

CONSTRUCTION INDUSTRY SURVEY



CAPACITY STATUS REPORT ON SKILLS, EQUIPMENT, MATERIALS AND FINANCING

1.0 Executive Summary

This Report presents the findings of a survey of skills, equipment, materials and finance on the Construction Sector in Kenya. The objective was to assess contractors' capacity by focusing on skills profiles, equipment ownership models, material source and availability, sources of finance and gaps in the construction Sector. The survey was conducted by the National Construction Authority (NCA) as a statutory body mandated to oversee construction industry and coordinate its development. This initial survey was carried out during a national consultative workshop of contractors with the Cabinet Secretary of Land, Housing and Urban Development held on 24th June 2014 at Kenya School of Monetary Studies, Nairobi.

1.1 Contractors Categories and Classes of work

The Contractors registration establishment in Kenya has 8 distinct categories ranging from NCA1 (Highest) to NCA8 (Lowest) with most of the contractors doing more than one class of work. The main classes of work include Roads, Water, Building, Electrical and Mechanical.

There are a total of over 13,700 contractors registered by NCA with over 22,400 licenses in the above classes of work. Building works has the highest proportion of licensed contractors at 43% followed by Roads at 34%. Water and Electrical works have proportions of 10% and 9% respectively. Mechanical has a paltry 3%. The sector is dominated by small and medium enterprise contractors which account for a total of 79% with NCA5 11%, NCA6 22%, NCA7 31% and NCA8 15%. Large establishment contractors account for 21% with NCA4 13%, NCA3 4%, NCA2 2% and NCA1 3%.

71% of the construction firms are owned by men whilst 21% have joint ownership of both men and women. Women owned companies account for only 7%.

1.2 Construction Workers

The results of the survey indicate that the construction sector in Kenya currently has a total of 511,676 workers employed as Skilled, Semi-skilled and Unskilled Artisans. The sector depends mainly on unskilled laborers, who account for 42% of the employed labor force within the sector. Skilled workers account for 25% whilst Semi-skilled workers are 33%. Women are underrepresented in all the categories with a proportion of 19%. The most predominant age group of construction workers is between 25-30 years at 48% followed by 30-35 years at 29%. Proportions of other age groups are: below 25 years at 7%, 35-40 years 9%, 40-45 years 3% and above 45 years 4%. The number of construction workers

employed per category is NCA1, skilled 37, semi skilled 96 and unskilled 112. NCA2 skilled workers 28, semi-skilled 8 and unskilled 13. Skilled workers for NCA3 and NCA4 are less than 15, whilst for NCA5 to NCA8, less than 10 skilled workers are employed.

1.3 Skills gaps

The skills gap in the sector is dominated by Plumbers accounting for 24%, Electricians 23%, Welders 13%, Masons 12%, Carpenters and Painters 10% each, Machine/Plant Operators 2%, Interior specialist artisans 2%, Aluminum fabricators 1% and site supervisors 1%.

1.3 Equipment

The equipment survey revealed 53% of contractors use leased equipment, 27% Owned, 18% combined lease and owned and 2% use hired equipment. The service condition of the equipment is Good 47%, Average 34%, Excellent 18% and Poor 1%.

Availability of road construction equipment is most inadequate in the industry at 58% with bulldozers and graders being singled out as most predominantly inadequate. Availability of other equipment such as cranes, concrete mixers, concrete pumps and vibrators are also inadequate.

1.4 Materials

89% of contractors use mostly locally available construction materials whilst 8% use mostly imported materials. 3% rely mostly on both locally available and imported materials.

1.4 Project Financing

Contractors main source of project financing; Bank loans/overdrafts is 52%, proceeds from past projects is 22%, both bank loans & past projects is 18% and other sources at 8%. Sources indicated as others include advance payment and shylocks.

2.0 Introduction

Data from Kenya National Bureau of Statistics indicate that the construction sector contributed 5.5% growth to the GDP in 2013 due to increased spending on infrastructural development by the Government and Improved construction activities from private sector.

In the same year the total wage payment in the industry was Kshs 58.9B with private sector contributing kshs 50.3B and public sector kshs 8.6B.

