
THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF WORKS AND TRANSPORT



**STUDY ON THE USE OF FORCE ACCOUNT IN
CONSTRUCTION PROJECTS**

Prepared by:

NCC in Collaboration with AQRB, CRB, ERB and PPRA

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EXECUTIVE SUMMARY

In recent years, the use of Force Account (FA) to implement public construction projects has been widely adapted mostly to build schools, dispensaries, health centers and other Government buildings and houses. Many stakeholders of the construction industry however, are sceptical about the ability of many procuring entities to successfully implement projects using this method. In quest to learn the performance of projects implemented using FA approach, NCC in collaboration with AQRB, CRB, ERB, and PPRA initiated a study to that effect. This study was justified with the obligation to advise the Government in all matters related to construction industry.

The study of the performance of projects implemented using FA method was implemented in two stages, stage one is the review of existing reports of any studies conducted on the subject matter here in Tanzania. The second stage collected additional information from project sites and procuring entities.

This report presents the findings and recommendations. The study has established that the FA is viable method for implementation of works if well managed. This was evidenced by 24 projects out of 175 projects which had satisfactorily complied with procurement and contract management requirements. However, most PEs implemented projects without proper construction and contract management plans as evidenced by lack of engineers estimates (cost planning), bills of quantities, work programmes, specifications, inspection and acceptance plans.

Most of project audited lacked appropriate project documentations making it difficult for review teams to determine some important performance measures. In some projects payments were not based on measurements and payment certificates. It was noted that some LGA were making payments to Artisans without measuring works built by the paid artisan.

The study noted huge variability of overall labour costs in projects particularly in rehabilitation projects. Other huge shortcoming is the concept of one project budgets fits all, where the study has identified that similar buildings implemented at different locations were allocated equal budgets with severe consequences in some projects.

The study has also noted challenge in complying with legislations governing construction projects. Of particular concern is non-use of registered professionals in implementing projects. The review observed that some FA projects did not adhere to competition requirements during procurement of materials and labour. In most entities there was no evidence for price negotiations coupled with improper management of materials.

The study identified that most projects were implemented with relatively unsatisfactory quality coupled with challenge of handling defects and other risks.

Based on the above findings, the study provides a number of recommendations. first, a Report containing **detailed shortcomings** of the projects implemented by FA countrywide accompanied by **detailed best practices** should be prepared and made available to all implementing agencies. Second, **Capacity Building** to reduce the problem of repeated failures or shortcomings, should be done to each PE expected to use FA accordingly.

Third, the whole **project lifecycle management** involving project concept, feasibility study, planning, design, procurement, implementation and closure is supposed to be properly managed. Fourth, the Government through **PPRA** should develop **standard forms of contracts** that will be used in engaging **skilled labours and professionals** in supervision of construction works implemented using Force Account.

Fifth, In the long run, it will be beneficial if FA projects are implemented by **accredited licensed labourers**. Sixth, in order to improve budgeting and cost performance of FA projects, it is important that **unit prices of labour and materials** at different locations in Tanzania are established.

Seven, a **harmonized Guideline for compliance** to all legislations governing the construction projects should be prepared.

ACKNOWLEDGEMENT

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Additional information were collected from Value for Money Audit of COVID 19 PROJECTS CONDUCTED FROM 21ST FEBRUARY TO 7TH APRIL 2022, which was implemented jointly with PPRA. The team from NCC included, Eng. Moses L. Lwiva, Eng. Tumaini E. Lemunge, Eng. Geoffrey I. Mwakasenga, Eng. Evance N. Nyagano, and Eng. Dora H. Mwipopo.

ACRONYMS

United Republic of Tanzania	URT
Ministry of Works and Transport	MoWT
Architects and Quantity surveyors Registration Board	AQRB
Engineers Registration Board	ERB
Contractors Registration Board	CRB
Public Procurement Regulatory Authority	PPRA
National Construction Council	NCC
Occupational Safety and Health Authority	OSHA
Public Procurement Act	PPA
Controller and Auditor General	CAG
Force Account	FA
Occupational Safety and Health	OSH

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CHAPTER ONE

1.0 INTRODUCTION

This chapter discusses the background to the study, scope of the study procedures undertaken in data collection.

