

An Investigation of the Performance of Local Contractors in Kenya

Monicah Wairimu Chonge

Abstract: *The performance of contractors is a great determinant of their success or failure. Poor performance is linked to failure whereas good performance is linked to success. Despite of this, contractors in most industries of the world, and most especially the developing countries, have been accused of poor performance. In Kenya, the situation is not different as the performance of the contractors has been termed as poor as far as time, cost and quality is concerned. This study therefore sought to validate this accusation by finding out the level of the performance of contractors in Kenya. Thirteen performance measures as identified in the literature review were used as the scale of measure. These were: time, cost, quality, client satisfaction, health and safety, environment protection, participants' satisfaction, community satisfaction, sustainability of the development, functionality of the development, communication, profitability and productivity. The study employed the quantitative strategy as well as the cross-sectional research design. Quantitative data was collected through the use of structured questionnaires which were administered to local contractors of category NCA 1, 2 and 3. The contractors were sampled using the stratified random sampling and the systematic random sampling techniques. The data was analyzed using the Statistical Package for Social Sciences (SPSS for windows version 20). The method used for data analysis was descriptive statistics. The analysis revealed that the local contractors are average performers when all the performance measures are used to gauge their performance. But when these performance measures are considered separately, they performed poorly on time, cost, profitability, productivity and client satisfaction. They have an average performance on health and safety, participants' satisfaction, community satisfaction, environmental protection, sustainability, communication, quality and functionality. This study therefore concludes that local contractors in Kenya of category NCA 1, 2 and 3 can be termed as average performers rather than poor performers.*

Keywords: *Contractors performance, Performance measures, Construction industry*

I. INTRODUCTION

Kenya has a well-established construction industry that comprises of businesses mainly involved in the construction of commercial and residential buildings, engineering structures and affiliated trade services (Ndaiga, 2014). The industry is a major contributor to the Gross Domestic Product (GDP) thus it plays a leading role in determining the economic growth. According to data from the KNBS (2015), the construction sector is shown to have grown by 13.1% in 2014, contributed to 4.8% of Kenya's GDP which was an increase to Ksh 5.36 trillion from Ksh 4.73 trillion in 2013 representing a nominal growth of 13.3% and in line with the growth of the construction output,

The workers wage in the sector increased to a monthly wage of Ksh 45,473 from Ksh 39,480 in 2013 representing a 15.9% increase (Macharia, 2015). This growth was attributed to the massive construction projects and increased activity in the real estate sector (Construction Business Review (CBR), 2015).

According to Macharia (2015), the industry is still expected to grow with major opportunities being in the: road construction and rehabilitation, construction of rail linked to south Sudan, rehabilitation of major airports, development of Lamu port and associated infrastructure, construction of geothermal and wind power generation plant and urban housing development so as to meet the rising housing demand.

Despite the industry being a great contributor to the economy, the Kenyan construction industry is faced with huge challenges ranging from oligopolistic and monopolistic tendencies to unfair competition and substandard work especially amongst the small and medium-sized contractors. These, coupled with complications and irregularities in the procurement value chain, have threatened to lead to stunted growth of the industry leading to a need to tame the industry as well as shape it in the face of new and emerging challenges such as liberalization and increased foreign competition thus the formation of the National Construction Authority (NCA) (Ogoma, 2014).

II. PERFORMANCE OF LOCAL CONTRACTORS IN THE KENYAN CONSTRUCTION INDUSTRY

Performance can be defined as the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost and speed (Business dictionary, 2015). In the Kenyan construction industry, the performance of local contractors has been termed as poor. According to Nyangilo (2012) for example, the performance of the contractors in Kenya is termed as poor as time and cost performance of projects are to the extent that over 70% of the projects initiated escalate in time with a magnitude of over 50% and over 50% of the projects escalate in cost with a magnitude of over 20%. Kibuchi and Muchungu (2012) also indicate that despite the high quality of training of consultants in the construction industry in Kenya as well as the regulation of the industry in major urban areas, construction projects in Kenya do not always meet their goals. This, they argue that is manifested by myriad projects that have cost overrun, delayed completion period and poor quality resulting to collapsed buildings in various parts of the country, high maintenance costs, dissatisfied clients and even buildings which are not functional. Similarly, past industry experiences show that,

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Monicah Wairimu Chonge, Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya.

