implementation of a development projects. This therefore makes the community members key stakeholders of various development projects implemented across the globe. In its report that has given the in-depth water and sanitation programme implementation in London, DFID (2016) has shown that the community plays an important role in programmes implementation. This goes beyond implementation and incorporates the concept of sustainability of these programmes. According to the report, community members give the project engineers who ensure the success of the larger programmes, the community decides on which projects within the programmes are to be given priority and implemented first, the community consumes the outcome of the projects (meaning that the implementation of various projects must conform to the consumption trends of the community) etc. on their report that was funded by the World bank, Jody and Ray (2016) have shown that roads infrastructure in England's capital are among the best roads in the world and their durability is only comparable to two G7 countries (USA and Germany). In this report, the researchers have indicated that, the country's culture which ensures that all the community members are part of development projects implementation and maintenance (roads included) has made the projects to a success. Brown and Hyer (2014) argue that in London the community members provide the labour required for roads construction, the community gives direction on which roads should be given priority through public participation in development, the community provides other project capital resources like land, materials etc.

As much as women are left out in making major development decision in Ethiopia, their men's roles in these development projects in very pronounced (Meredith and Mantel, 2014). In their work, Meredith and Mantel (2014) have shown that the men in the highland region in Ethiopia mobilize themselves and site areas where roads should be developed, mobilize financial resources through the local administration or write to the national government to request for funding, allocate the other materials required by the projects and resolve any conflict that could be associated with the design and implementation prospects of these projects. In its publication that focused on tutorial for sustainable sanitation planning in Ethiopia, NETSSAF (2017) has shown that the community members are very crucial in the implementation of sustainable sanitation projects in the country. Men and women play the role of providing direction on the

types of sanitation projects to be adopted, where these projects should be located, the urgency of implementation, the size and even the people to oversee/manage them.

In his study that focused on the myth of community participatory in development in Shinyanga Tanzania, Shah (2016) has affirmed that community participation influences the implementation of various development projects. In this study, five projects gave the respondents. These projects were the infrastructural projects implemented in the water and sanitation sector, transport sector, hospitals, schools and communication infrastructure. The immediate consumers (community members) formed the members who were interviewed. In the study, 80% of the respondents strongly agreed with the idea that the community members are very important since they provided both skilled and unskilled labour for the projects, 87% of the respondents said that the community members were very crucial in deciding the types and location of various projects proposed etc. Indeed, community participation in development projects implementation is not a new thing in Tanzania and Zanzibar Island (World Bank, 2016). The Tanzanians after independence were motivated by their leader Mwalimu Julius Nyerere to adopt a number of concepts that compelled every community member to participate in one way or the other in bettering their community by engaging themselves in various community development projects implementation. Since then, the Tanzanians have a number of initiatives where community members propose a number of development projects, mobilize the required resources including donated land, they later on participate in the implementation of these projects as guided by given experts (World Bank, 2015).

Community participation in rural development has now entered its second decade as a key paradigm for rural development in Kenya (World Vision Kenya, 2010). This means that it is now over 28 years since the concept of community participation in development projects implementation was assigned a higher recognition. The rationale has been to fully engage all stakeholders in the rural communities in development, therefore taking initiatives and actions that are stimulated by their own thinking and deliberations for effective control of their development. This required effective co-ordination of local activities to enable people come together to achieve common development goals (Ofuoku, 2015). Schouten and Moriarty (2003) argued that community participation is fundamental to the sustainability of water supply in rural areas, particularly in developing countries. Omosa (2015) also underscored the need to involve local people when designing development interventions as development cannot be defined from outside and imported for implementation. Mwanzia and Strathdee (2016) did a study that focused on participatory development in Kenya; Voices in development management. In this study, the marginalized communities in Kenya's coast were involved. The regional considerations included Taita Taveta County, Kwale County, Kilifi County, Tana River County and Lamu County. It was discovered that community participation and involvement in community development projects implementation could be the only sure ways of ensuring projects success and sustainability. According to the study, community members donate their land to be used in projects construction like water dams (collection points), roads, schools, hospitals, dumping sites etc. The community members also are the ones to determine the types of projects they need and at what levels of implementation they could be ok with.

