A Critical Analysis of the Causes of Project Management Failures in Kenya

Abednego Oswald Gwaya, Sylvester Munguti Masu, Githae Wanyona

Abstract- ***The success of a project would normally be measured by the extent to which the predetermined targets set by the Client have been met, whether it performs the function it was intended to meet satisfactorily and if it solves an identified problem within the stipulated time, cost and quality standards. To meet the objectives, the project will require effective planning control through the application of project management systems (Muchungu,2012). Developed economies have made use of project management in meeting the stated objectives. For an effective project management to apply; developed economies have made use of project management modelling to enable track and monitor project performance.***

There is need for developing economies to emulate the approaches of developed economies. Problems identified with the existing models prompted a discussion on the need to reconfigure the measurement process and the measures used. For this to be achieved, it is imperative that causes of project management failures be identified, analyzed, and or solutions or the way forward suggested.

This paper therefore critically analyses the causes of project management failures in Kenya. A survey approach was used on a sample size of 500 members of which 312 members were responsive. The response rate was 62.4%.

Key Words: Project Management, Project failures, Construction Problems, Performance Measurement Systems

I. INTRODUCTION

Project Management is a specialized management technique necessary for the planning, organization and control of industrial and commercial projects under one strong point of responsibility. Modern project management emerged some fifty years ago in the United States and has been evolving ever since particularly in connection with the defence and aerospace industry, process engineering and development of computers (Lock, 2007).

The success of a project would normally be measured by the extent to which the predetermined targets set by the Client have been met, whether it performs the function it was intended to meet satisfactorily and if it solves an identified problem within the stipulated time, cost and quality standards. To meet the objectives, the project will require effective planning control through the application of project management systems (Muchungu,2012).

Projects have an element of risk and the tasks leading to their completion may not be described with accuracy in advance.

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The function of project management is, therefore to predict as many of the risk and problems as possible and to plan, organize and control activities so that the project is completed successfully. This process must start before any resources are committed and continue until the project is completed to the satisfaction of the Client, within the promised timescale, without exceeding the financial allocation and to the highest quality standards achievable (Kerzner,2013). Developed countries have made use of project management models to ensure effective and efficient projects execution.

There is need for developing countries to emulate the approaches of developed economies. Problems identified with the existing models prompted a discussion on the need to reconfigure the measurement process and the measures used.

II. CONSTRUCTION INDUSTRIES IN DEVELOPING COUNTRIES

Considering the investments levels of the construction industry and the development needs of most developing countries, the time is overdue for construction matters to be given prominence. This is also because, despite the relatively high investment in infrastructure in developing countries, the World Development report (1994) highlights the less corresponding impact these have had on the people in these countries. Hence, the report indicated that the infrastructure's future challenges should be dealt with by tackling inefficiency and waste –both in investment and delivering services. The report indicated that the poor performance of those managing the delivery and maintenance of these infrastructures provides strong reasons for doing things differently. Indeed, Agenda 21 for sustainable construction in development countries puts construction at the centre of how the future is to be shaped, and the sustainability of this future (Du Plessis, 2002). In particular, developing countries were well advised to avoid the development mistakes of the developed world and to take steps to intervene on behalf of sustainability today than to wait and change things after they have occurred (Du Plessis, 2002). Even though the research does not cover sustainable construction, this advice is seen as another reason why developing countries should make efforts to deliberately address the many problems that confront their construction industry, particularly, in the area of project performance and project management modelling.

III. CURRENT PRACTICE OF PROJECT MANAGEMENT

Ofori (2001) argues that the absence of measurable targets in the development programmes to guide and assess, at intervals, the success of their implementation is a possible

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reason for lack of progress and the persistence of problems in the construction industry. Following a deliberate process of continuously monitoring the performance of the construction industry everywhere based on relevant indicators is, thus, at the core of the quest to develop, improve and sustain the industry. This research sees this as an important aspect of the global agenda for construction industry development and its sustainability. More importantly, this goal could be better achieved if the approach takes into consideration the very peculiar nature of the industry as outlined by Hillebrandt (2000):

(i) the nature of the final product,
(ii) the structure of the industry and the organization of the construction process,
(iii) the determinant of demand,
(iv) method of price determination. Koskela (2000a) summarized it as: "one-of-a-kind production, site production and temporary product organization".

