

# Project Integration Management and Performance of National Housing Corporation Projects in Kenya with the Moderating Effect of Community Participation

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## Abstract

Project performance has remained the centre of project management since long time, continuous efforts are being indulged by various academicians and professionals to find out the factors that contribute significantly towards project performance. The main objective of study was to examine the influence of project integration management on performance of national housing corporation projects in Kenya with moderating effect of community participation. Specifically, the study examined the effect of project scope management and the moderating effect of community participation on performance of national housing corporation projects in Kenya. The study targeted 425 projects where the study units of observation were the project managers. The study was guided by community participation theory, theory of constrain, the goal setting theory and the general system theory. The study found out that project scope management had a positive relationship with performance of national housing corporation projects in Kenya. (( $r = 0.395$ ;  $p < 0.05$ ).the study also found out that project scope management significantly influence performance of national housing corporation projects ( $t = 3.470$ ;  $p < 0.05$ ), $b=0.347p=0.5$ .The study also found out that community participation has a positive significant effect on performance of national housing corporation, projects in Kenya. The study concluded that project scope management significantly influence performance of national Housing Corporation projects in Kenya. The study recommends that community should participate in terms of indentifying, listing and identifying their interests from inception of any project to completion and this will help in

improving the acceptance by stakeholders, which is a key in ensuring efficiency, effectiveness and sustainability of national housing corporation projects the study also concludes that project performance can be enhanced through unfolding the relationship between project managers leadership and management support.

**Keywords:** Project Scope Management, Community Participation, Project Performance

## **Introduction**

Projects are bounded by time and are supposed to be completed within the planned and stipulated time period, covering a predetermined scope, within the planned budget and quality specified by the customer or client (Abdilahi et al., 2020). Housing plays a huge role in revitalizing the economic growth in any country (Gitau & Sang, 2020). Access to adequate and affordable housing is current and growing problem in all countries globally. National Housing Corporation is mandated by Kenyan government to deliver affordable housing. In recent years National Housing Corporation has continued to supply houses but the demand outstrips the supply (K.N.B.S, 2021).

Today in the world of disruptive technology, rising software's solutions, increasing ambiguity of risks, and high client and stakeholder's expectations, managing projects is more complex than ever. Thus, for a project manager, synchronizing the different aspects of resources and processes of a project often fell over went. Project integration management makes every project a success, many organizations use it as a standard practice, and it helps project manager to oversee project complexity, manage project resources and manage risks. Project integration management focus on the individual procedures during execution process (Martin & Chelule, 2018). Project integration management is a collection of processes required to ensure that various elements of the project are properly coordinated, not to fail in a project (Hirpa, 2022). Project integration management help managers coordinate plan and ensure that all process within a project run effectively and that team members stay on track towards their final goals. Integration management is the practice of making certain every part of the project is coordinated (Hafton, 2019). Project management is an integrative undertaking requiring each project process to be appropriately aligned and connected with other processes to facilitate coordination.

Project integration management involves coordinating the knowledge areas, anticipating and dealing with issues and making decisions each day about what is the best interest on the entire project. Project managers must ensure that they have integration in mind as a spring board to achieving success in a project. Project integration management is very vital in all project work Omondi (2017) when project integration is properly performed; it ensures that all processes in a project run smoothly, that will produce a series of deliverables like project charter, scope management and project plan. Project scope management describe the procedures where all the elements or work required to ensure the success of the project is included in the project, it is basically to define what is define and what is not included in a project (PMI, 2017). Project time management ensures that the project is completed within time as stipulated in the project plan. Project cost management is to ensure that project is completed within the budget. Project cost management involves the process of cost estimation, cost budgeting and cost control.

Project performance metrics focus on the project impact at one point in time or over a fixed time frame Kavitu et al (2018); the impact of the project value should supersede the cost of the intervention. Project performance is directly related to the project potential success. Project is considered to be implemented successful if event is a component of project is

completed on schedule, realized the purpose on what it was designed through achieving the set project goals and objectives identified and the project is completed within the budget (Kirimi & Munyori, 2019). Project performance is evaluated differently by stakeholders based on their varying expectations, in relation to the actual quality, cost, and time (Martin & Chelule, 2018).

Over the past years a number of projects in Kenya have failed to be completed within the estimated time, scope, budget or the combination of them Mwangi (2018) In the construction industry, the term “delay” is used to describe the time overrun of a project beyond the officially agreed completion time due to causes by the parties in the contract, who are the, employer, contractor and the consultant (Kavita et al., 2018). It is a project spilling over its planned schedule and is considered a common problem in construction projects (Hirpa, 2022). To the owner, delay means loss of revenue through lack of use of proposed facilities. In some cases, to the contractor, delay means higher overhead costs because of longer work period, higher material costs through inflation and labor cost increases (Gitau & Sang, 2020). Housing construction projects industry comprises of a large number of parties which include the clients, contractors, consultants, stakeholders, shareholders, regulators and among others. Many projects in Kenya suffer from many problems and complex issues in performance because of many reasons and factors Elizabeth (2020) Research evidence notes that performance of the construction projects in Kenya is minimal as time and cost overruns performance affects their implementation and successful completion (Mwangi, 2018). Project delays have a common problem not only with an immeasurable cost to society, but with debilitating effects to the contracting parties Memon, 2014).