Community development in the implementation of various development projects has been cited as one component that is missing in most Kenyan implemented projects; leading to failure of majority of them. When projects are imposed to the community, the community members may not accept them freely since they tend to associate them with some hidden agendas (African

Development Bank, 2015). In marginalized areas like the North Eastern Kenya, the communities for long have opposed the construction of various road networks due to the poor myths that they could open ways to the foreigners who could later on erode their culture and take away the people's resources. This has led to continuous community conflicts with various proponents of given development projects; particularly the roads (Omota, 2015). However, while concluding his study that focused on the impact of water conflicts on pastoral livelihoods; the case of Wajir District in Kenya Omota (2015) has shown that development in Wajir can be achieved if the various communities are involved in the projects implementation. Involving these communities in implementing the various community water projects will give them a sense of belonging and later on lessen the conflicts experienced. The community members can be involved in various ways. For example they can participate in decisions making on the sites of projects implementation, the type to be implemented, duration of implementation, they can be involved in providing labour, they can be involved in proving land for the location of projects etc.

2. Statement of the Problem

Roads construction projects consume the highest budgets of infrastructural projects budgeted for by national and local governments in developing countries in Africa and Asia (OECD, 2017). The roads receive high budgets that are aimed at coming up with new roads, renovating/repairing the existing ones or completing the ones that stalled previously. However, the World Bank (2017) has noted that despite the fact that a higher percentage of the budgetary allocation in developing Africa goes to road projects, the continent has a poor coverage and linkage of road network. In the two poorest countries in Africa for example (Lesotho and Eritrea), the construction of various roads has for long been a problem due to hostile communities and poor defined community development policies. The communities have been in wars with each other in relation to who should be the beneficiaries of these roads, who pays much in the these projects (funding), who deserves the various jobs etc. (AfDB, 2015). All these conflicts land at the concept of poor community involvement in development projects implementation,. In these cases, the communities have been left out and they completely don't know their roles as far as these projects are concerned. This therefore makes it necessary for studies to be carried out to examine the role/influence of communities' involvement and participation in development projects implementation like the roads projects. World Vision Kenya (2010) has shown that community participation component in projects implementation has gained popularity in Kenya over the past two decades. However, the report has shown that a number of projects proposers and implementers; more specifically, projects designed by government have completely ignored the inputs of the local community members. This has led to common conflicts in the construction of various projects in Kenya that are initiated by the local feeling that their interests like jobs allocations have been ignored, the implementation favors a given tribes and many other conflicts. Mwanjia and Strathdee (2016) add that most projects in Kenya fail because the communities feel that the projects are imposed on them by either the government or development partners with some hidden agendas. They have concluded that Kenya technocrats need to understand the importance of the community in development since it is these community members whose interests are targeted by the various projects implemented. The role of communities as indicated by the above researchers makes it necessary for such a study to address the gap.

Moreover there seems to be little attention to the community roles in development from various researchers and other scholars on the influence of community participation in development projects implementation; particularly the road projects. For example, Mwanjia and Strathdee

(2016) did a study on participatory development in Kenya and found out that community plays a very vital role in community development. The community members give resources (land and human resource), they resolve conflicts that may arise, they determine the type and sites of projects implementation etc. However the duo has failed to address the scope of projects. They have only written on projects and it is known, projects differ from one location to another, the type of projects proponents (funding agencies), for profit making or not for profit making projects and many more; an issue that is going to be addressed by this study. Omosa (2015) asserts that conflicts in relation to water projects implemented in Wajir Kenya are as a result of poor community involvement in development projects implementation. However this study has focused on community water projects and it has failed to clearly differentiate the role of the community and has not shown at what level should we involve the community; calling for such a study. It is worth noting therefore that there is no known study that has focused on the influence of community participation in roads projects implementation in Garissa County. It is in this realization that this study shall be carried out. The study sought to examine the influence of community participation on projects implementation in arid and semi-arid regions; a case of road construction projects in Garissa County, Kenya.