2.1 Justification for the survey

Strategic and sustained capacity development of the construction industry requires credible and comprehensive industry data and information. Presently, there is inadequate data and information on skills gaps, equipment shortages and sources of materials and finance especially for small and medium size contractors.

This survey is a strategic start towards building a credible database for decision making and planning of capacity building programmes for the construction industry.

2.2 Objectives

The aim of the survey was to:

1. Collect data to establish quantitative and qualitative information to identify capacity gaps in the construction sector,
2. Provide the Authority with comprehensive empirical data on the existing capacity gaps against which capacity building interventions and performance can be based,
3. Provide prioritized recommendations and an action plan that the Authority and other key stakeholders should undertake to address the identified gaps.

2.3 Design and Methodology

The key respondents during the survey were contractors attending a one day national consultative forum in Nairobi with the Cabinet Secretary ministry of Land, Housing and Urban Development. The register of contractors by the Authority was used as baseline to determine the number and categorization of contractors in the country.

2.4 Data Collection

A questionnaire was developed with a set of questions which examined class of works, registration category, and gender of the organization director, skills gaps, equipment, material and financial resources for contractors.

The questionnaire forms were randomly distributed during the forum and respondents asked to fill and return by the end of the workshop.

The number of respondents and categories are shown in table 1.

Table 1: Respondents per category

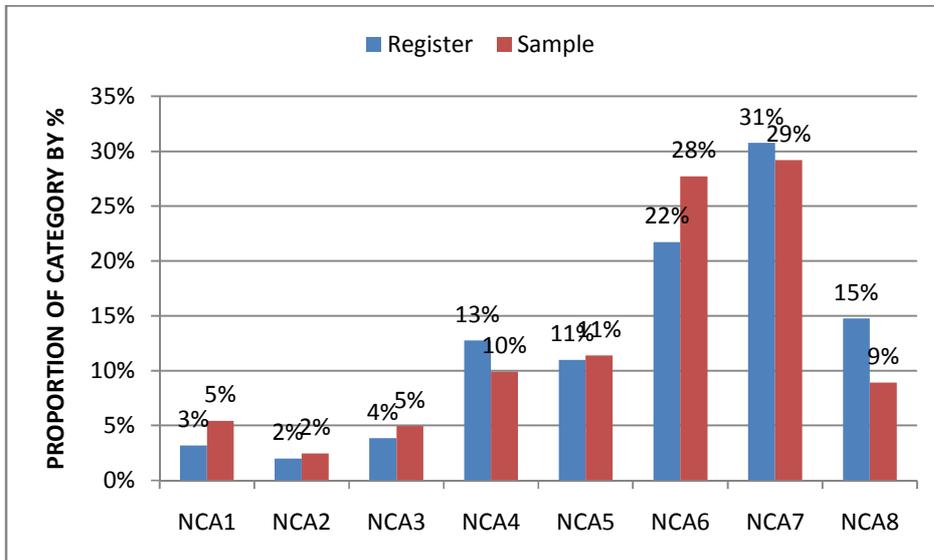
Category	Number of Respondents
NCA1	11
NCA2	5
NCA3	10
NCA4	20
NCA5	23
NCA6	56
NCA7	59
NCA8	18
TOTAL	202

3.0 Findings of the Survey

A total of 202 filled questionnaire forms were returned by the respondents during the survey. The proportion of sample against the register is shown in fig 3.1 below. The survey indicates that most contractors are licensed in more than one class of work.