### **Statement of the Problem**

According to comprehensive poverty report by Kenya Bureau of statistics K.N.B.S in the year 2020, the population of Kenya was found to be growing steadily, consequently, the demand for housing was reported to be on rise especially in urban areas, with urbanization which has become tremendous there is need for housing at the moment, the gap between demand and supply for housing continues to increase and widens, the estimated deficit is approximately 2.0 mn units, growing by 200,000 units per annum (K.N.B.S, 2019). The government pledged to build 50,000 housing units for middle and low income population every year, the units were to be sold at a range of US \$ 6,000 to US\$30000 but by the end of 2021 ,the five year plan had only yielded 431 units or 0.8% of the target as a result over 60% of urban households in Kenya live in slums where they struggle to raise US\$10 a month for rent. G.O.K (2020) this is driven by rapid population growth rate at 2.5% per annum and high urbanization rate at 4. 3% compared to 1.2% and 2.0% globally, with developers being unable to meet this demand due to inadequate credit supply, high cost of funding and low uptake of credit due to low purchasing powers by citizens (Mwangi, 2018).The acute housing shortage in Kenya has given rise to serious problem of affordability challenges as demand for housing continue to outstrip the supply.

Despite the contribution of building sector and the economy, performance of National Housing Corporation Projects performance have been poor they exist increase number of fail projects, incomplete projects ,abandoned projects generally the performance of most projects have fail to meet the expected goal and objective , based on time and cost indicators (Omondi, 2017). They exist incomplete projects, many programs taking longer than scheduled, a lot of project being complex and not meeting the laid down performance metric as earlier planned, some projects do not satisfied the stakeholders or the clients because of

design, some project did not involved the stakeholders of the project from start to completion (Mwangi, 2018). Community participation is very vital in any development project especially Government projects (Elizabeth, 2020; Kweyu, 2018). Performance measure is important in assessment of improvement of organization as well as determining whether or not it is achieving the stated goals Namusonge, Kabare and Mutua (2012) as cited by (Gitau & Sang, 2022).

Previous studies by Mwangi (2018); Omondi (2017); Martin & Chelule (2020) mainly concentrated on factors influencing completion of projects. However none of the referenced research have concentrated on application of Project Integration Management and performance of National Housing Corporation Projects. Based on this gap the current research aims at answering questions, “how does” Project Integration Management influences performance of National Housing Corporation Projects in Kenya This has left the knowledge gap in key areas of project integration management and performance of National Corporation projects. This Current study sought to fill this research gap by examine the influence of project scope, project time, project cost and disclosure and reporting on performance of National Housing Corporation Projects in Kenya.

### **Reserch Objectives**

1. To determine the influence of project scope t management on performance of national Housing Corporation projects in Kenya.
2. To establish the moderating effect of community participation on project scope management and performance of national housing corporation projects in Kenya.

### **Literature Review**

This section covers theoretical review and empirical review.

#### ***A Theoretical Review***

The study was guided by theory of constraint and community participation theory.

#### **1) Theory of Constraints**

This research was be based on the theory constrain which is a collection of administrative ideas created by Goldratt in 1984. It holds that a system is faced by constraints that limit it from achieving its objective. This theory can be used to demonstrate the way project managers can manage organizations effectively on the assumption of system thinking and management (Kavita el.al., 2018). It focuses on three levels: namely the mindset of the organization, constrains and the needs in a multi-party situation as a necessary issue in construction projects which brings complications in project management (PMI, 2021).

Theory of constrain requires the recognition of constrains, oversight as well as management of these constrains. Its procedures and processes focus on moving barriers that deter each part from functioning as an integrated system. Like the weakest connection in a system or chain, each system must have a constraint or bottom neck which administers its results and output (Goldratt, 1984). Constraints limit output whether recognized or not at the point when legitimately recognized and managed; constraints provide a speedy route to decisive change and profile the bedrock for nonstop expansion (Gitau & Sang, 2020)

*Based on the constrains theory, this study seeks to find out why most housing projects are difficult to manage with uncertainties around the three different opposing commitments of budget, due date and content which the Project managers and supervisors perceive as*

*prerequisites for achievement of projects and are also evaluated and accepted as the measure of project success (Chan et al., 2018). Every one of the three constrains that is scope, cost and time have individual impact on the project and whenever any of these constraints is disregarded, it may lay sit out of gear, misusing a lot of competence. It's therefore vital that for effective management of these constrains, the project manager adopts good project management practices on performance for projects to work well or fail to meet the anticipated outcome. The theory suggests that project manager and all the stakeholders of the project need to work together so that the constraints which may hinder the project success is managed hence this should be done by proper coordination of all project activities by defining all tasks and subtasks needed to complete the project.*

### **B. Community Participatory Theory**

Formally introduced by Robert chambers in early 1980's under rapid rural appraisal methodology, the theory is heavily influenced by theories of development and is highly varied and complex due to different theoretical position. This theory advocates for the need for modes of participation. It represents a mere fraction from the global aspiration and top down strategies that dominated early development initiative to locally sensitive methodologies. In simple terms participation is about decision making, (AON, 2012).

The employment of participation approach in development has been a required element of project design for many donor organizations over the last 20 years. Participation involves both theory and practice related to the direct involvement of citizens or citizen action groups potentially affected by or interested in a decision or action. Participation theory suggests that the world poor have to be involved in development decision, implementation and as well as benefits (Kariungi, 2014). As participation approaches advanced, weakness inherent in traditional top down approaches that focused on single disciplines and reduction list paradigm were highlighted. The dominance of top down approach to development was largely as a result of modernization theory which was dominant in 1960s.

Various community stake holders perceive that they have a stake in county or government .In regard to stake holders or community perception about having stakes in government projects; there is usually a tussle in ways they act which convinces them that they will achieve them and accomplish the objective of their own projects which may or may not be aligned to projects managers vision, mission or objective. This is important for the project manager to manage their needs and desires. For effective completion of projects, the project manager has project management process ,hence , the current research assessed how community participation/stakeholders influences the performance of National Housing Corporation projects in Kenya .This theory inputs that an organization is a social construction made of interaction of various stakeholders.