This peculiarity in itself poses the first challenge regarding the quest of its development. However, in the industry's quest for development through performance assessment, the research notes a central problem. In the majority of cases, attempts at using indicators to track and monitor the improvements in the construction industry have been to address the problem en bloc. Beatham et al (2004) notes five problems with this approach in relation to construction companies:

(i) They focus on post-event lagging key performance outcomes at a very high level that offered little opportunity to change and were not used by businesses to influence managerial decisions.
(ii) The key performance indicators were not aligned to the strategy or business objectives of construction companies.
(iii) They were designed for cross industry benchmarking purposes, but due to a lack of certainty in the data, problems with different procurement routes and lack of validation of results, this level of benchmarking is not thought to be viable.
(iv) The key performance indicators do not provide a holistic, company-wide representation of the business.
(v) They are not incorporated into a Performance Measurement System (PMS). It is the position of this research that the objective of improvement in the construction industry would be better achieved if the industry is rightly divided into its major component parts, that is, *clients*, *construction firms*, *practitioners* (consultants, project managers), *products*, *the material suppliers* and *consumers/the publics* and the other *stakeholders*. These will need specific indicators of measurement for monitoring and evaluation to accomplish specific purposes of interest. Consequently, the performance of the construction industry of any country will be the aggregation of the performance of its components. Thus, the improvements in the construction industry of any country as measured by its performance at any time should be represented by the aggregation of the improvement of its components; and that the overall development of the construction industry of any country at any time should be represented by the aggregation of the developments of its components. Towards these end, the critical issues to address are:

(i) How to assess the performance of each of these components for their effective management over time.
(ii) How to assess and manage the performance of the construction industry on the basis of the results of the performance of its components.

IV. PROBLEMS IN PROJECT EXECUTION

The unique characteristic of the construction industry is epitomized in the project. This has meant that every project is different, a situation which emanates from the project's own characteristics, that is, its type, its size, its geographic location, personnel involved in the project, those emanating from the other subsystems within the industry, and also those from the super-system. Hence project execution is inherently risky and the lack of appropriate approach to addressing these risks has led to a lot of undesirable results in project execution in the construction industry of most developing countries. Most of the problems militating against the achievement of the desired effect on the construction industry of any country have to do with the project execution challenges, namely, the difficulty in achieving the main objectives of the project. Traditionally, this is seen in the failure of the project to achieve its cost, time, quality and other targets due to inefficiencies in the execution process. This ultimately, causes client dissatisfaction.

A. The Problems Of Low Productivity, Delays And Cost Overruns In Project Execution

A common problem that affects project performance in the industry is low productivity. For example, Makulwasawatudom et al (2003), identifies 23 critical factors influencing the construction productivity in Thailand. Ten of these were found to be critical: lack of materials, incomplete drawings, incompetent supervisors, lack of tools and equipment, absenteeism, poor communication, instruction time, poor site layout, inspection delays, and reworks. A research by Mutijwaa and Rwelamila (2007) showed that the South Africa Infrastructural Department (SAID) is under pressure to improve performance, that is, to deliver projects on time, on budget and to higher standard of quality. They attributed the problem to lack of skilled workers in these infrastructure departments (ID) and called for the need for a project manager in all these offices to coordinate the many on-going projects. Further, they observe that the infrastructural departments do not know whether they are:

(i) Achieving desired results
(ii) Meeting their customer's success criteria and
(iii) Achieving their desired return on investment. Hence, they propose a means of assessment to evaluate progress as a means of addressing these questions.