An Investigation of the Performance of Local Contractors in Kenya

medium to large size projects have high failure rate in Kenya (Auma, 2014). A study by (Muguiyi, 2012) also indicate that, the performance of contractors in Kenya is poor; citing that the success rate of government funded projects in Kenya as a whole stands at 15%. Kuta and Nyaanga (2014) cite the prevalence of collapsing buildings in the country as an indicator of poor performance of contractors in the country.

All these evidences are a clear indicator that the performance of contractors in the construction industry is poor.

III. PERFORMANCE MEASURES

A number of researchers have explored this concept of performance in order to develop a framework for measuring construction project performance both quantitatively and qualitatively. For instance (Navarre and Schaan, 1998) stated that project performance was measured in terms of time, monetary cost and project success. Walker (1996) stated that time, cost and quality are the basic indicators to project performance as nearly all authors of related articles mentions them pointing out their importance in a construction project, with Atkinson (1999) identifying these three measures as the iron triangle.

Pinto and Pinto (1991) advocated that measures for project performance should include project psychosocial measures such as the satisfaction of interpersonal relations with project team members. He also added that subjective measures such as participant's satisfaction should be included as a performance measure. Pocock, Hyun, Liu, and Kim (1996) stated that having no legal claims should also be considered a measure of performance. Kometa and Olomolaiye (1995) gave a comprehensive approach to assess project performance which included; safety and flexibility to users. Songer and Molenaar (1997) advocated that in addition to the iron triangle, conformity to user expectations, meeting the specifications and minimization of construction aggravation showed performance by contractors. Kumaraswamy and Chan (1995) included a variety of measures in their study which include client and project manager's satisfaction, transfer of technology, friendliness of the environment and health and safety. Hussaini, Syuhaida, and Lee (2014) gave nine key performance measures to monitor in any construction project. These are; cash flow, labour productivity, schedule of work and progress, margin variance, unapproved change orders, committed cost, backlog, and finally customer satisfaction.

This study therefore summarizes the measures into the following thirteen measures: time, cost, quality, client satisfaction, community satisfaction, participants' satisfaction, health and safety, environment protection, communication, sustainability, functionality of the development, profitability and productivity.

IV. RESEARCH METHODOLOGY

This research employed the quantitative research strategy as well as the cross-sectional research design. The sample size was comprised of 80 contractors which were broken down as follows: NCA 1-26, NCA 2-22 and NCA 3-32. Stratified

random sampling as well as systematic random sampling techniques was used to sample these contractors. Structured questionnaires with closed ended questions were administered to these local contractors seeking to find their performance based on their most recently completed projects as well as on their ongoing projects. Out of the 80 questionnaires distributed, 56 were returned representing a 70% response rate. Data collected was analyzed using the descriptive statistics method, which was achieved through the use of Statistical Package for Social Sciences (SPSS for windows version 20).

V. ANALYSIS AND RESULTS

5.1 Respondents Response Rate

Out of the 80 questionnaires distributed, only 56 were returned giving a 70% response rate as indicated in the table 5.1 below

Table 5.1-RESPONSE RATE

Respondents	Questionnaires Distributed	Questionnaires Returned	% of Response
Contractors	80	56	70%
TOTAL	80	56	70%

5.2 Results and Discussion on The Performance of Contractors In Kenya

The results and discussion on the performance of contractors are as shown in the table 5.2 and the graphs 5.1-5.13 below.