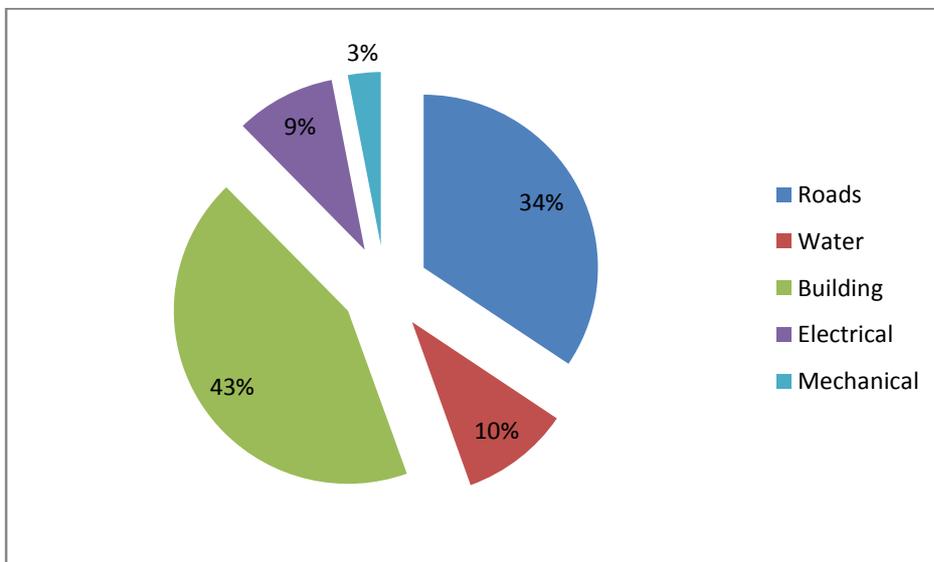
The sector is dominated by small and medium enterprise contractors which account for a total of 79% with NCA5 11%, NCA6 22%, NCA7 31% and NCA8 15%. Large establishment contractors account for 21% with NCA4 13%, NCA3 4%, NCA2 2% and NCA1 3%.

Fig 3.1: Proportion of sample against register



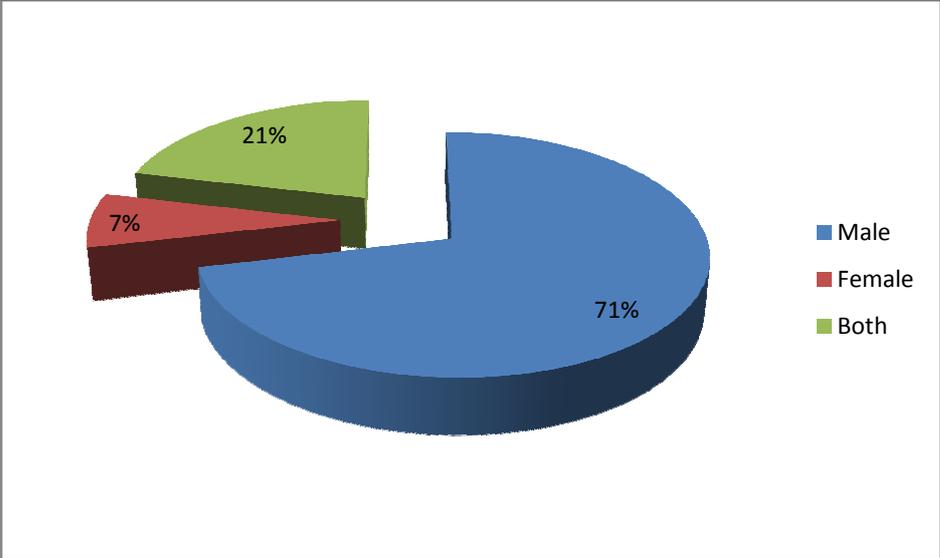
As indicated in figure 3.2 Building works has the highest proportion of licensed contractors at 43% followed by Roads at 34%. Water and Electrical works have proportions of 10% and 9% respectively. Mechanical has a paltry 3%.

Fig 3.2: Class of Works



The ownership structure of the construction firms are such that 71% of the firms are owned by men whilst 21% have joint ownership between men and women. Women owned companies account for only 7%.

Fig 3.3: Company Ownership



a) Construction Workers

Figures 3.4 to 3.6 below shows the skilled, semi-skilled and unskilled construction workers in the construction firms surveyed. This can be generalized to the sector by deducing that the industry depends mainly on unskilled workers with a labour force of 214,792 compared to total labour force of 511,676 Artisans. The semi skilled workers are 169,620 and skilled workers are 127,264. Women artisans are few, constituting only 19% of the total labor force.