**Conceptual model and Hypothesis**

The following conceptual framework was used for this study

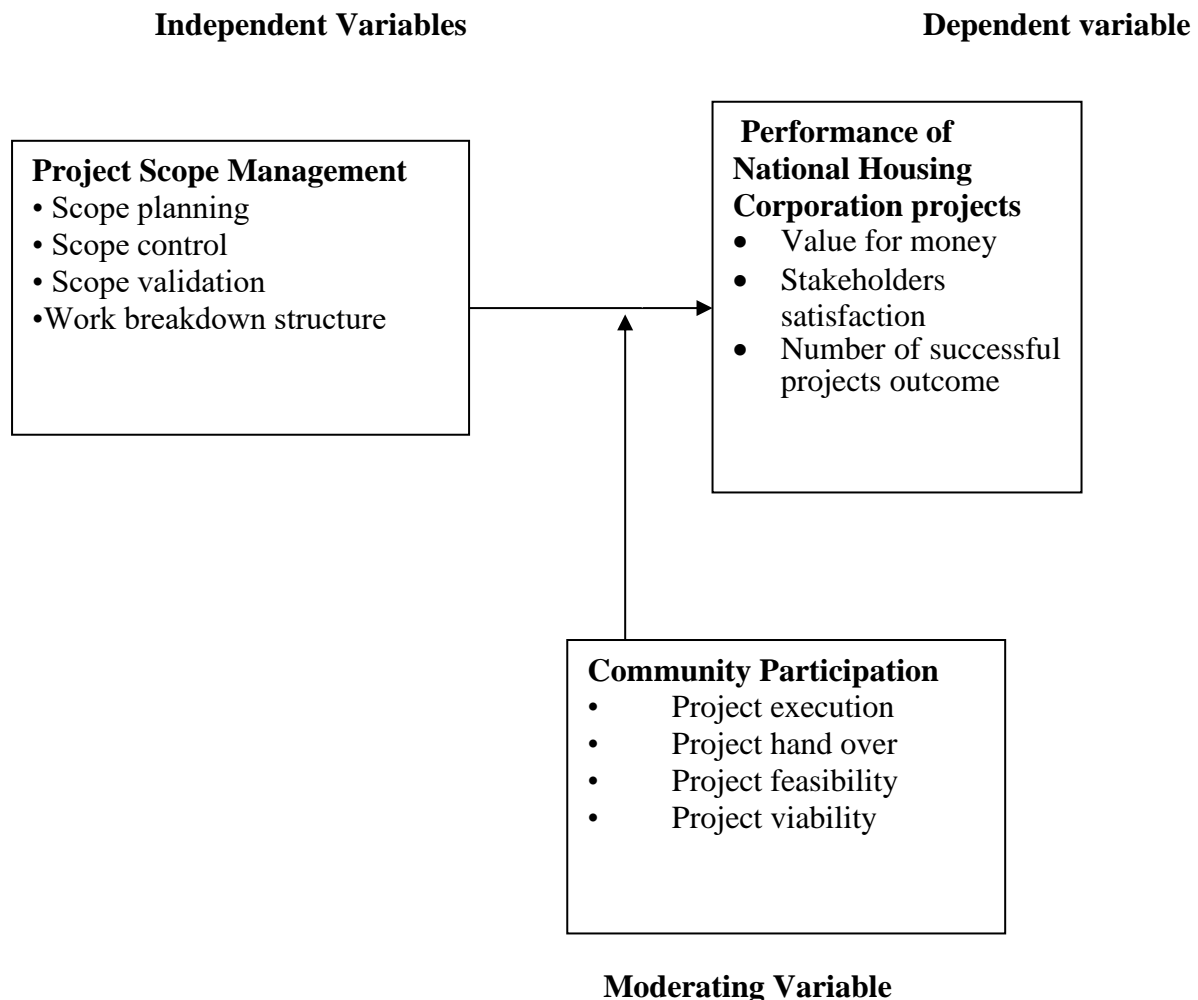


Fig I conceptual framework

**Empirical Review**

*a) Project Scope Management*

According to Omondil (2017) Project scope is the definition of what the project is supposed to accomplish or in other wards it is specific description of what the end result should be or accomplish . The scope often is referred some times as scope of work and it clearly a specific statement as to what has been agreed to be performed/achieved in a particular project. In other words, the scope expressly lays out the functions, features, data, content it can also be said scope clearly express the desired final product of a project, that will be included in the project at hand, it can also be said that the scope. One important component of scope of a project include specifically the quality of the final product, the allocated amount of time put into individual tasks that determines the overall quality of the project. Some project tasks may require a given amount of time to be completed successfully, but given more time could completely exceptionally, over the project cycle of large projects, quality always can have a direct significant impact on time and cost or vice versa. Scope management is the skill that project managers use to define the work that needs to be done (PMI, 2017).



According to Obadoho and Obadoho (2016) states that project scope is one of the main areas that contribute to project failure many project researchers' documents that scope change is a major contributing factor for project failure. Among the project requirements are either altered before the commencement of work or altered half way through the project life cycle. But rarely are these changes effected by the completion date, this is more evident in project management. Odipo (2013) argues that project changes in scope have been conventionally treated as having heavy or negative impacts on project completion and in theory they should not happen if project activities have been perfectly planned and schedule in other words, changes in scope of the project are bound to happen and if they happen, it has a negative effect on completion time of the project especially on complex projects that involves multi-stage iterative process.