Secondly, they recommend such IDs to be project-oriented organizations (POO). Other project-related challenges have to do with the twin chronic problems of cost and time overruns. These problems are not limited to developing countries alone. According to "Benchmarking the Government Client stage 2 study (1999)", UK,

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benchmarking study conducted in 1999 of 66 central government departments' construction projects with a total value of £500 million showed that three quarters of the projects exceeded their budgets by up to 50% and two thirds had exceeded their original completion date by 63%. According to Yisa and Edwards (2002) despite the development of new alternative and less adversarial contractual arrangements, the industry continues to be affected by problems of project time and cost overruns and consequently, client dissatisfaction (drawing from Latham, 1994; Egan, 1998). Different countries identify different factors as critical in this regard. In Botswana, Chimwaso (2000) research into the factors of cost overrun and came out with four related factors: *variations, re-measurement of provisional works, fluctuation in the cost of labour and materials and contractual claims, that is, claims for extension of time with cost.* In the case of time overruns, Zhang et al. (2003) identify 8 factors that cause delay in project executions in China: *factors related to the contractor, the design team, the project, labour, client, material, equipment, and other factors.* In the midst of the booming infrastructure development and urbanisation in Vietnam, Le-Hoai et al (2008) established that cost and time overruns top the list of problems of project implementation. Using factor analysis techniques, they obtained 5 main factors out of a list of 21, namely: *poor site management and supervision, poor project management assistance, financial difficulties of owner, financial difficulties of contractor, design changes.*

V. PROJECT MANAGEMENT FOR THE CONSTRUCTION INDUSTRY IN KENYA

Project management in the construction industry in Kenya still remains rudimentary. A study done in Kenya for public building projects established that out of one hundred (100) of the projects, seventy three (73) experienced time overruns compared to thirty eight (38) out of one hundred (100), which suffered cost overruns (Mbatha,1986). Another study undertaken for both public and private building projects came up with a similar conclusion (Talukhaba, 1989). The overall implication is that national resources are significantly wasted. The observations also do imply that project risks are not adequately examined prior to the award of contracts (Gichunge, 2000).

According to Gichunge (2000) the most serious source of cost and time risks in building projects during the construction period is 'extra work' (technically termed as variations), which normally occurs in 73.50% of the building projects in the population whereas defective materials accounted for 38.20% for observed unacceptable quality work cases. There is evidence that construction projects performance in Kenya is inadequate. Time and Cost performance of projects in Kenya are poor to the extent that, over 70% of the projects initiated are likely to escalate in time with a magnitude of over 50%. In addition over 50% of the projects are likely to escalate in cost with a magnitude of over 20%. Studies have shown that, although cost performance was not better, time performance was comparatively the worst (Masu, 2006). The latter recommended that efforts should be directed to the training of the key participants in construction resource management. Work-studies on construction resources, application of resource optimization techniques, Just-in-time philosophy and project information management strategies should be embraced.

VI. METHODOLOGY

A survey research approach was used on 500 members comprising of 100 Architects, 100 Quantity Surveyors, 100 Project Managers, 100 Engineers and 100 Contractors. The research instrument to contractors was slightly different under the background section. All respondents were randomly selected using stratified random sampling approach. For contractors only those previously registered under categories A to C with Ministry of Public Works; were subjected to the study to reflect the strategy of the research and quality of information sought.

Data analysis was carried out by descriptive statistics and Principal Component Analysis (PCA) for conclusive reduction of variables. Respondents were to rate on a Likert scale from choices given and or suggest other variables not captured under "Other".

VII. EXPERIENCE ON CURRENT PROJECT MANAGEMENT PRACTICES

On the current practices of project management respondents were asked to rate from structured choices on the extent to which they experience problems with current project management practices. Generally, the practice of project management experiences a lot of problems as attested by the responses. Five out of eleven factors are rated above 50% as being problematic. The same case applies on usage of current project management models. Of the total respondents, 33% and 24% were of the opinion that they experience problems on the current project management practices to a high extent and Low extent respectively. Figure 1.1 summarizes on how respondents rated various factors