Table 5.2- Performance of Contractors on the Specific Performance Measures

S/N o.	Performance Indicators	N	Min	Max	Mean	Std. Dev.
1	Completion within budget	56	1	5	2.71	.756
2	Profitability	56	2	4	3.07	.684
3	Good labour productivity	56	2	5	3.21	.706
4	Timely Completion	56	2	5	3.30	.685
5	Sustainability of the development	56	2	5	3.61	.846
6	Environmental protection	56	2	5	3.64	.645
7	Health and Safety adherence	56	2	5	3.75	.667
8	Achieving client satisfaction	56	3	5	3.77	.713

9	Good communication	56	2	5	3.79	.780
10	Project participants satisfaction	56	3	5	3.82	.508
11	Community satisfaction	56	2	5	3.82	.508
12	Good quality of work	56	3	5	4.02	.486
13	Functionality of the development	56	4	5	4.13	.334
Overall mean/standard deviation					3.59	0.64

5.2.1 Completion Within Budget

The figure 5.1 below indicates the response of the participants on their completion of projects within the budget.

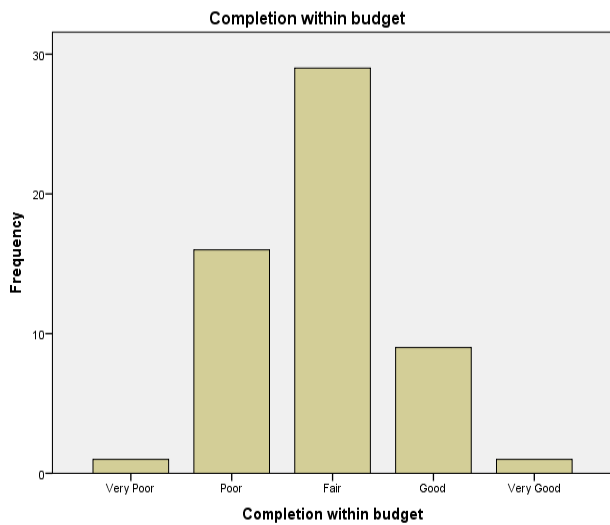


Figure 5.1: Respondents Performance on Completion within Budget

From the table 5.2, completion within budget by the contractors scored a mean of 2.71. This mean is very low and it indicates that contractors in Kenya perform poorly in terms of completion within budget (cost).

The chart in figure 5.1 above also, affirms this finding since it shows that most of the contractors' completion within budget was fair. A few of the contractors rated their cost performance as either good or very good.

This indicates that contractors in Kenya perform poorly in terms of completion within budget.

5.2.2 Profitability

The figure 5.2 below shows the respondents response on their profitability.

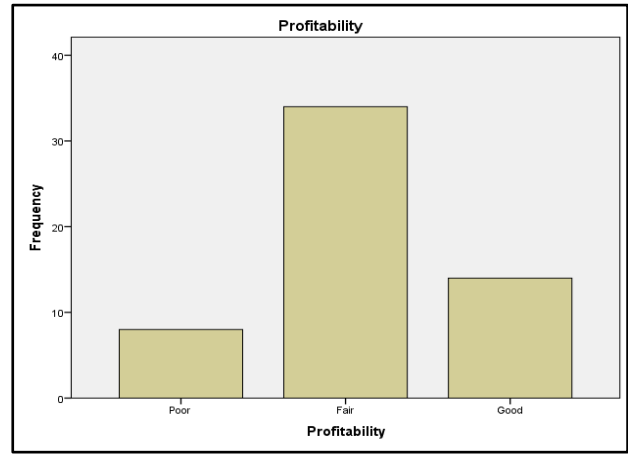


Figure 5. 2: Respondents Performance on Profitability

From the table 5.2, profitability scored a mean of 3.07. This mean is average indicating that most of the contractors profit was average.