1.1 BACKGROUND

Force Account (FA) as one of procurement methods was introduced in the Public Procurement Act of 2011 and its Regulations of 2013. Sect 21(c) of PPA as amended in 2016, defines “Force Account” as a construction undertaken by a Procuring Entity itself or use of public or semi-public agencies or departments concerned, where procuring entity or the public or semi-public agency uses its own personnel and equipment or hired labour.

In recent years, the Government has taken deliberate efforts to improve social economic infrastructures throughout the country. In the quest to enable wide distribution of the benefits of infrastructure spending, the Tanzanian Government prefers the use of FA approach in the construction and rehabilitation of public infrastructure such as schools, hospitals, colleges and public offices. Indeed, there are success stories on the use of the method, however, in various forums most stakeholders in the construction industry pray for proper guidance on effective implementation of projects using FA method.

It is recognized that there are efforts tried by several stakeholders to improve the use of FA method in construction projects. Some of these efforts include the issuance of the Guideline for Carrying out Works under Force Account (PPRA, May 2020), CAG Special Audit on FA Projects in Education Sector (NAO, 2020), Special Procurement Audit on FA Projects in Health Sector (PPRA, 2020), MoWT Report on Special Audit on Construction Projects of Government Buildings Implemented Using FA (AQRB, CRB and ERB, 2020).

In recognition of the efforts made thus far and fulfilling the obligations of AQRB, CRB, ERB, PPRA and NCC in advising the Government in matters related to construction industry, it was seen prudent to jointly conduct a study on effectiveness of FA application in construction projects. To start with, the Study should make use of the findings of previous studies and audits conducted on the subject in order to reconcile and consolidate findings and recommendations, and identify gaps which may be filled to achieve the envisaged improvements. This report presents the approach, findings and recommendations of the study.

1.2 SCOPE OF THE STUDY

The study covers Government project implemented using FA for the period 2016 to 2020. The study reviewed data, information, findings and recommendations of the CAG Special Audit on Force Account Projects in Education Sector (2020), PPRA Special Procurement Audit on Force Account Projects in Health Sector (2020), MoWT Study on Government Building Projects Implemented using Force Account (2021).

Primarily, the study evaluates the effectiveness of using FA method in implementing construction project for the purpose of learning the short comings and best practices with the view of advising both the Government and other construction industry stakeholders. The study concentrates on the following.

- a. To review and identify findings of the study and Audits undertaken by CAG, PPRA, Ministry of Works and Transport special team (AQRB, CRB & ERB), and value for money audit carried by NCC staff.
- b. To establish in relative terms the project performance in terms of project value, duration, quality, cost, compliance and risk handling.
- c. To propose improvements to be adapted to enable successful implementation of construction projects using FA method.

1.3 DATA COLLECTION METHOD

The study went through the Public Procurement Act No. 7 of 2011 (PPA 2011) and its Regulations 2013, G.N No. 446 as amended, the Guideline for Carrying out Works under Force Account and legislations governing practices in construction industry, i.e., AQRB Act (Act No. 4 of 2010), CRB Act (Act No. 17 of 1997 and Amendments) and ERB Act (Act No. 15 of 1997 and Amendments). The study also reviewed the CAG Special Audit on Force Account Projects in Education Sector (2020), PPRA Special Procurement Audit on Force Account Projects in Health Sector 2020, MoWT Study on Implementation of Government Buildings using FA method for a period of 2016 to 2020.

Additional information was collected during the Value for Money Audit carried out on projects implemented through the IMF funded Project No. 5441- Tanzania COVID-19 Social Economic Response and Recovery Plan (TCRP). Particularly, data was collected from forty seven (47 projects) comprising of Classroom, dormitories, staff houses, water tanks, supply of water pipes, construction of emergency medical facilities and construction of intensive care units. The total value of these projects is TShs. 2, 393,957,328. Tanzania Shillings two billion three hundred ninety three million nine hundred fifty seven thousand three hundred twenty eight only.