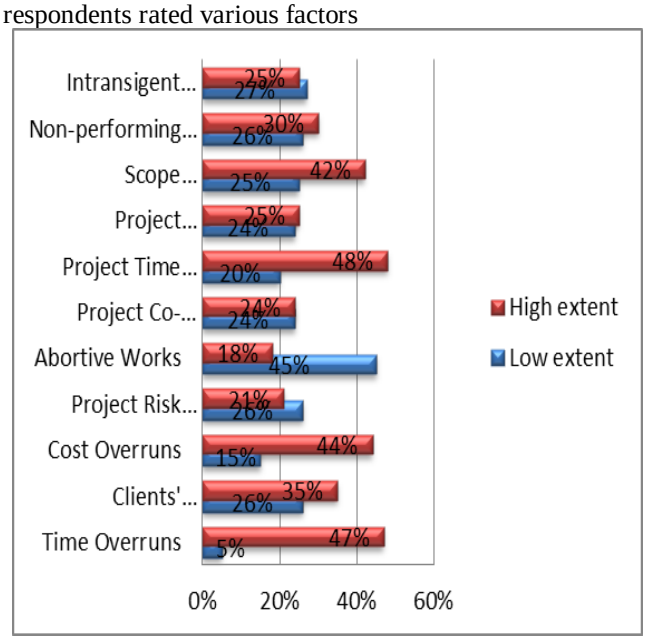

Figure 1.1: Analysis of current project Management practices problems

Source: Field survey 2013

From figure 1.1 as conducted in the study 48% of the respondents confirmed that the major problem was on project time management issues while 45% rated abortive works at a low extent. This implies that majority of the respondents'

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rarely experienced abortive works as compared to project time management problems.

Out of the total number of respondents, 73% confirmed that time overruns was the major issue on project management followed by time management issues at 64%. The other highly ranked project management problems are cost overruns at 63%, clients' interference in projects at 60%, scope management problems at 56%. Abortive works and intransigent colleagues were the lowest ranked; both at 35%.

A. Causes Of Poor Workmanship/Quality In Projects

The main reason for poor workmanship was due to poor supervision of the projects which rated 51.96% as shown in figure 1.2. Change in specifications also contributed 49% while coordination challenges between the main contractor and other Sub-Contractors were rated least important, an indication that most of the project are not affected due to coordination challenges.

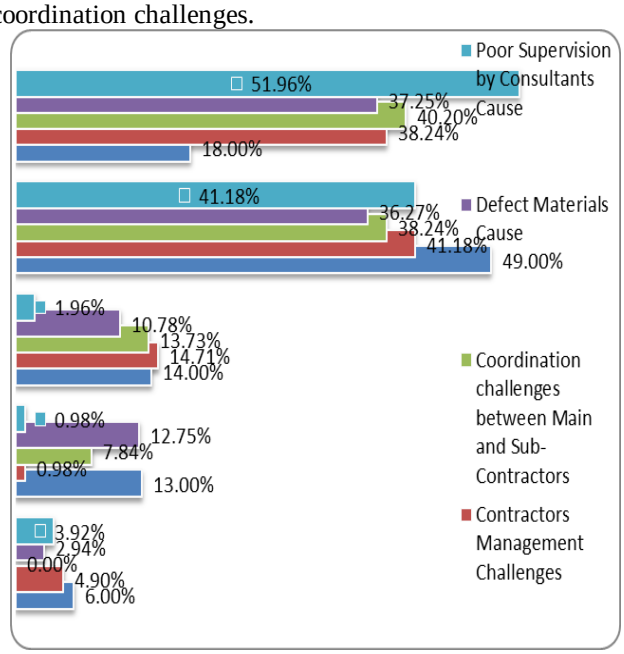

Fig 1.2 causes of poor workmanship and quality challenges in projects.