The amount of time put into individual tasks may require a given amount of time to complete exceptionally, Over the e large projects, quality can have a significant impact on time and cost or vice verse, scope management is the skill project managers need to use to define the work that needs to be done on a given project (PMI, 2017). For example if the project is working to fixed level of scope then the cost of the project will largely be depended upon schedule availability. Similarly, when the time is fixed, the scope of the end product will depend on the budget or resources available. Project management researchers and authors widely recognize that the inherent trade off dynamics of the iron triangle, Scope constrained projects are bounded by performance criteria of the deliverables

According to PMI (2017), the major input of these process are the project agreement, project workshops and assets, expert opinion, analysis of product, alternative development and workshop that are facilitated. The defined scope and the work breakdown structure will need the commitment of project stakeholder's satisfaction, verification of project scope which entails official acceptance of project deliverables by various participants.

*According to PMI (2021), the major inputs of the process of scope verification include namely the project management plan, traceability matrix, documents requirements and deliveries that are validated. Inspection is a major technique used for scope verification. The acceptance of deliverables, change request and updates of the documents are the output of the scope verification process. A well-defined project scope should be used to control tracking of project activities, the scope controlling process comprises of monitoring of product and project scope status,. It covers the inputs which include the following, project management plan, documentation requirement, requirement, information on performance of work and process organization group variances one of the tools and techniques used in this process*

### **b) Community Participation**

According to Aon (2012) defines community participation as the involvement of people in a project to solve their problem. Further-more, According to PMI (2017) defines participation as, to have a share in or, to take part in, by emphasizing the rights of individuals and the choices that they make in order to participate. Communities' participation concept in development gained prominence in development in the seventies and since then literature on the subject has grown widely. The involvement of the locals in development of projects has become a common phenomenon that nearly all organization talks about. Related literature shows that there is very little scope of participation for common people in decision making, management and supervision of many community based development projects Auma (2014) Contemporary development scholars have been advocating the inclusion of

people's participation in development projects as they believe the avowed objectives of any project cannot be fully achieved unless people are fully involved and participate in it.

According to Oino, et.al (2015) laments that Community participation in construction of development projects involves, In this case, each participant is directed towards a specific goal, which is shared by others within the development process. This is what is defined as popular participation in the development process, and which has been thought to be a positive move in the running of affairs that directly concern and affect people (Wanyona & Musau, 2014). The Kenya Development Plan of 1989-1993 bearded the theme, —Participation for Progress and emphasized on tapping the energies of individuals and many various socio-economic entities and institutions in the economy. Kagiri & Wanaina (2013) observe that community Participation in Kenya has evolved through a long process of economic reforms. The community projects have therefore played a major role in providing services to the public. Substantial evidence suggests that reciprocal relationship between stakeholders increases their participation in rural development projects because they provide a platform for new relationships to be developed in addition to the existing ones—and they learn to appreciate the legitimacy of each other's views (Kariungi, 2014). People should not be forced to be involved or 'participate' on projects which affect their human right and fundamental principal where possible. Community participation take place during the following activities on a project (Oino et.al., 2015). Namely during the need assessment this is the expression of opinion about desirable improvements and priorities, goals while negotiating with agencies, secondly is planning which involves the formulation of objectives, setting goals, , thirdly is mobilization this is raising and creating awareness in a community about needs, establishing or supporting organizational structures within the community. Fourthly is Training this is the participation in formal training events to enhance communication, construction, maintenance and financial management skills, lastly implementation this is engaging in management activities and materials, contributing cash towards cost, paying of service or membership fees of community organization (PMI, 2017). According to Dar (2014) states that in ever project people with disabilities, elderly people, participate fully in projects so that the project could be completed within time, cost and quality and to avoid conflicts in a project. Participatory development is the most important approach towards enabling communities to help themselves and sustain efforts in development work. Communities are no longer seen as recipients of development programmers; rather, they have become critical stakeholders that have an important role to play in the management of programmers and projects in their areas (Gaba, 2013).

### ***C).Performance of Projects***

To perform is to take a complex series of actions that integrate skills and knowledge to produce a valuable result. Project performance has been defined as the degree of achievement of certain effort or undertaking which relates to the prescribed goals or objectives that form the project parameters (Chan el al., 2018). The key requirements of suitable performance measures and measurement frameworks are identified as including, having a few but relevant measures, being linked with critical project objectives, providing accurate information, and comprising financial and non- financial the successes of a project construction mainly depend on the success of performance. Project Completion is the degree of achievement of various efforts or undertaking which relates to the described goals or objectives that form the project parameters. In the view of Gitau & Sang (2020) performance is the complex series of action that integrate skills knowledge to produce a valuable result.



Scholars such as Karimi & Munyori (2019); Abdilai et al (2020), agree that conventional treatment for project performance is often based on the iron triangle where by committed outputs from the project are delivered based on three criteria namely scope, quality, time and cost.

The key performance measure and frame work are identified as probably having few but relevant measure being linked with critical project objective, example providing accurate information and comprising financial and non-financial measures Martin & Chelule (2020) they are several many potential measures for evaluating the success of a construction project. All these address three key areas that are scope, schedule and cost. The research study discovered and outlined the major seven project performance indicators, as follows project construction cost, project construction time, project cost predictability, project time predictability, client satisfaction with the final product and lastly, client satisfaction with the service and also discovered the three company performance indicators as safety, productivity and profitability

## **Emperical Review**

### **A) Project scope management and performance of projects**

According to Kerzner (2017); Karl (2014); Hassan & Adeleke (2019), their study findings reveals that poor scope definition is recognized by industry practitioners as one of the leading causes of failure of many projects adversely affecting project in area of cost, schedule and operational characteristics. Project scope planning comprises of determining and documenting a list of specific goals of a project, deliverables, tasks, costs and deadlines. The major take away from the triple constrain, is that it is a triangle that cannot be altered one side without affecting the other sides.