Fig 3.4: Distribution of Construction Workers by Skill

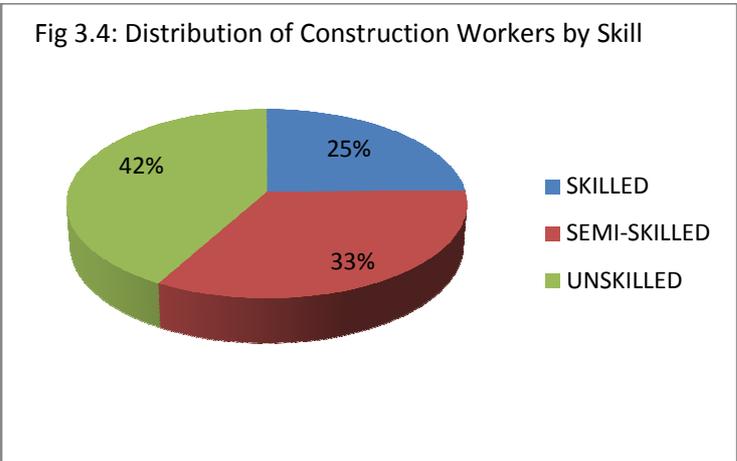


Fig 3.5: Distribution of Construction Workers by Gender

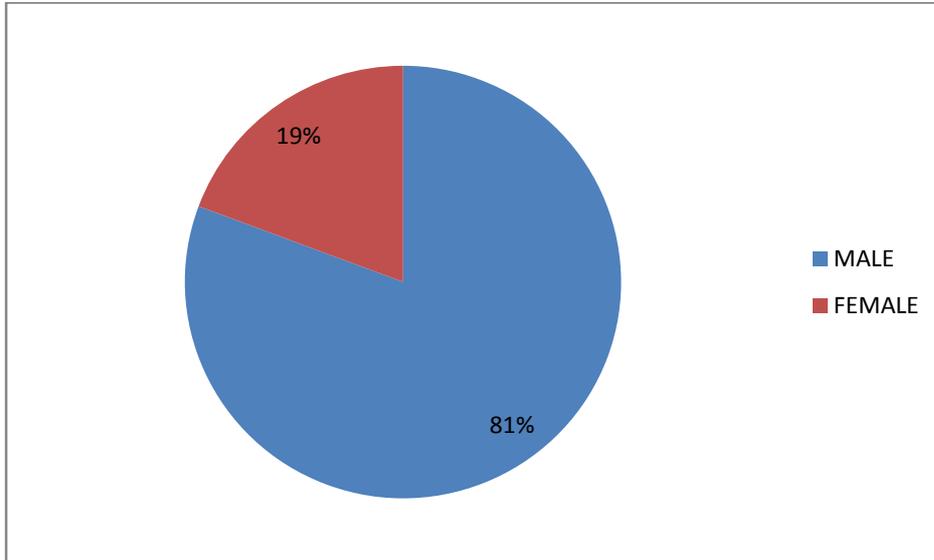


Fig 3.6: Distribution of Construction Workers by Number Proportion



Figures 3.7 below shows the most predominant age group of construction workers is between 25-30 years at 48% followed by 30-35 years at 29%. Proportions of other age groups are: below 25 years at 7%, 35-40 years 9%, 40-45 years 3% and above 45 years 4%. The youthful population which is up to 35 years of age represents 84% of the workforce.