3. Purpose and Objectives of the Study

The purpose of the study was to examine the influence of community participation on projects implementation in arid and semi-arid regions; a case of road construction projects in Garissa County, Kenya.

This study was guided by four objectives as follows:

- i. To examine the extent to which community decision making influences the implementation of roads construction projects in arid and semi-arid Kenya.
- ii. To examine the extent to which community human resources mobilization influences the implementation of roads construction projects in arid and semi-arid Kenya.
- iii. To examine the extent to which community involvement in conflicts resolution influences the implementation of roads construction projects in arid and semi-arid Kenya.
- iv. To examine the extent to which communal project resources provision influences the implementation of roads construction projects in arid and semi-arid Kenya.

4. Theoretical Framework

This study was guided by two theories i.e the Community Development Theory and the Logical Framework Model as explained below:

4.1 Community Development Theory

It was developed by Robert K. Merton in 1960s. The theory focuses on the centrality of oppressed people in the process of overcoming externally imposed socio-cultural problems. Social work, at its foundation, shares much in common with the tenets of community development. Castillejo (2009) offers definitions of both which succinctly point to the similarities as well as the unique distinction. Social work is defined as professional intervention to address situations of personal distress and crisis by shaping and changing the social environment in which people live. Community development is defined as the employment of

community structures to address social needs and empower groups of people (Dasgupta & Sudarshan, 2011).

COS focused attention almost exclusively on individuals and sought to provide charity and services to the poor; the COS model viewed the role of the worker as the 'expert' in the process of aid and change (Brady, 2015). By contrast, the settlement house movement focused on the environment and communities in which the poor lived by moving into the immigrant and oppressed areas and developing an understanding of the issues leading to an individual's poverty; settlement house workers then sought to work in collaboration with the poor to achieve community change, viewing the role of the worker as a facilitator in the process of change (Muhammad & Yasin, 2011). This theory is relevant to this study as it addresses centrality of oppressed people (ASALs communities like the pastoralists in Garissa County) in the process of overcoming externally imposed social problems that are to be evaluated in this study on marginalized community practices/roles and their influence on community projects implementation.

4.2 Logical Framework Model

The Logical Framework Model abbreviated as (LFA) is a very important tool in planning and managing county roads construction projects. This theory was originated in American military as a planning approach for the US military operations. It was then adopted for the US space agency National Aeronautics and Space Administration (NASA). It was later adopted by United States Agency for International Development (USAID) for development projects to improve project management of development projects (Anumba, 2006). Logical framework model used a top-down approach to formulate a hierarchy of project objectives. At any given level in the logical framework model, the lower objectives are the means to satisfying the next higher level objectives towards a path to ultimate project goal. The community can be seen as the smallest part of the roads construction projects for example but their input either directly or indirectly are very crucial in projects success.

The model offers a hierarchy of project objectives that communicates clearly the project targets to the project team (MacArthur, 2011). Logical framework model assist in problem analysis, project planning and design, development of project objectives, project outputs and indicators. Logical framework model also assist the project team in the identification of project risks and assumptions while developing the overall project plan. Project success is determined by measuring the achieved objectives against a target as found by the project indicators of success (Montana & Charnov, 2011). This model is relevant to this study since it assists the project team in project planning, evaluation and monitoring using the logical framework analysis tool in the effective implementation of county roads construction projects (Wanjau, 2015).

5. Conceptual Framework

The conceptual framework outlines the relationship between the independent and dependent variables as shown in figure 1 below. Also included are the intervening variables that influence the study but their literature has not been included here.

Fig. 1: Conceptual Framework

The conceptual framework indicated as figure one above has outlined the various independent variables that influence the dependent variable. The various independent variables have been indicated on the left hand side and they are four in number together with their indicators. These