According to research done by Musa (2010) the researcher the findings reveals that they exist a variation in project tasks significantly as affected by time and schedule of project. In addition the results further noted that any change in project activities will significant affect the quality outcome of the project. In another study done by Memon (2014) on project management practices and its effect on project execution, the research findings shows that important practices that are essential correlated with project performance and identifies with the scope. The findings suggest that weight be assigned on scope management with the view of attaining exemplary performance in projects.

According to Rugenyi & Bwisa (2016) on housing projects in Nairobi County on managers' perspective the research findings show that the project triple constrain management had no statistically significant effect on project management in Nairobi County if measured in terms of project context. In study further states that the triple constrain elements are too small to affect the project manager's capacity in various contexts.

According Gar (2015) studied the critical accomplishment aspects of project management for dam construction project implemented in India Myanmar. The researcher examined the aspect of quality of project management practices by outlining and defining all the factors starting with the well-known success factors and project knowledge areas management that facilitate project success in dam construction projects in India. The study findings show that a lot of attention should be given to ten critical common success areas as follows estimation of project costs, cost requirements, determine the right project budget, quality checklist, control cost, collection requirements, estimate activity duration, develop schedule, identify risks, well defined stake holder management plan.

***B).Community Participation and performance of projects***

According to Muchungu (2012) term participation is modified with adjectives, resulting in terms like community participation, citizen participation, people's participation, public participation, and popular participation but in all it means one thing. Community or stakeholder participation has been viewed as an approach that contributes to sustainable development because the views, opinions and perspectives of those affected are taken into consideration

According to a study done in Zimbabwe, by Chifamba (2013) the study findings revealed that despite two decades of tireless effort and the adoption of several approaches to raise the development and economic growth of rural areas in Zimbabwe by integrating the rural population, who are largely peasants, into mainstream rural development (through community involvement and participation in rural development projects), The conditions of the people living in the rural areas are still deteriorating. This has raised a lot of questions which have prompted people to interrogate the role of community participation in rural development

Additionally, Yang et al (2016) in their study on the typology of stakeholder analysis and engagement methods reiterated the importance of public participation in project implementation and execution. This reiteration was informed by their awareness of the basic rights of humans to participation. Their research showed that community participation facilitated the monitoring process by increasing the public self-confidence and skills learned throughout the project to help the participants to respond more effectively to local problems. Sigmon (2011) looked at five Engineers without Borders USA (EWB-USA) water projects in Peru to find lessons learned. He found the following characteristics which aided project success: strong local partner, involved local government, established regulations (including monitoring community cash contributions), community participation involvement and communication, and, measurable metrics. Of the literature reviewed, it appears that community cash contributions make up the most often-cited characteristic of successful projects, while community in-kind contributions, community input on decision-making and upfront project-screening were also cited several times.

According Paddock (2013) noted that a Bolivian latrine project without cash contributions but that did include labor and tools from the community didn't prove successful. Of five implemented latrines over two implementation trips, only three were operating, and these three were not being used as designed. The chapter realized this problem was due to lack of community ownership and knowledge, and has intended to provide more education and not provide further latrines without a cash contribution from the individual families A study by Hassan & A study done by Oino et, al (2015) reported that, in the world today, community based approaches for community development, have emerged as the best tools for achieving project sustainability

**Research Methodology**

The study employed positivism research philosophy, which seek to explain social phenomenon in an objective way through the gathering of verifiable facts using quantitative means. The study adopted explanatory design, the target population for the study comprised of 425 projects which have been undertaken by National Housing Cooperation from the period of 2013 to 2020 while the study unit of observation was the project managers. A simple random sampling technique was used to select the 206 participants for the study .Questionnaire were the chosen instruments for data collection, and a likert scale was used

to record the participants response. Data collection procedure was started by obtaining permission from relevant authorities. Primary data was collected through administration of questionnaire to relevant construction project managers in National Housing Corporation. The collected data was analyzed by descriptive and inferential statistics

**Research Findings**

*The study conducted both descriptive and inferential analysis.*

**A. Descriptive Analysis**

**1) Project scope management**

The first objective was to explore the influence of project scope management on performance of national housing corporation projects in Kenya.

Table 1

*Descriptive Statistics for Project Scope Management*

		Total	SD	D	NT	A	SA	Mean	STD
The scope planning of the project was done before the project was initiated	Freq.	170	7	43	34	56	30	3.35	1.158
	Perc.	100	4.1	25.3	20.0	32.9	17.6		
Project scope control is key issue in the implementation of the project	Freq.	170	28	65	24	39	14	2.68	1.228
	Perc.	100	16.5	38.2	14.1	22.9	8.2		
The work break down structure was used to plan the project activities	Freq.	170	18	41	31	61	19	3.13	1.209
	Perc.	100	10.6	24.1	18.2	35.9	11.2		
All the projects delivered were within the stipulated scope	Freq.	170	22	38	28	57	25	3.15	1.286
	Perc.	100	12.9	22.4	16.5	33.5	14.7		
The collection of the project requirements was mandatory before execution of any project in my organization	Freq.	170	15	38	40	33	44	3.31	1.311
	Perc.	100	8.8	22.4	23.5	19.4	25.9		
Validation of project scope deliverables were compared against the scope baseline to ascertain if the project teams have produced what was in the planed document	Freq.	170	10	27	61	53	19	3.26	1.045
	Perc.	100	5.9	15.9	35.9	31.2	11.2		

Based on the findings on table 1 50 (29.4%) of respondents disagreed that the scope planning of the project was done before the project was initiated. 86 (50.5%) respondents agreed that the scope planning of the project was done before the project was initiated. Respondents were undecided on whether the scope planning of the project was done before the project was initiated or not (mean = 3.35; STD = 1.158). It was established that 93 (54.7%) respondents disagreed that project scope control is a key issue in the implementation of the project. 53 (31.1%) respondents agreed that project scope control is a key issue in the

implementation of the project. There was indecisiveness on whether project scope control is key issue in the implementation of the project or not (mean = 2.68; STD = 1.228).