Fig 3.7: Age Distribution of Construction Workers

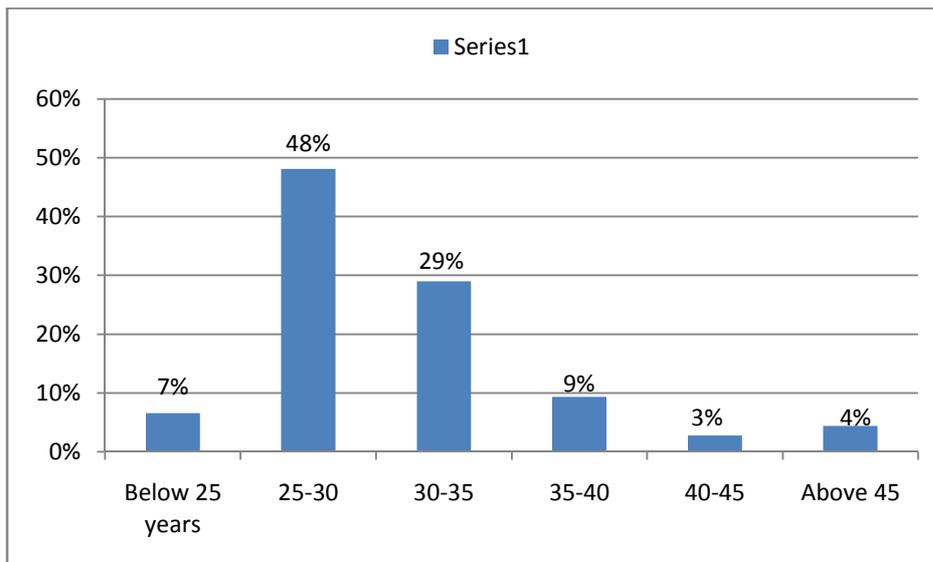
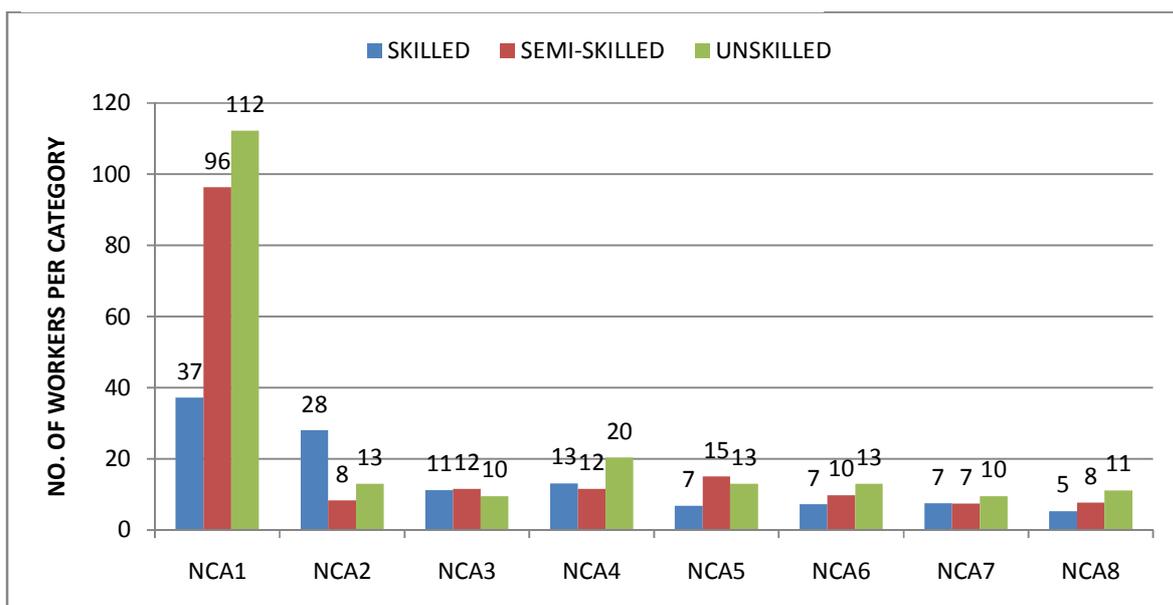


Figure 3.8 below indicates the average number of construction workers employed per category in NCA1 to NCA8. The number of skilled workers in NCA1 37, NCA2 28, NCA3 11, NCA4 13, NCA5 7, NCA6 7 and NCA 8 5. The number of semi-skilled workers in NCA1 96, NCA2 8, NCA3 11, NCA4 12, NCA5 15, NCA6 10, NCA7 7 and NCA 8 8. The number of unskilled workers in NCA1 112, NCA2 13, NCA3 10, NCA4 20, NCA5 13, NCA6 13, NCA7 10 and NCA 8 11.