variables include: decision making; human resources mobilization; projects conflicts resolution; and communal projects resources. In each variable, there are various indicators that shall constitute the questions that shall be contained in the research instrument. In relation to decision making for example, indicators include: decision on types of road projects to be implemented; decision on the location/site of roads projects; decision on the people to be employed and opportunities sharing; decision on the urgency of the projects; and decisions on the community to run the projects. Human resource mobilization variable has indicators that include: abundance of community labour; roads construction experts; skilled labour; unskilled labour; cheap labour; and free /voluntarily labour. Conflicts resolution variable has indicators that cut across: conflict forecasts; sources of conflicts identification; conflicts mitigation; community reconciliation; peace negotiations; and peace seminars and advocacy. Finally, communal project resources variable has indicators that include: land; raw material (Gravel, Sand, Stones/rocks, Bitumen, Murram and Timbers) etc. These independent variables interact to influence the dependent variable that is, the implementation of roads construction projects. This is composed of indicators that include: roads completed in time; delayed roads; abandoned roads; and roads failed to kick off.

6. Research Methodology

This study adopted a descriptive research design. This study targeted the 3210 householders who have formal registered complaints of negligence in the Garissa county offices in relation to roads construction since 2013 when the county governance came into inception. Also, included in the list were the 32 main and subcontractors' contractors involved in roads construction in Garissa since 2013. The instrument of data collection was a questionnaire. The use of questionnaire was the most preferred since the target group was sparsely distributed and the time of study was limited. The questionnaire included a set of structured and unstructured questions. Amin (2005) and Sarandakos (1988) confirm the usefulness of questionnaires in terms of their simplicity, time used and easiness for a researcher to administer. The respondents were kindly requested to respond to all items in sections, with consistency and freedom of expression. The researcher first defended the proposal at the University of Nairobi Mombasa Campus. Once the researcher was given a go ahead, the researcher shall picked a letter of transmittal and wrote a letter of introduction that was deposited at the local village elders' and household leaders' homes. The researcher then proceeded to the County offices and informed the department in charge of roads construction on the intended research. The researcher then trained 5 research assistants from the local community who helped in distributing the questionnaires. The questionnaires were dropped and picked after one week. After data was collected, the response to the close-ended items in the data collection instrument was assigned codes and labels. Frequency counts of the responses were then obtained, to generate descriptive information about the respondents that participated in the study and to illustrate the general trend of findings on the various variables that were under investigation (as facilitated by the use of SPSS version 24.0).

6. Data Analysis Results

6.1 Influence of Decision Making Variables on Projects Implementation

A number of questions were asked in relation to the influence of community participation in decision making on roads projects implementation in Garissa County. The results were as discussed in tables 1 and 2 below respectively.

Table 2: Basic Information on Community Decision Making and Projects Implementation

Statement	n	Yes	No
• Knowledge about the Garissa county roads development project	225	96%	04%
• Implementation of roads construction projects through full participation	225	51%	40%
• Participation in making some decisions through organized forums (barazas) on the Garissa road development project	225	75%	25%
• Supporting the idea that participation in roads construction decision making influences the implementation of roads projects in Garissa County	169	90%	10%

Descriptive statistics measured in central measure tenancy of percentage indicated that: majority of the respondents (96%) had prior knowledge about the Garissa county roads development project; fairly half of the respondents (51%) supported the idea that implementation of roads construction projects has been through full community participation; majority (75%) supported the idea that they have been involved in participation in making some decisions through organized forums (barazas) on the Garissa road development project; majority of the respondents (90%) supported the idea that participation in roads construction decision making influences the implementation of roads projects in Garissa County.

Table 2: Community Participation in Decision Making and the Implementation of Roads Construction Projects

Statement	M	SD
The community is actively involved in making decision on types of road projects to be implemented and this affects projects performance	3.80	0.473
The community is actively involved in decision making on the location/site of roads projects	3.7	0.619
The community members are actively involved in decision on the people to be employed and opportunities sharing	3.0	0.462
The community members are actively involved in decision on the urgency of the projects	3.8	0.489
The community members are actively involved in decisions on the community/members to run the projects	2.2	1.759

On a likert a scale of measure where respondents were asked to indicate the extent of agreement or disagreement with a number of indicators touching on the influence of community participation on decision making on the implementation of roads projects, a number of results were arrived at as discussed below: Majority of the respondents agreed that the community: is actively involved in making decision on types of road projects to be implemented and this affects projects performance ($m=3.8$; $sd= 0.473$); is actively involved in decision making on the location/site of roads projects ($m=3.7$, $SD= 0.619$); members are actively involved in decision on the urgency of the projects ($m=3.8$, $SD= 0.462$). On the other hand, majority of the respondents fairly agreed with ideas that the community members are actively involved in decision on the people to be employed and opportunities sharing ($m=3.0$, $SD= 0.489$). However they did not

support the idea that community members are actively involved in decisions on the community/members to run the projects ($m=2.2$, $SD= 1.759$).