Findings were compiled using developed study matrix in line with the scope of the study. The data extracted include the following; project value created using FA, quality of work of implemented projects, risks allocation/mitigation, project duration, project cost and compliance to the existing laws, regulations and guidelines.

CHAPTER TWO

2.0 INTRODUCTION

This chapter presents discussion on project performance in terms of project value created, quality of works, project duration, project cost, compliance levels and risks allocation/mitigation.

2.1 PROJECT VALUE ON FORCE ACCOUNT

According to PMBOK (2013), project value encompasses both tangible and intangible elements. Tangible elements are relatively straightforward measured and can easily be reduced to a financial return. The intangible elements however, are difficult to measure but very crucial to creating lifetime impression or outcomes in the minds of stakeholders. They include wide range of environmental and social benefits. Therefore, understanding the intangible value the project can create and identifying low-cost options that have the potential to add significant intangible value for the organization is often emphasized in public projects.

One such intangible value is associated with sustainability. It is important that when projects are conceived, designed, implemented, operated and even demolished, the idea of 'triple bottom line' of 'Profit/People/Planet', as demonstrated in Figure 2.1 below is comprehensively considered (Elkington, 1995).

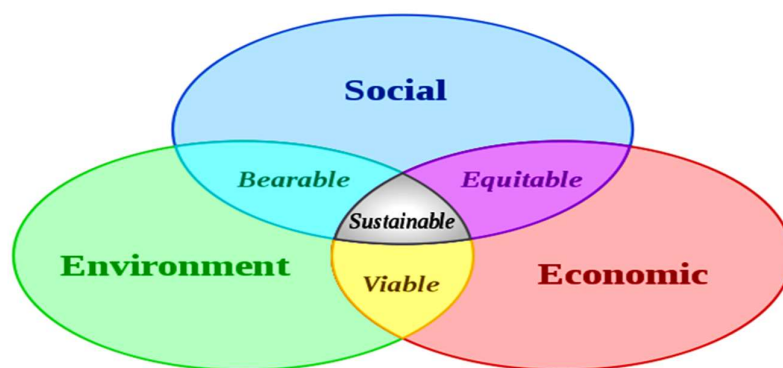


Figure 2.1:

The

Concepts of Sustainability and the 'triple bottom line'

Source (Elkington, 1995)

Prior to emphasis on using FA to deliver projects, CAG audits found major problems in construction projects. Some projects were uncompleted and abandoned, some were judged to be implemented at relatively high costs and most projects were delayed. These findings were prevalent particularly in reports CAG report for year 2015/2016. Sadly, these projects were mostly implemented using competitive procurement methods. Consequently, it was argued that the use of force account may improve the performance of works projects particularly in LGA. This study therefore, assessed the influence of force account in achieving value for money on construction projects.

The general recommendation from previous studies and audits insisted on improving project planning and preparations (pre-construction requirements); cost control; time control; quality control; and adherence to health and safety requirements. Consequently, the study adapted these as elements of study to establish project value created in FA projects.

2.2 COST CONTROL

Regulation 114 (a) of Public Procurement Regulations, (GN 446) of 2013 requires Procuring Entities (PE) to monitor cost when undertaking construction of works. It is therefore a matter of not only compliance to the procurement legislation, but is very important that cost of any project is effectively controlled to enable the project achieve its objectives within budget. In this study however, the following were identified:

a) Insufficient Budget (Cost Increase)

Budgets were set and disbursements made without consideration of particular project site requirements, resulting into failure to complete projects. It was learnt that similar buildings or projects implemented at different Local Government Authorities were budgeted same amount without regard to peculiarity of project sites, local prices and other site-specific factors influencing construction costs.

Multipurpose halls were budgeted to be implemented for TZS 100 million only, a single classroom was to be implemented using TZS 20 million only, administration block TZS 50 million; and a library got TZS 50 million. The Audit noted that, disbursement did not consider engineer's estimates of particular areas. As a result, projects were not completed due to shortage of funds (Refer Table 2.1).