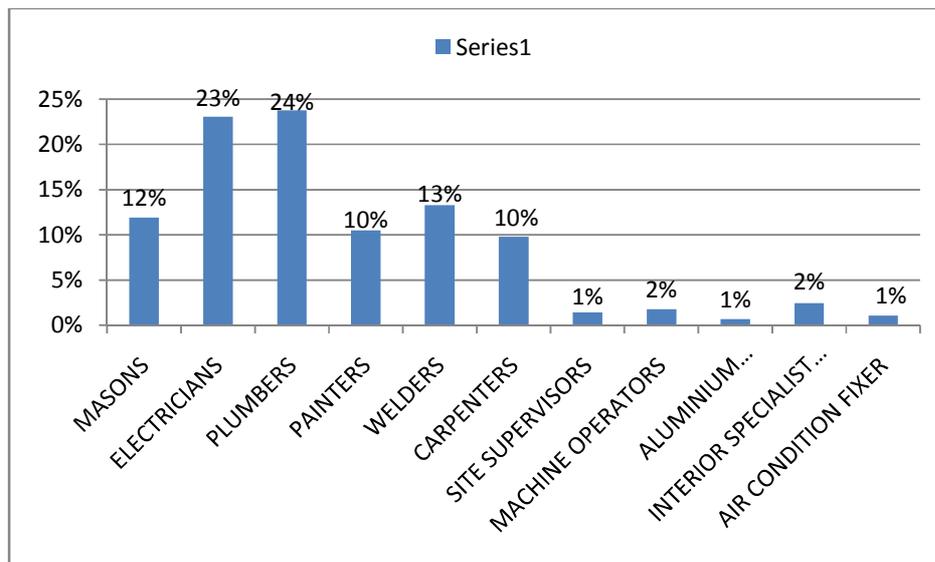
Fig 3.8: Number of Workers Employed by each Category



b) Skill Gaps

Figure 3.9 indicates the skills gap in the sector is dominated by Plumbers accounting for 24%, Electricians 23%, Welders 13%, Masons 12%, Carpenters and Painters 10% each, Machine/Plant Operators 2%, Interior specialist artisans 2%, Aluminum fabricators 1% and site supervisors 1%.

Fig 3.9: Skills Distribution



c) Construction Equipment

Figure 3.10 shows 53% of contractors use leased equipment, 27% Owned, 18% combined lease and owned and 2% use hired equipment.

Availability of road construction equipment is most inadequate in the industry at 58% with bulldozers and graders being singled out as most predominantly inadequate. Availability of other equipment such as cranes, concrete mixers, concrete pumps and vibrators are also inadequate.