6.2 Human Resource Mobilization and the Implementation of Roads Projects

A number of ordinal rated questions which required the respondents to indicate the extent to which they agree or disagreed with the various statements in relation to community participation in human resource mobilization and its larger influence on roads projects implementation achieved the following results indicated in table 3 below:

Table 3: Extent of Community Human Resource's Mobilization Influence on the Implementation of Roads Projects

Statement	M	SD
The community is actively involved in providing abundant community labour for roads projects implementation	2.4	0.298
The community provides roads construction experts to implement the roads	2.0	0.264
The skilled labour implementing the roads projects come from the various tribes in the county	2.5	0.305
All the unskilled labour in the road construction projects come from the local communities	1.9	0.246
The community provide cheap laborers who work in roads being implemented in this county	3.9	0.518
Free and voluntarily labour from the community members is used in the implementation of roads projects in this county	3.85	0.582

Respondents in this category seemed to agree with the ideas that: the community provide cheap laborers who work in roads being implemented in the county ($m=3.9$, $SD= 0.518$), and free-voluntarily labour from the community members is used in the implementation of roads projects in the county ($m=3.85$, $SD= 0.582$). Majority of the respondents on the other hand fairly supported the arguments that the skilled labour implementing the roads projects come from the various tribes in the county ($m=2.5$, $SD= 0.305$), and the community is actively involved in providing abundant community labour for roads projects implementation ($m=2.4$, $SD= 0.298$). Finally, majority of the respondents did not agree with ideas that the community provides roads construction experts to implement the roads ($m=2.0$, $SD= 0.264$), and all the unskilled labour in the road construction projects come from the local communities ($m=1.9$, $SD= 0.246$).

6.3 Conflicts Resolution and Roads Construction Projects Implementation

In a question that sought to examine whether the community has been playing the projects conflicts resolution roles and how this influences the implementation of county roads development projects implementation, the results were as discussed in table 4 and 5 below:

Table 4: Basic Information on Conflicts Resolution and Roads Construction Projects Implementation

Statement	n	Yes	No
• Community members participation in resolving conflicts that face the various road construction projects in the locality	225	95%	5%
• Support on the idea that community involvement in solving conflicts influences the implementation of the roads construction projects in the locality	214	87%	13%

The results indicated that a higher composition of the respondents as indicated by 95% strongly supported the idea that community members do participate in solving conflicts that face the various roads construction projects in their localities. Further, a higher percentage (87%) of these respondents who supported the first idea equally supported the idea that community involvement in solving conflicts that face the roads construction projects affects their implementation significantly.

Table 5: Influence of Community Participation in Conflicts Resolution and its Influence on Roads Construction Projects Implementation

Statement	M	SD
The community members are actively involved in conflict forecasts	2.5	0.477
The community members are actively involved in sources of conflicts identification	4.1	0.739
The community members are actively involved in conflicts mitigation	3.4	0.412
The community members are actively involved in community reconciliation	3.8	1.482
The community members are actively involved in peace negotiations	3.8	0.593
The community members are actively involved in peace seminars and advocacy	4.0	0.576

Majority of the respondents supported the ideas that the community members are actively involved in: sources of conflicts identification ($m=4.1$, $SD=0.739$); in conflicts mitigation ($m=3.4$, $SD=0.412$); community reconciliation ($m=3.8$, $SD=1.482$); peace negotiations ($m=3.8$, $SD=0.593$), peace seminars and advocacy ($m=4.0$, $SD=0.576$). However, majority of the respondent fairly supported the idea that the community members are actively involved in conflict forecasts ($m=2.5$, $SD=0.477$).