This finding is confirmed by the chart in figure 5.2 above, which indicates that, profit made by most contractors in the Kenyan construction industry is fair. It has been a common practice however to select the least cost bidder among competing contractors to perform the job (Nassar and Hosny, 2013). This justifies the main reason given by the contractors as to why they do not make good profit. It is because they made low bids so as to win the tenders at the expense of them making profit. The second reason given was that most local contractors lacked financial management skills and thus many of them admitted to diverging the money to other non-project activities.

5.2.3 Productivity

The figure 5.3 below shows the response of the respondents on the productivity of their firms.



Figure 5.3: Respondents Performance on Productivity

From the table 5.2, productivity scored a mean of 3.21. This score is average indicating that productivity in the Kenyan construction industry is average.

Also, as indicated in the figure 5.3 above, the level of productivity of construction contractors in Kenya is found out to be fair. From the data collected, the reasons cited as contributing to the low productivity by most construction firms were,

An Investigation of the Performance of Local Contractors in Kenya

lack of motivation for the workers, shortage of manpower, employees attitude, absenteeism and turn over.

5.2.4 Timely completion

The figure 5.4 below gives the response of the respondents on their time performance for the construction projects they have undertaken.

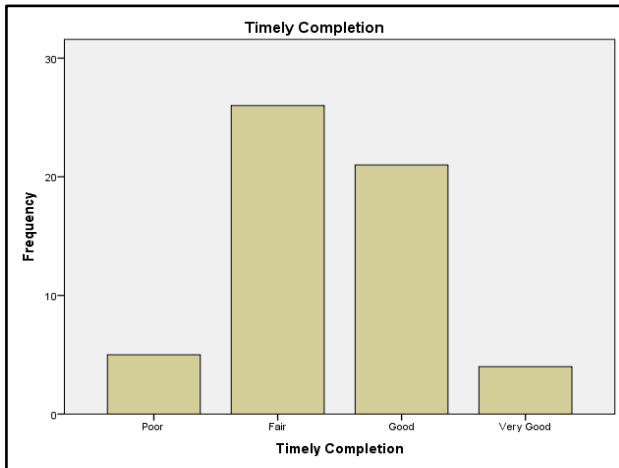


Figure 5. 4: Respondents Performance on Timely Completion of Projects

From the table 5.2, timely completion of projects scored a mean of 3.30. This mean is average indicating that the time performance of the local contractors was average.

The results on timely completion being fair, means that most of the contractors in the construction industry do not meet the time target thus most of their projects experience time overruns. These findings have also been affirmed by the results of the graph in figure 5.4 above.

5.2.5 Sustainability of the Development

The figure 5.5 below gives the respondents response on the sustainability of the development.

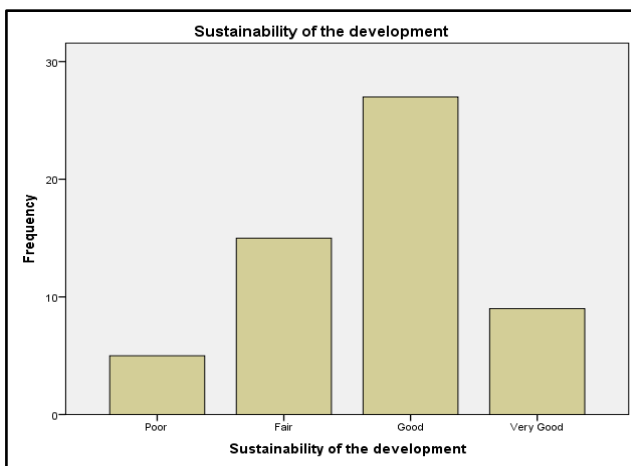


Figure 5. 5: Respondents Performance on Sustainability

Sustainability in the context of this study stood for the ability of the development to meet the needs of the present without compromising the ability of future generations meeting their own needs.

The table 5.2 indicates that, sustainability of the development scored a mean of 3.61. This mean is high indicating that most of the contractors performed well as far as the sustainability of the development was concerned.