Fig 3.10: Equipment Source Model

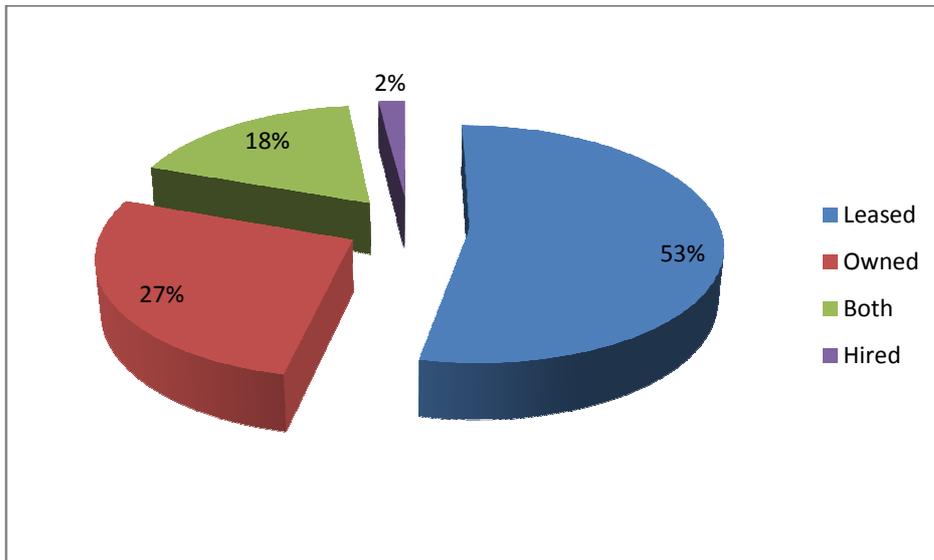
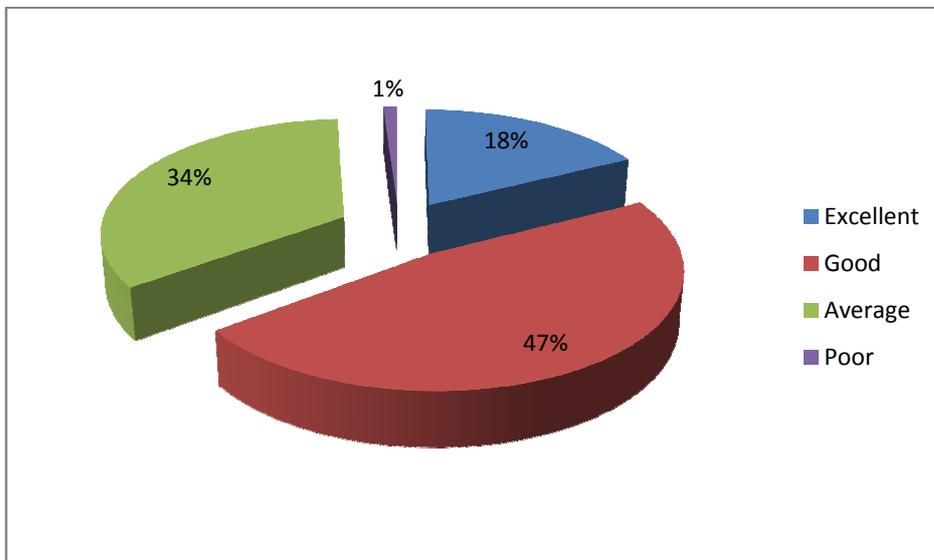


Figure 3.11 indicates that 47% of the equipment is in good service condition, 34% is in Average service condition, 18% in Excellent Service condition and only 1% is in Poor service condition.

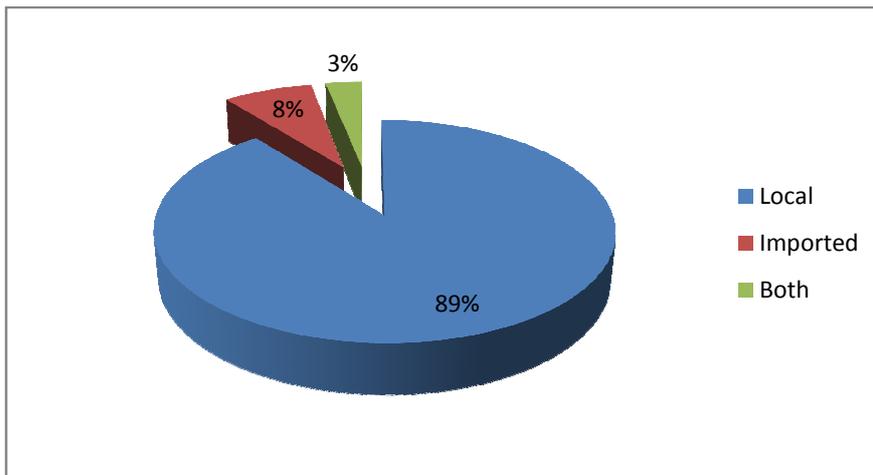
Fig 3.11: Equipment Service Condition



d) Construction Materials

Figure 3.12 shows that 89% of contractors use mostly locally available construction materials whilst 8% use mostly imported materials. 3% rely mostly on both locally available and imported materials.