The findings indicate that 59 (34.7%) respondents disagreed that the work break down structure was used to plan the project activities. 80 (47.1%) respondents agreed that the work break down structure was used to plan the project activities. The study established that there was indecisiveness on whether that the work break down structure was used to plan the project activities or not (mean = 3.13; STD = 1.209). It was noted that 60 (35.3%) respondents disagreed that all the projects delivered were within the stipulated scope. 82 (48.2%) respondents agreed that all the projects delivered were within the stipulated scope. There was indecisiveness on whether all the projects delivered were within the stipulated scope or not (mean = 3.15; STD = 1.286).

It was established that 53 (35.3%) respondents disagreed that the collection of the project requirements was mandatory before execution of any project in my organization. 77 (45.3%) respondents agreed that the collection of the project requirements was mandatory before execution of any project in my organization. There was indecisiveness on whether the collection of the project requirements was mandatory before execution of any project in my organization or not (mean = 3.31; STD = 1.311).

It was established that 37 (21.8%) respondents disagreed that validation of project scope deliverables were compared against the scope baseline to ascertain if the project teams have produced what was in the planed document. 72 (42.4%) respondents agreed that validation of project scope deliverables were compared against the scope baseline to ascertain if the project teams have produced what was in the planed document. The respondents were undecided on whether validation of project scope deliverables were compared against the scope baseline to ascertain if the project teams have produced what was in the planed document or not (mean = 3.26; STD = 1.045). From the findings the respondents agreed that validation of project scope deliverables were compared against the scope baseline to ascertain if the project teams have produced what was in the document this this is in agreement with the findings of (Omondi, 2017).

Table 2

*Descriptive Statistics for***Community Participation**

		Total	SD	D	NT	A	SA	Mean	STD
Poor communication plan leads to project delays	Freq.	170	27	39	59	30	15	2.81	1.168
	Perc.	100	15.9	22.9	34.7	17.6	8.8		
The community is involved in the planning and design of the project	Freq.	170	21	45	57	35	12	2.84	1.108
	Perc.	100	12.4	26.5	33.5	20.6	7.1		
Training of community on project issues leads to minimal project disputes	Freq.	170	25	54	41	34	16	2.78	1.200
	Perc.	100	14.7	31.8	24.1	20.0	9.4		
The project manager takes lead in community participation for meaningful decision making of the project activities	Freq.	170	33	40	38	38	21	2.85	1.310
	Perc.	100	19.4	23.5	22.4	22.4	12.4		
The procedures for community participation and contribution are available	Freq.	170	26	49	51	27	17	2.76	1.188
	Perc.	100	15.3	28.8	30.0	15.9	10.0		

The study found that 66 (38.8%) respondents disagreed that poor communication plan leads to project delays. 45 (26.4%) respondents agreed that poor communication plan leads to project delays. The respondents were undecided on whether poor communication plan leads to project delays or not (mean = 2.81; STD = 1.169). The study determined that 66 (38.9%) respondents disagreed that the community is involved in the planning and design of the project. 47 (27.7%) respondents agreed that the community is involved in the planning and design of the project. The respondents were undecided on whether the community is involved in the planning and design of the projector not (mean = 2.84; STD = 1.108).

The study determined that 79 (46.5%) respondents disagreed that training of community on project issues leads to minimal project disputes. 50 (29.4%) respondents agreed that training of community on project issues leads to minimal project disputes. There was indecisiveness on whether training of community on project issues leads to minimal project disputes or not (mean = 2.78; STD = 1.200). It was noted that 73 (42.9%) respondents disagreed that the project manager takes lead in community participation for meaningful decision making of the project activities. 59 (34.8%) respondents agreed that the project manager takes lead in community participation for meaningful decision making of the project activities. The respondents were undecided on whether the project manager takes lead in community participation for meaningful decision making of the project activities or not (mean = 2.85; STD = 1.310).

It was noted that 75 (44.1%) respondents disagreed that the procedures for community participation and contribution are available. 44 (25.9%) respondents agreed that the procedures for community participation and contribution are available. The respondents were undecided on whether the procedures for community participation and contribution are available or not (mean = 2.76; STD = 1.188). Most of the respondents agreed that poor communication plan leads to project failure. Failure to plan for communication between

teams is a requisite to project failure communication is a key issue in every project because it stipulates what to be done in subsequent period of time. (Mwangi, 2018).

Table 3

*Descriptive Statistics for Performance of National Housing Corporation Projects in Kenya*

		Total	SD	D	NT	A	SA	Mean	STD
All the projects completed by my organization are always aligned with the stated business requirements	Freq.	170	21	26	48	53	22	3.17	1.207
	Perc.	100	12.4	15.3	28.2	31.2	12.9		
Stakeholders' satisfaction is a key indicator of project performance and realization of its objectives	Freq.	170	30	34	30	50	26	3.05	1.349
	Perc.	100	17.6	20.0	17.6	29.4	15.3		
Aspects of micro economy affect the number of projects completed	Freq.	170	22	38	38	45	27	3.10	1.281
	Perc.	100	12.9	22.4	22.4	26.5	15.9		
With the community being the direct beneficiary of the projects, the success of the project outcomes is always determined by their levels of satisfaction	Freq.	170	23	33	37	57	20	3.11	1.241
	Perc.	100	13.5	19.4	21.8	33.5	11.8		
The current trends and changes in technologies affect the project deliverables to be attained	Freq.	170	16	40	45	40	29	3.15	1.231
	Perc.	100	9.4	23.5	26.5	23.5	17.1		