6.4 Communal Project Resources and Implementation of Road Projects

The study sought to establish whether the community has been participating in proving communal resources like land for roads construction or roads construction materials like gravel and sand. The results were as indicated on table 5 and 6 below:

Table 5: Communal Project Resources and Implementation of Road Projects

Statement	n	Yes	No
<ul style="list-style-type: none"> The community plays a role in providing communal project resources like land and other raw materials (sand and stones) 	225	99	01%

Majority of the respondents strongly supported the idea that the community plays a role in providing communal project resources like land and other raw materials (sand and stones).

Table 6: Extent of Influence of Communal Resources Providence on Roads Construction Projects Implementation

Statement	M	SD
The community members participate in roads construction by giving their land for the roads to pass	4.6	1.156
Community members give their land for the road constructors to build their temporary camps through agreements	4.7	1.432
The community provides projects raw materials (sand, gravel, stones and murram)	4.9	1.732

Majority of the respondents ($m=4.6$, $SD=1.156$) strongly agreed that the community members participate in roads construction by giving their land for the roads to pass. Further, majority of the respondents strongly agreed that community: members give their land for the road constructors to build their temporary camps through agreements ($m=4.7$, $SD= 1.432$), and the community provides projects raw materials (sand, gravel, stones and murram) ($m=4.9$, $SD= 1.732$).

6.5 Inferential Statistics

The various hypotheses were tested by use of inferential statistics. Omnibus Tests of Model Coefficients that integrate the chi-square values and p-values to explain the relationship between the various variables in the study.

Basically this is the chi-square that integrates the chi-square values calculated at a given degree of freedom and the p-values as outlined in table 6 below:

Table 6: Inferential Statistics

Variable	Measure	Chi-square	Df	Sig. (p-value)
Decision Making	Step	123.458	4	.000
	Block	123.458	4	.000
	Model	123.458	4	.000
Human Resource Mobilization	Step	98.091	4	.001
	Block	98.091	4	.001
	Model	98.091	4	.001
Conflicts Resolution	Step	122.1	4	.000
	Block	122.1	4	.000

Variable	Measure	Chi-square	Df	Sig. (p-value)
Communal Project Resources	Model	122.1	4	.000
	Step	124.01	4	.002
	Block	124.01	4	.002
	Model	124.01	4	.002

Model chi-square tests whether the model as a whole predicts occurrence better than chance. In binary logistic regression, it is interpreted as a test of the capability of all predictors (independent variables) in the model jointly to predict the response (dependent) variable. The value given in the sig. column is the probability of obtaining this chi-square statistic (123.458, 98.091, 122.1, and 124.01) if there is in fact no effect of the independent variables, taken together on the dependent variable. This is the p-value which is compared to a critical value (0.05) to determine if the overall model is statistically significant. The model is statistically significant because the predictors are less than 0.05. The chi-square statistics for step, model and block are the same because we have not used stepwise logistic regression or blocking.

Df: - This is the number of degrees of freedom for the model. There is one degree of freedom for each predictor in the model. We have four predictors; decision making, human resource mobilization, conflicts resolution, and communal project resources.

From the results in table 6 above, it can be concluded that the hypotheses tested communicate the following:

i) First Hypothesis

Alternative hypothesis (H_1): Community decision making influences the implementation of roads construction projects in arid and semi-arid Kenya.

Null Hypothesis (H_0): Community decision making doesn't influence the implementation of roads construction projects in arid and semi-arid Kenya.

Tested results indicate that the null (H_0) hypothesis is rejected and alternative hypothesis (H_1) is favored i.e community decision making influences the implementation of roads construction projects in arid and semi-arid Kenya. This is due the fact that the sig. p-value obtained of 0.000 is less than the critical value (0.05) i.e $p < 0.05$. In addition, at the 4 degree of freedom the Chi-square critical value is 9.488. Therefore a score that is more than the critical value (9.488) means that the alternative hypothesis (H_1) is favored. In the study a critical value of 123.458 was obtained meaning that community decision making influences the implementation of roads construction projects in arid and semi-arid Kenya.

ii) Second Hypothesis

Alternative hypothesis (H_1): Community human resources mobilization influences the implementation of roads construction projects in arid and semi-arid Kenya.