Although this is not a requirement for FA method to set budget without consideration of particular project requirement, in this audit it was identified to influenced the performance of projects implemented using Force Account. Regulations 69 (3) and

(6) require PE to forecast its requirements for goods and works as accurately as practicable. It requires PE to prepare its estimates based on prevailing market prices. Likewise, part 6(a)(ii) of the Guideline for Implementation of Force Account issued 2017 requires MoEST to conduct feasibility study (condition survey) for rehabilitation projects in order to identify needs and funds needed to execute the projects. Therefore, setting similar budget for different project sites is a shortcoming which need to be addressed.

Table 2.1: Uncompleted Projects because of Cost Increase

SN	LGA	Procuring Entity	Project descriptionn	Engineer's estimate (million)	Amount disbursed (million)	Variance (million)	Variation from Estimate (%)
1	Bariadi TC	Simiyu SS	Construction of 2 Hostel Buildings	X	150	X	X
2	Nzega TC	Kitangili SS	Construction of 1 Hostel Building	X	75	X	X
			Construction of multipurpose Hall	X	100	X	X
3	Morogoro MC	Mafiga SS	Construction of Administration Block	87.97	50	37.97	43.2
			Construction of Library	62.31	50	12.31	19.8
4	Nachingwea DC	Nachingwea Girls SS	Construction of 1 Hostel Building	108.26	75	33.26	30.7
	Iringa MC	Mawelele SS	Construction of multipurpose Hall	125.42	100	25.42	20.3
5	Mpwapwa DC	Mazae SS	Construction of multipurpose Hall	147.81	100	47.81	32.3
		Berege SS	Construction of multipurpose Hall	147.81	100	47.81	32.3

X-Implies that Engineer's estimates were not prepared in that respective LGA

Source: (CAG Special Audit March, 2020)

Table 2.1 Shows that out of nine (9) projects which could not be completed with the allocated budget (increase in cost), three (3) did not have Engineer's Estimates. All the remaining six (6) projects that had Engineer's Estimates received funds less than the estimated costs. Table 2.1 also indicates that, variation ranges from 19.8 to 42 percent. The variations were attributed to difference between estimated cost of materials; transportation and labour cost as compared with prevailing market prices. As a result, projects were not completed.

b) Payments were not based on Certificates

Part 9(e) of the Force Account Guideline issued by the Ministry of Education Science and Technology (MoEST), 2017 required interim and final certificates to be prepared in order to ascertain work done and payment to be made. The CAG Special Audit (March, 2020) report pointed out that in four (4) out of seven (7) of visited LGAs, artisans were paid without preparation of Payment Certificates. The artisans were requesting payments and being paid by considering contract labour charges at construction stages they had completed. The extent of artisans being paid without use of Payment Certificates is as indicated in Table 2.2.

Table 2.2: Use of Payment Certificates

Name of LGA	Payment Certificates Used
Bariadi TC	X
Nzega TC	X
Morogoro MC	V
Tanga CC	V
Nachingwea DC	V
Iringa MC	X
Mpwapwa DC	V
Total	X=3, V=4

Source: CAG Special Audit (March, 2020)

Table 2.2 shows that, four (4) out of Seven (7) visited LGAs, Artisans were paid without preparation of Payment certificates. The remaining LGAs which did not use payment certificates used mode of payment for specific BoQ item. For instance, when the artisan completed building the foundation he requested for the payment of labour charge corresponding to that stage of construction.

Payment without preparing Payment Certificates contributed to non-deduction of retention money. Also, inspection and reporting for the executed works prior to payment may not be enforced when payment is done without use of certificates.

In addition, no reduction of retention money was done for LGAs which did not prepare payment certificates. As a result, early defects were noted indicating that appropriate supervision and thorough inspections were not conducted prior to acceptance of work and general site handover. The report pointed out that Interviewed supervising Engineers indicated that, the amount deducted was low because reduction was supposed to be done for labour charge without materials used. This implies that, in case of any defect that will need building materials to rectify, it will be difficult to attain.