The study found out that 47 (27.7%) respondents disagreed that all the projects completed by my organization are always aligned with the stated business requirements. 75 (44.1%) respondents agreed that all the projects completed by my organization are always aligned with the stated business requirements. The respondents were undecided on whether all the projects completed by my organization are always aligned with the stated business requirements or not (mean = 3.17; STD = 1.207). It was noted that 64 (37.6%) respondents disagreed that stakeholder satisfaction is a key indicator of project performance and realization of its objectives. 76 (44.7%) respondents agreed that stakeholder satisfaction is a key indicator of project performance and realization of its objectives. The respondents were undecided on whether stakeholder satisfaction is a key indicator of project performance and realization of its objectives or not (mean = 3.05; STD = 1.349).



The study results reveals that that 60 (35.3%) respondents disagreed that aspects of micro economy affect the number of projects completed. 73 (42.4%) respondents agreed that aspects of micro economy affect the number of projects completed. The respondents were undecided on whether aspects of micro economy affect the number of projects completed (mean = 3.10; STD = 1.281). The study determined that 56 (32.9%) respondents disagreed that with the community being the direct beneficiary of the projects, the success of the project outcomes is always determined by their levels of satisfaction. 77 (45.3%) respondents agreed that with the community being the direct beneficiary of the projects, the success of the project outcomes is always determined by their levels of satisfaction. The respondents were undecided on whether with the community being the direct beneficiary of the projects, the success of the project outcomes is always determined by their levels of satisfaction or not (mean = 3.11; STD = 1.241).

The study determined that 56 (32.9%) respondents disagreed that the current trends and changes in technologies affect the project deliverables to be attained. 69 (40.6%) respondents agreed that the current trends and changes in technologies affect the project deliverables to be attained. The respondents were undecided on whether the current trends and changes in technologies affect The respondents were undecided on whether the time to be taken by each activity is estimated during the planning process to ascertain the required timeframe for every task or not (mean = 3.29; STD = 1.112).

It was noted that 71 (41.8%) respondent disagreed that projects completed are normally delivered within the projected timeframes. 53 (31.2%) respondents agreed that projects completed are normally delivered within the projected timeframes. It was consented that projects completed are normally delivered within the projected timeframes (mean = 2.82; STD = 1.102).Project is considered to be successful implemented and completed if it is on schedule on budget and achieves all goals originally set for and accepted Flyvbjerg, (2015)

**Correlation Analysis**

Table. 4

*Correlation Analysis Results*

		<b>Project performance</b>	<b>Project scope management</b>
Project performance	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	170	
Project scope management	Pearson Correlation	.395**	1
	Sig. (2-tailed)	.000	
	N	170	170

\*\* . Correlation is significant at the 0.01 level (2-tailed).

According to the results in table 4 ,it was found out that there is a weak positive and significant relationship between project scope management and performance of National Housing Corporation Projects in Kenya (r = 0.395; p < 0.05). This implies that increased project scope management is associated with enhanced performance of National Housing Corporation

Projects in Kenya and vice-versa. This implies that enhance project scope management has a significant influence on performance of National Housing Corporation Projects This current results are in line with the findings of Hassan & Adeleke, (2019) that established that project scope management enhances project performance and hence leads to projects being delivered within the stipulated time frame and within the assigned budget, proper planning of scope management prevents alteration of design and prevents the project from running into scope creep, Similarly the study by Fashina el al ,(2020) established that project scope management if well planned and followed will eventual give exemplary performance in projects

Table 5

*Model summary Project integration and performance*

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
				R Square Change	F Change	df1	df2	Sig. Change	F
.614	.377	.358	.82273	.377	19.835	5	164	.000	

a. Predictors: (Constant), Disclosure and reporting, Project scope management, Project time management, Project cost management, community participation

c. Dependent Variable: Performance of National Housing Corporation Projects in Kenya

A simple linear regression was performed to examine the link between the two variables. The table 5 presents R and R square values coefficient of correlation between project integration management and performance of National Housing Corporation Projects in Kenya. The R square 0.337 reveal that 37.7% of the variation in performance of National Housing Corporation Projects can be explained by project scope management, project time management, and project cost management, project disclosure and reporting. The remaining 62.3 % of project performance variation was determined by factors that did not form part of the model.

Table 6

*ANOVA Project Integration Management and Performance*

		Sum of Squares	Df	Mean Square	F	Sig.
Model 1	Regression	7.256	4	1.814	9.725	.000b
	Residual	17.161	92	.187		
	Total	24.418	96			

a. Dependent Variable: Performance of National Housing Corporation Projects in Kenya

b. Predictors: (Constant), Disclosure and reporting, Project scope management, Project time management, Project cost management

Table 6 indicate the ANOVA model results .The F statistics value was 9.725 and the p value of 0.000 was less than 0.05.tthis implies that the regression model predicted significantly the dependent variable(Performance of National Housing Corporation projects).this suggests that project integration was a significant predictor

Table 7

*Regression Coefficient Project scope Management*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error			
(Constant)	1.646	.464		3.549	.001
Project scope management	.374	.100	.333	3.470	.001

a Dependent variable ; Project performance

The value of ( $t = 3.470$ ;  $p < 0.05$ ), the finding indicates a positive and significant effect of project scope management and performance of National Housing Corporation Projects in Kenya. It further obtained a beta coefficient of 0.347 for project scope management. This implies that 1 unit increase in project scope management enhances performance of National Housing Corporation Projects in Kenya by 0.347 units. This result implies that project scope management affects performance of National Housing Corporation Projects in Kenya.