Null Hypothesis (H_0): Community human resources mobilization doesn't influence the implementation of roads construction projects in arid and semi-arid Kenya.

Tested results indicate that the null (H_0) hypothesis is rejected and alternative hypothesis (H_1) is favored i.e community human resources mobilization influences the implementation of roads construction projects in arid and semi-arid Kenya This is due the fact that the sig. p-value obtained of 0.001 is less than the critical value (0.05) i.e $p < 0.05$. In addition, at the 4 degree of

freedom the Chi-square critical value is 9.488. Therefore a score that is more than the critical value (9.488) means that the alternative hypothesis (H₁) is favored. Since the calculated chi-square value of 98.091 is greater than the critical value, it can be confirmed that community decision making influences the implementation of roads construction projects in arid and semi-arid Kenya.

iii) Third hypothesis

Alternative hypothesis (H₁): Community involvement in conflicts resolution influences the implementation of roads construction projects in arid and semi-arid Kenya.

Null Hypothesis (H₀): Community involvement in conflicts resolution doesn't influence the implementation of roads construction projects in arid and semi-arid Kenya.

Tested results indicate that the null (H₀) hypothesis is rejected and alternative hypothesis (H₁) is favored i.e community involvement in conflicts resolution influences the implementation of roads construction projects in arid and semi-arid Kenya. This is due the fact that the sig. p-value obtained of 0.000 is less than the critical value (0.05) i.e $p < 0.05$. In addition, at the 4 degree of freedom the Chi-square critical value is 9.488. Therefore a score that is more than the critical value (9.488) means that the alternative hypothesis (H₁) is favored. Since the calculated chi-square value of 122.1 is greater than the critical value, it can be confirmed that community involvement in conflicts resolution influences the implementation of roads construction projects in arid and semi-arid Kenya.

iii) Third hypothesis

Alternative hypothesis (H₁): Communal project resources providence influences the implementation of roads construction projects in arid and semi-arid Kenya.

Null Hypothesis (H₀): Communal project resources providence doesn't influence the implementation of roads construction projects in arid and semi-arid Kenya.

Tested results indicate that the null (H₀) hypothesis is rejected and alternative hypothesis (H₁) is favored i.e communal project resources providence influences the implementation of roads construction projects in arid and semi-arid Kenya. This is due the fact that the sig. p-value obtained of 0.000 is less than the critical value (0.05) i.e $p < 0.05$. In addition, at the 4 degree of freedom the Chi-square critical value is 9.488. Therefore a score that is more than the critical value (9.488) means that the alternative hypothesis (H₁) is favored. Since the calculated chi-square value of 124.01 is greater than the critical value, it can be confirmed that communal project resources providence influences the implementation of roads construction projects in arid and semi-arid Kenya.

7. Conclusions

The researcher concludes that:

- i. The community plays a very vital role in making decisions in relation to roads to be given priorities in the various localities. It also plays a very important role in deciding the sites for the proposed roads, and the urgency of roads construction during various periods of financial allocations.
- ii. Community participation in human resources mobilization for county roads development projects influences their implementation. The community provides both skilled and non-

skilled labour where possible to undertake the various activities in the process of roads construction. Basically the community gives much unskilled labour, free/voluntarily labour and cheap labour.

- iii. The community plays a very vital role in ensuring that conflicts related to projects implementation-specifically the roads construction projects- are identified and resolved amicably. The community performs vital roles that cut across forecasting possible conflicts, identifying sources of conflicts, mitigating the conflicts etc.
- iv. The community capital resources for projects like land and other raw materials like gravel and sand entirely depend on the level and ability of community members to participate in the construction of the roads. This has a very significant influence on the rates of implementation and reality in roads construction projects implementation.