The figure 5.5 above affirms this finding by indicating that most of the contractors' sustainability performance was good.

5.2.6 Environmental Protection

The figure 5.6 below shows the respondents response on environmental protection.

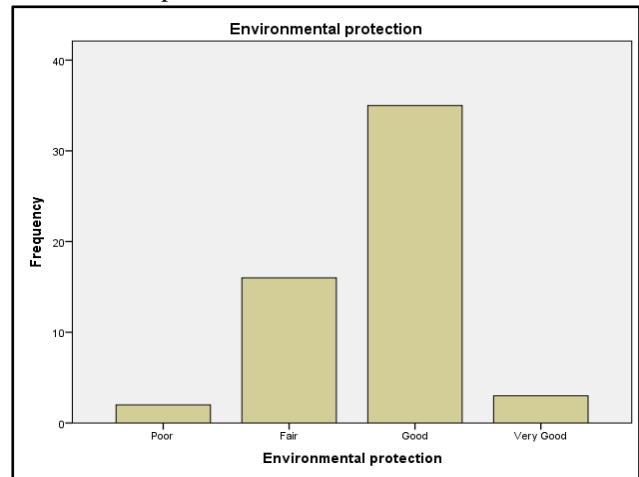


Figure 5. 6: Respondents Performance on Environmental Protection

Environmental protection by the contractors in this study stood for how well the contractors took into consideration the effects of the construction activities on the surroundings. According to the table 5.2, the environmental protection scored a mean of 3.64. This mean score indicated good environmental protection performance by the contractors in Kenya.

This result is affirmed by the graph in figure 5.6 above which indicates that most of the respondents gauged their environmental performance as good.

4.2.7 Health and Safety Adherence

The figure 5.7 below shows the respondents response on their health and safety adherence.

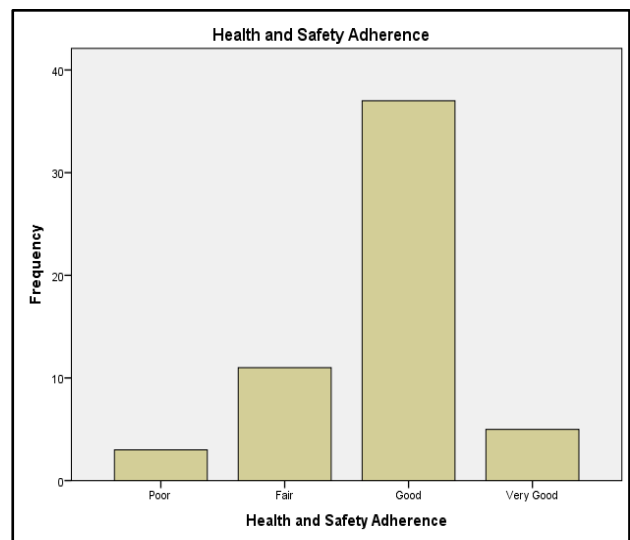


Figure 5. 7: Respondents Performance on Health and Safety Adherence

Health and Safety in this study was mainly measured by the number of accidents in the site.

From the table 5.2, health and safety adherence scored a mean score of 3.75. This mean indicated that most contractors in the Kenyan construction industry performed well in terms of health and safety.

The figure 5.7 above also indicates that most contractors in the Kenyan construction industry performed well in terms of health and safety. This performance was attributed to their dedication in adhering to health and safety regulations/requirements. Some of these requirements were; that all workers and visitors in the construction site should always be on safety gear, having a health and safety personnel in the field as well as the implementation of health and safety policies formed by the company. Bodies such as the National Construction Authority (NCA) also have played a great role in the contractors adhering to the health and safety requirements through their inspections on health and safety standards by the contractors which has forced most contractors to ensure that they adhere to these standards.

4.2.8 Achieving Client Satisfaction

The figure 5.8 below shows the response of the respondents on their performance of client satisfaction.