This results agrees with the study findings of Omondi (2017) that planning of scope management in projects enhances project performance the findings further reveals that proper scope planning comprises of determining and documenting a list of specific goals of a project, tasks, costs and deadlines, if the project scope is altered automatically the project is bound to fail in performance. Project scope management planning should be considered if projects are to be completed on time and within the assigned budget. This study further agrees with the findings of Kiarie and Waynoka (2016) as cited by Murithi (2018) in their study on determinates of Financial Integrated Management system the results of the findings indicates that many government projects are characterized by political interference in regards to identification and definition of scope alteration, the findings by the researcher recommends that project manager supervision on government funded projects should be firm particularly on management of the scope because failure to be firm the performance of the project is doomed to fail and the intended objective will not be achieved.

Model summary **The linear regression**

$$Y = 1.646 + 0.374x$$

Where;

Y=Performance Housing projects

X=Project scope Management

Moderation for project scope management and performance of National housing corporation projects in Kenya.

### ***Testing for Moderating Effects of Community Participation***

The study sought to examine the variance of performance of National Housing Corporation Projects in Kenya that can be explained by project scope management with the moderator. The results of analysis are shown in Table 8.

Table 8

*Significance of the Interaction Term for Project Scope Management*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Change	F Change	df1	df2	Sig.	F Change
1	.446	.199	.189	.92447	.199	20.719	2	167	.000	
2	.513	.263	.249	.88946	.064	14.405	1	166	.000	

a. Predictors: (Constant), Project scope management, community participation

b. Predictors: (Constant), Project scope management, community participation, X<sub>1</sub>\*community participation

c. Dependent Variable: Performance of National Housing Corporation Projects in Kenya

The findings indicate that 19.9% of the variation in performance of National Housing Corporation Projects in Kenya can be explained by project scope management and community participation ( $R^2 = 0.199$ ). 6.4 % of the variation in performance of National Housing Corporation Projects in Kenya can be explained by the interaction of project scope management and community participation over and above the variance explained by project scope management and community participation ( $R^2$  change = 0.064). In Model 2, it is also shown that there is a potentially significant moderation by community participation on the relationship between project scope management and community participation on performance of National Housing Corporation Projects in Kenya ( $p < 0.05$ ).

The researcher therefore tested for moderating effect of community participation using centred regression terms. This was done using Process version 3.3 software in SPSS 25. The relevant results of analysis are shown in Table 9.

Table 9

*Moderating Effect for Project Scope Management*

	B	Std. Error	T	Sig
(Constant)	3.1151	.0674	46.2026	.0000
Project scope management	.5395	.0858	6.2861	.0000
Community participation	.2769	.0721	3.8409	.0002
Project scope management * Community participation	-.3391	.0862	-3.9349	.0001

The findings in table 9 indicate that interaction of project scope management and community participation has negative significant effect on performance of National Housing Corporation Projects in Kenya ( $t = -3.9349$ ;  $p < 0.05$ ). This implies that increasing community participation has a buffering effect on the relationship between project scope management and performance of National Housing Corporation Projects in Kenya. It is shown that project scope management has positive significant effect on performance of National Housing Corporation Projects in Kenya ( $t = 6.2861$ ;  $p < 0.05$ ). Community participation has positive significant effect on performance of National Housing Corporation Projects in Kenya ( $t = 3.8409$ ;  $p < 0.05$ ). It is implied that complete moderation has not occurred as both project scope management and community participation are significant with the interaction of project scope management and community participation added to the model. Given that both the interaction term and the  $R^2$  change are significant, it is implied that community participation negatively and

significantly moderates the relationship between project scope management and performance of National Housing Corporation Projects in Kenya.

The researcher examined the variance of performance of National Housing Corporation Projects in Kenya that can be explained by project time management with and without the moderator. The results of analysis are shown in Table 4.42

by the project integration management ( $R^2$  change = 0.068). In Model 2, it is also shown that there is a potentially insignificant moderation by community participation on the relationship between the project integration management and community participation on performance of National Housing Corporation Projects in Kenya is insignificant ( $p > 0.05$ ).

Table 10

*Significance of the Interaction Terms*

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.268	1.363		-.930	.354
Project scope management	.978	.260	.796	3.755	.000
X <sub>1</sub> * community participation	-.222	.083	-.841	-2.678	.008

The findings confirm that community participation moderates the relationship between project scope management and performance of National Housing Corporation projects in Kenya ( $t = -2.678$ ;  $p < 0.05$ ).

### Recommendations

The study recommends that community participation in terms of identification, listing and identifying their interests influences the execution of National Housing Projects. It is therefore recommended that organizations should ensure that community participation in the project is done from project inception to project completion. This will help in improving acceptance by stakeholders, which is a key in ensuring efficiency, effectiveness and sustainability of National Housing projects.

The study recommends that a sensitive and competency based program need to be initiated to government projects since most of them operate to lack of proper personnel in conducting the specialized activities in ensuring the projects are delivered within the desired scope, within the required time frame and within the planned budget.

### Conclusion

The study concluded that project scope management significantly influence performance of national Housing Corporation projects in Kenya, it also conclude that community participation negatively and significantly moderates the relationship between project scope management and performance of National Housing Corporation Projects in Kenya. The future researchers and academicians, this study recommends that a study should be conducted on mechanisms that can be put in place for project integration management in performance of National Housing Corporation projects in Kenya.

Government should start an initiative where senior managers manning projects are compelled to audit and oversight, this will definitely ensure that there is improvement in service delivery

There is need to enhance the knowledge of project scope management, identification of sources of project scope creep and ensuring the management exhibits diversity in terms of project scope performance.

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