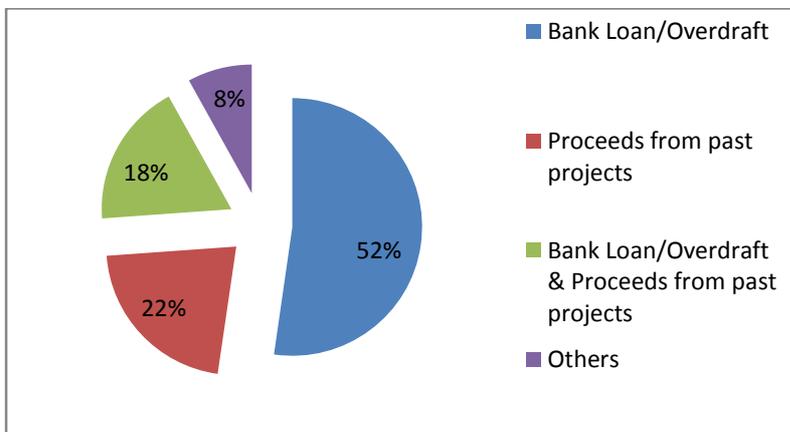
Fig 3.12: Material Availability



e) Project Financing

Figure 3.13 shows contractors main source of project financing include Bank loans/overdrafts accounting for 52%, proceeds from past projects is 22%, both bank loans & past projects is 18% and other sources at 8%. Sources indicated as others include advance payment and shylocks.

Fig 3.13: Contractors' Source of Financing



4.0 Conclusion and Recommendations

4.1 Conclusions

The survey findings indicate that the construction industry is experiencing a number of critical issues. First, the industry is dominated by 75% of semi-skilled and unskilled construction workers. Second, the industry is experiencing skills shortages in key areas such as plumbing, electrical, masonry, paint works, welding and carpentry. Thirdly, 55% of contractors do not own equipment of their own and rely fully on leased and hired equipment. Fourth, 78% of contractors rely on credit financing through banks and other sources. Fifth, there are few women contractors with only 7% own construction firms. However, despite the issues identified, it is worth noting that 89% of contractors reckon that local construction materials are readily available for use and youthful population of up to 35 years of age accounts for 84% of the workforce in the industry. This provides an excellent opportunity for the industry to grow.

4.2 Recommendations

The findings of the survey clearly point to the need for concerted effort, well coordinated and comprehensive strategy and investment to enhance capacity development for the construction industry.

The following specific recommendations are proposed:

a) Skills Development & Improvement

- i. There are over 169,000 semi skilled and 214,000 unskilled construction workers currently employed by contractors in the industry. There is need for specific training courses to improve skills and competencies of this category of workers in the industry. In addition, contractors should be sensitised to take training/upgrading of their employees skills as a strategy for quality improvement, higher productivity and profitability.
- ii. There is need to create Sector Based Skill Development Taskforce that will bring together all the stakeholders – each sub-sector in construction industry, labour and the training providers and other collaborators, for the common purpose of workforce development within the industry. Each sub-sector taskforce will be key in developing skills qualifications standards to ensure that the quality of trainees in technical training institutions is relevant and globally competitive. The Skill

Development Taskforces will also coordinate linkages between the training institutions and the industry to provide on job training for skills development.

- iii. The Authority in collaboration with Technical and Vocational Training Centres (TVETs) and other training institutions should develop tailor made programmes for already employed or self-employed construction workers. The fees charged by the training institutions should be subsidized and trainees supported through mutually agreeable initiatives between the Authority and the institution.
- iv. A skills development fund should be created through apportionment of the construction levy to the fund. The fund will be used to sponsor in-service trainees that contractors send for training in accredited training institutions.
- v. Public-Private Partnership should be enhanced to promote attachment, apprenticeship and internship opportunities for trainees. The strategies should include:
 - Development of a national Internship Policy.
 - Set up Internship Fund. Contractors should apply for such funds on the basis of trainees they have offered internship/attachment.
- vi. Encourage women and youth to take up training courses in construction related fields through awareness campaigns.

b) Construction Equipment & Finance

- i. Establish partnerships with equipment leasing providers and set up strategic regional leasing hubs for ease of access by contractors.
- ii. Set up credit guarantee schemes to provide affordable financial access to local contractors to enable them carry out works effectively.

c) Further Surveys

- i. Carry out nationwide surveys to establish the geographical distribution of construction workers for purposes of planning of training activities.
- ii. Conduct county surveys to determine equipment requirements for planning of leasing programmes.