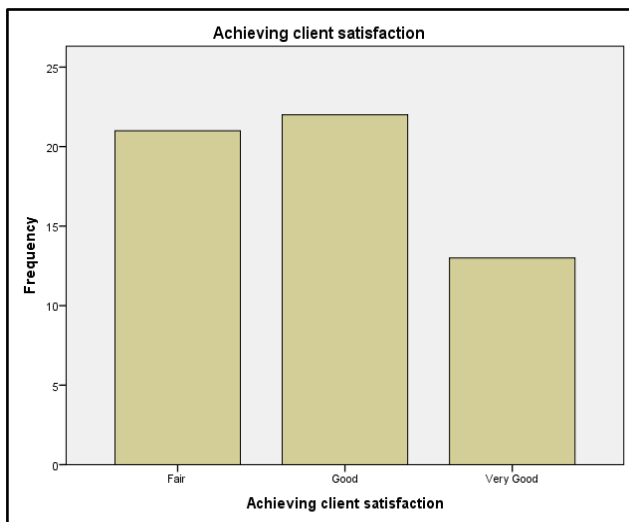


Figure 5. 8: Respondents Performance on Client Satisfaction

Client satisfaction is achieved by the adherence of contractors to time, cost and quality of the development. From the table 5.2, achieving of client satisfaction by the contractors scored a mean score of 3.77. This mean is above average and it indicates that most of the contractors satisfied their clients. The figure 5.8 above also affirms these findings by indicating that most of the contractors satisfied their clients. Most contractors, as found out in this research, admitted that they performed well on quality. Contractors also cited that clients were not greatly dissatisfied by their poor time and lack of completion within the budget because the failure to perform in these factors was highly contributed by the clients for example, through delayed payments, many change orders as well as delays in decision making by the clients.

5.2.9 Communication

The figure 5.9 below shows the response of the respondents on the communication performance.

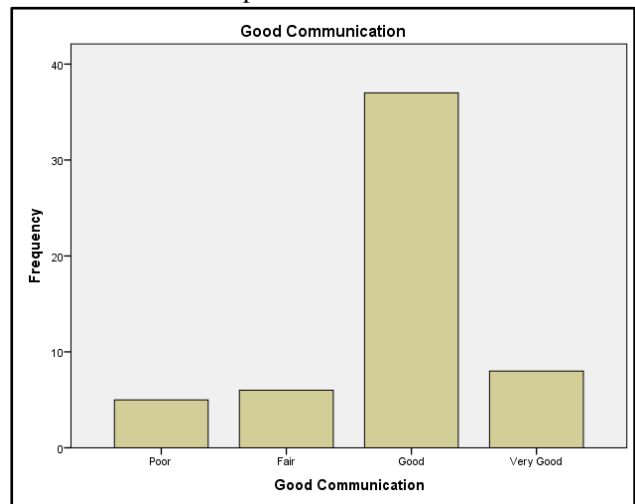


Figure 5. 9: Respondents Performance on Communication

Communication stands for how information flows between the various projects participants for the smooth running of the project.

From the table 5.2, communication scored a mean score of 3.79. This mean is above average indicating that there is good communication between the projects participants in the construction firms in Kenya.

The figure 5.9 above also shows that communication is not an issue for most contractors in Kenya. Part of the reason behind good communication in the construction firms in Kenya is the adoption of information technology such as the use of e-mails, telephones and by having regular site meetings. This offers a fast mode of communication thus leading to smooth running of the projects.

5.2.10 Project Participants' Satisfaction

The figure 5.10 below shows the response of the respondents on the project participants' satisfaction.