Source: Field survey 2013

From figure 1.2 human resource management is also a key performance indicator of successful execution of projects arising mainly from poor supervision by consultants and coordination challenges between the main contractor and subcontractors. Hence so far seven factors have been confirmed as causes of project management failures as follows: Cost, quality, time, scope, projects performance and human resources. Clients' issues have been confirmed and shall be treated separately. Elsewhere, from literature review project issues and people issues were established as key performance indicators (Hamza, 1995). Equally, most of the discussed models from literature review including PMBOK, PRINCE2 and Global Alliance of Project Performance standards clearly indicate that human resource management is one of the key variables of a successful project management practice. Table 1.1 ranks causes that lead to poor quality of projects as follows: poor supervision by consultants as cause No. 1 with a mean score of 4.3627; second is coordination challenges at a mean score of 4.1078; third is contractor's management challenges at 4.06886; fourth is defective materials causes at a mean score of 3.9216 and changes in specifications is ranked fifth at a mean score of 3.600 out of the five respectively. The challenge then is appropriate application of project management given highly qualified human resources in the industry as attested by requirements prior to registration with the various professional bodies.

Table 1.1 showing the ranking of factors that cause/lead to poor quality of projects

Name of the Profession		Poor Supervision by Consultants Cause	Defect Materials Cause	Contractors Management Challenges	Changes in Specifications Cause	Coordination challenges between Main and Sub-Contractors
Engineering N=57	Mean	3.9474	3.6316	3.4737	3.3684	4.1579
	Rank	5	4	5	5	2
Architecture N=84	Mean	4.5000	4.3929	4.1429	3.5385	4.2500
	Rank	2	1	4	3	1
Quantity Surveying N=75	Mean	4.4400	4.0400	4.2000	3.5600	4.0400
	Rank	3	2	2	2	4
Project Management N=45	Mean	4.4000	3.2000	4.3333	3.4000	4.0667
	Rank	4	5	1	4	3
Contractor N=45	Mean	4.4667	3.9333	4.2000	4.2667	3.9333
	Rank	1	3	2	1	5
Total N=306	Mean	4.3627	3.9216	4.0686	3.6000	4.1078
		1	4	3	5	2

Source: Field survey 2013

B. Using The Principal Component Analysis (PCA) Method To Analyze The Problems Often Experienced In Current Project Management Practices In Kenya.

The loadings for the variance on the problems are explained as per tables 1.2 and 1.3;

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Table 1.1 showing the ranking of factors that cause/lead to poor quality of projects

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.853	44.121	44.121	4.853	44.121	44.121	3.255	29.590	29.590
2	1.245	11.322	55.443	1.245	11.322	55.443	2.535	23.049	52.639
3	1.138	10.347	65.790	1.138	10.347	65.790	1.349	12.265	64.904
4	1.016	9.238	75.028	1.016	9.238	75.028	1.114	10.124	75.028
5	.660	6.002	81.030						
6	.543	4.936	85.965						
7	.451	4.099	90.065						
8	.337	3.061	93.126						
9	.309	2.813	95.938						
10	.269	2.445	98.383						
11	.178	1.617	100.000						

Extraction Method: Principal Component Analysis
Kaiser-Meyer-Olkin Adequacy measure (KMO): 0.841
Cronbach's Alpha: 0.792

Source: Field survey 2013

Table 1.3: Component Matrix for general data

	Component			
	1	2	3	4
Scope Management Problems	.714			
Abortive Works	.553	.386		
Cost Overruns	.764			
Time Overruns	.677			
Non-performing contractors	.701			
Project Time Management Issues	.828			
Project Risk Management Issues	.838			
Intransigent Colleague Problems	.730		.388	
Clients' Interference in Projects	.708			
Project Co-ordination Problems - Lead Consultant		.836		
Project Integration Management Issues			.332	.852

Source: Field survey 2013

From the general data and all respondents combined four components are extracted from tables 1.2 and 1.3. Component one can be renamed inappropriate project management application; component two can be renamed lead consultant challenges; component three can be renamed project team organization challenges and finally component four project integration problems. The most important variables are project risk management issues, project time management issues, cost overruns, intransigent colleagues, scope management problems and clients' interferences in projects.

VIII. CONCLUSION

This paper has analyzed causes of project management failures in Kenya. From the field study it has been confirmed that the traditional measures of cost, time, scope, and quality are still major challenges. However, human resources, Clients' interference issues, risk management are some of the other variables which should be addressed. Some of the challenges in the course of execution can broadly be analyzed as project performance to cover coordination issues, meetings, materials compliance, workmanship and contractor/ subcontractor issues.

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