8. Recommendations

Based on the fact that the tested hypotheses were in agreement with the alternative, the researcher recommends that:

- i. Any time the national government, the county government and other stakeholders come up with any development project- be it infrastructural project or community development project inclined to social development-, they should ensure that public participation is a core factor considered before the actual implementation of the projects at any level.
- ii. A higher percentage of the locals should be considered for various employment positions during the implementation of the roads projects in the county. In fact, the figure should be increased by ensuring effective capacity building and the community should give at least 70% of the labour taskforce.
- iii. The communities should be involved at all levels of the projects to prevent conflicts.
- iv. The government agencies, development partners, and any other stakeholder should ensure that all the community members must requested to provide the relevant capital resources for roads construction projects and be rewarded effectively.

REFERENCES

- African Development Bank. (2015). *Rural Water Supply and Sanitation Initiative: Framework for Implementation: A Regional Response to Africa's Rural Drinking Water and Sanitation*, pp 37-97.
- Anumba C.J (2006): Information and Communication Technology Support for Globalization in the Built Environment. Proceeding of the International Conference on *The Built Environment; Innovation, Policy and Sustainable Development*. Department of Architecture, Covenant University, Ota, Nigeria. 24-26 January. Pp. xi-xxii.
- Brown, B., & Hyer, N., (2014); *Managing Projects: A Team-Based Approach*, International Edition, Singapore, McGraw- Hill.
- DFID. (2016). Guidance Manual on Water Supply and Sanitation Programmes. London: Water, Engineering and Development Centre (WEDC) for the Department for International Development (DFID). URL [Accessed: 04.01.2011].
- Krejcie R. and Morgan (1970) *Determining sample size for research activities* ; educational and psychological measurement; University of Minnesota, Duluth.
- Kombo, D.K and Tromp, L.A (2006). *Proposals and thesis writing*. Paulines publications Africa.

- MacArthur, J. D. (2011). *The Logical Framework-A tool for the management of project planning and evaluation*. MacArthur Publishers.
- Meredith, J. & Mantel, S. (2014). *Projects Management and Procurement: A Managerial Approach*. (8thed.).Singapore, John Wiley & Sons, Inc.
- Montana, P. & Charnov, B. (2011). *Barron's management book*: Fourth edition
- Mugenda .M. and Mugenda, A.G. (2003).*Research methods qualitative approaches*. Nairobi: Africa centre for technology studies.
- Mugenda, O. & Mugenda, A. (2010).*Research Methods: Quantitative & Qualitative Approaches*. Nairobi, Acts Press.
- Mwanzia S. J. and Strathdee C. R (2016) *Participatory development in Kenya; Voices in development management*. ASHGATE.
- NETSSAF.(2017). Approach. A tutorial for sustainable sanitation planning. Network for the Development of Sustainable Approaches for Large Scale Implementation of Sanitation in Africa. URL [Accessed: 29.03.2017].
- OECD. (2017). “Glossary of Key Terms in Evaluation and Results-Based Management.” Paris: OECD/ DAC
- Ofuoku A. U. (2015) *Effect of community participation on sustainability of rural water projects in Delta Central agricultural zone of Delta State*, Nigeria Journal of Agricultural Extension and Rural Development Vol. 3(7), pp. 130-136, July, 2011-ISSN- 2141 -2154 ©2011 Academic Journals
- Omosa K. E. (2015) The Impact of Water Conflicts on Pastoral Livelihoods; The Case of Wajir District in Kenya. International Institute for Sustainable Development 161 Portage Avenue East, 6th Floor. <http://www.iisd.org/>
- Republic of Kenya. (2010). *Kenyan Constitution 2010*. Government printers: Nairobi.
- Shah, M. K. (2016). The myth of community: Gender issues in participatory development. ITG Publishing.
- Wanjau, B. N. (2015). *Factors influencing completion of building projects in Kenya, ministry of land, housing and urban development, Nairobi county* (Doctoral dissertation, University of Nairobi).and *Entrepreneurship*, 1(12), 570-580.
- World Bank, (2004). World Development Report: Making Services Work for Poor People. Washington DC: World Bank.
- World Bank. (2017). “Rural Development Indicators Handbook.”2nd Edition. Washington, D.C. Available at http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont
- World Vision Kenya, (2015). *The myth and reality of community participation in rural development in Kenya*. World Vision Agency, Kenya.

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