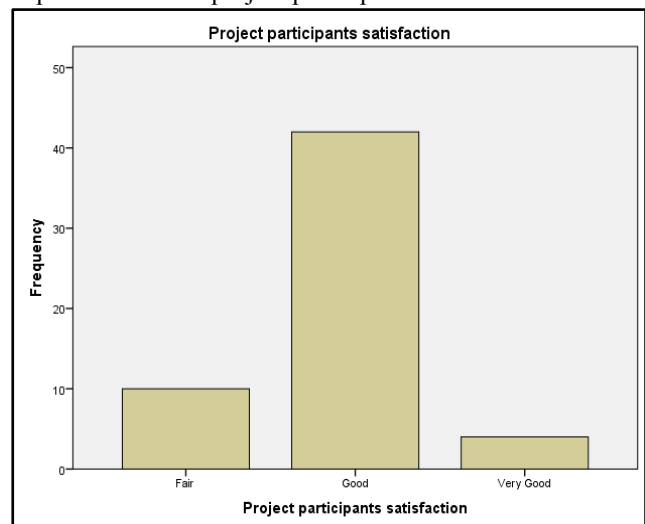


Figure 5. 10: Respondents Performance on the Project Participants' Satisfaction

An Investigation of the Performance of Local Contractors in Kenya

The table 5.2 indicates that project participants' satisfaction scored a mean of 3.82. This is a high mean indicating that most of the contractors believe that project participants are normally satisfied with the work that they undertake.

This finding is supported by the findings of the graph in figure 5.10 above which shows that contractors achieve to satisfy the project participants such as the consultants and their clients in their work. This satisfaction as gathered from the field comes about mainly through the cooperation of all the parties.

5.2.11 Community satisfaction

The figure 5.11 below shows the response of the respondents on community satisfaction performance.

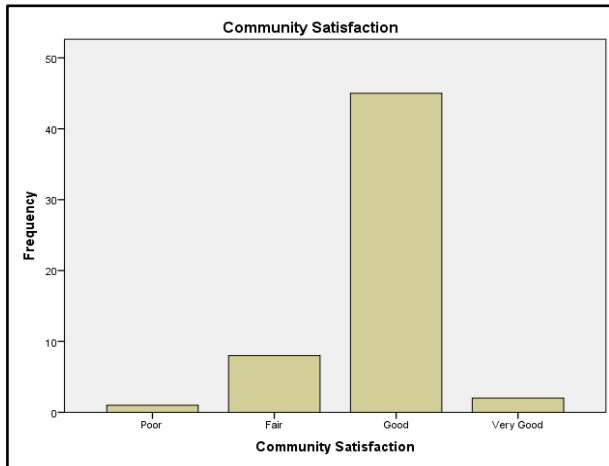


Figure 5. 11: Respondents' Performance on Community Satisfaction

Satisfaction by the community is mainly achieved through the compliance of the contractor to the set regulations that impact on the community as well as through the construction of a development that meets the expectations of the community.

The table 5.2 indicates that community satisfaction scored a mean of 3.82. This is a high score indicating that most contractors satisfy the community in which their developments are.

The figure 5.11 above affirms this finding by indicating that most contractors satisfy the community in which their developments are by showing high score of good.

5.2.12 Quality of work

The figure 5.12 below indicates the respondents' response on quality of their work.

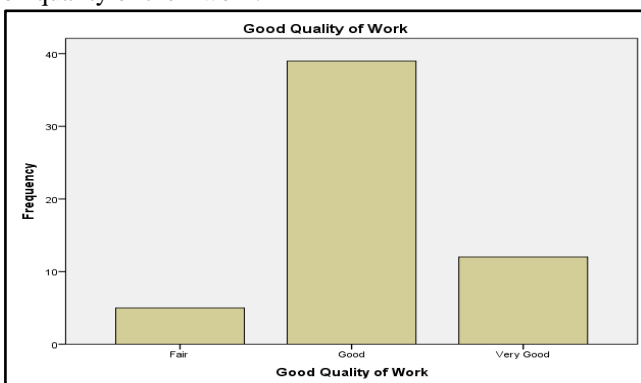


Figure 5. 12: Respondents Performance on Quality

Quality is the satisfaction with the appearance; performance and reliability of the project for a given price range (Jha and Lyer, 2006).

The table 5.2 indicates that quality of work done by the contractors in Kenya scored a mean of 4.02. This is a very high mean indicating that most contractors of the category NCA 1 to NCA 3 do quality work.

The figure 5.12 above affirms this by indicating that quality of work done by the contractors in Kenya good.

5.2.13 Functionality of the Development

The figure 5.13 below shows the respondents responses on functionality of the development.

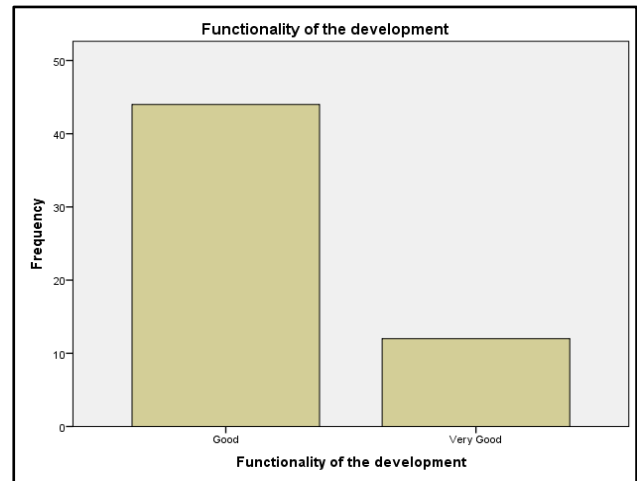


Figure 5. 13: Respondents Performance on Functionality

The functionality indicator correlates with expectations of project participant and can best be measured by the degree of conformance to all technical performance specifications (Chan, Chan, and Kumaraswamy, 2002).

From the table 5.2, functionality scored a mean of 4.13. This indicates that most contractors meet the functionality requirement of the development.

The table 4.13 above affirms this by indicating that most contractors meet the functionality requirement of the development as a majority of the contractors indicated that their performance on this was good. This good performance was attributed to the fact that, functionality of the development is dependent on the design. If the design is functional, contractors definitely met the functionality since they strictly follow the design they receive from the architects and engineers.

VI. CONCLUSION

From the literature review section, it was found out that the overall performance of contractors can be measured using thirteen performance measures which are; time, cost, quality, client satisfaction, health and safety adherence, community satisfaction, participants satisfaction, profitability, communication, productivity, environmental protection, sustainability and functionality of the development.

This study therefore investigated the level of performance of contractors in Kenya using the thirteen indicators and the analysis of the findings done in the section 5.2 of this paper. From the analysis, three conclusions were made.

Firstly, local contractors of category NCA 1, NCA 2 and NCA 3 are average performers. This conclusion was made after the computation of the means of each performance measure as shown in table 5.2. According to a likert scale of five points, the overall performance was found out to be 3.59 out of 5. This mean indicates that local contractors in Kenya are average performers.

Secondly, contractors in Kenya perform poorly on: time, cost, profitability, productivity and in achieving of client satisfaction. From the analysis, the contractors performed as follows: Timely completion-Fair, Completion within Budget-Poor, Profitability-Fair, Productivity-Fair and Achieving client satisfaction-Fair. Thirdly, contractors in Kenya perform averagely on: sustainability, environmental protection, health and safety, quality, participants' satisfaction, communication, community satisfaction and functionality. From the analysis, the contractors performed as follows: Sustainability-Good, Environmental protection-Good, Health and safety adherence-Good, Participants satisfaction-Good, Community satisfaction-Good, Communication-Good and Functionality-Good.

In conclusion the contractors in Kenya are average performers and not poor performers.

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AUTHORS PROFILE



Monicah Wairimu Change. MSc (Construction Project Management; JKUAT), BSc (Construction Management; JKUAT). **Specialization:** Construction Project Management.