In general FA approach poses challenge in handling of defects, because of the involvement of client in purchase of works and supervision of works. It is indeed difficult to hold responsible the local fundi for defects of works which the client has supplied materials and client's personnel was involved in supervising. To eliminate this challenge, the works should be performed by skilled experienced artisans and supervision should be done on works as they proceed by resident qualified personnel so that defects are identified.

c) High Variability of Project Labour Costs

With regard to evaluation of labour charge for rehabilitation projects, the Audit noted that, there was a huge variability on the overall projects labour costs relative to the total project cost. For example, Galanos SS and Usagara SS incurred labour charges at 23% and 19% respectively while Tanga Technical SS was 43% of the total project cost.

Commonly, for simple building (new construction) it is expected that labour costs averages thirty percent (30%) of the total project costs. However, with regard to rehabilitation projects, it is difficult to generalize because of variable nature of rehabilitation requirements. Generally, the study expected to find the labour cost not exceeding thirty percent (30%) of the total project which is commonly expected in normal buildings like classrooms and hostel rooms.

The adaption of FA in implementing these projects was among other things expected to relatively save on labour cost as most of the supervision costs and risks are borne by the Client. Finding labour costs as high as 43% calls for detailed evaluation of the costs. However, there were no details to enable the required comprehensive evaluation to be carried out. Labour charges for all visited rehabilitated projects are presented in **Table 2.3**.

Table 2.3: Percentage of Labour Charges rehabilitated projects

	Name of School/College	Project Amount inTZS (Disbursed Amount)	Labour chargesin TZS	Percentage of Labour Charges
1	Morogoro SS	1,042,554,532.80	205,831,606.00	20
2	Usagara SS	963,501,458.00	240,875,364.00	19
3	Galanos SS	969,269,927.00	220,578,735.00	23
4	Tanga Technical SS	2,111,515,886.00	905,291,241.00	43
5	Nachingwea TTC	1,928,077,257.60	632,481,872.00	33
6	Klerruu TTC	1,139,852,085.50	184,568,241.00	16
7	Mpwapwa TTC	1,624,980,784.94	347,742,370.00	21

Source: CAG Special Audit, (March, 2020)

2.3 TIME CONTROL

Regulation 114 (b) of Public Procurement Regulation (GN 446) of 2013 requires PEs to monitor the progress and timely completion of works. Also, part 6(d) (iii) of Guideline for Implementation of Force Account requires PEs to supervise construction and rehabilitation works so as to ensure that they are completed on time. Review of project reports and site visits noted the weaknesses with regard to time control.

a) Inadequate Use of Work programme

Review of project reports in the visited LGAs noted that, eight (8) out of 22 (equivalent to 36 percent) of projects were implemented and completed without having work programme (refer **Table 2.4**). The report pointed out that Interviewed supervising Engineers and Technicians indicated that there was wrong perception that contract management when implementing projects through Force Account does not necessitate the use of works programme. In principle, preparation of Work Programmes and the supervision for adherence is a primary requirement of any good management practice. Therefore, non practice of a fundamental requirement like this is an indication of misconception of the FA method. If work programmes were not prepared, it is evident that supervision of works was non-existent, or

sporadic and inadequate resulting into reworks, defects, delays and generally poor quality.

Table 2.4: Projects with Work Programme

LGA	Name of Project	Status of Work Programme
Bariadi TC	SQA-Office building	V
	Simiyu SS	V
	Sima B PS	V
	Kidinda PS	V
Nzega TC	Kitangili SS	X
	Bulunde SS	X
	Mwanzoli SS	X
Morogoro MC	SQA-Office	V
	Morogoro SS	V
	Mafiga SS	X
Tanga CC	Usagara SS	V
	Tanga Tech SS	V
	Galanos SS	V
Nachingwea DC	SQA-Office	X
	Nachingwea TTC	V
	Nachingwea Girl SS	X
Iringa MC	Klerruu TTC	V
	Mawelewele	V
	Tagamenda	V
Mpwapwa DC	Mpwapwa TTC	V
	Mazae SS	X
	Berege SS	X

Source: CAG Special Audit (March, 2020)

b) Delays in Completion of Projects

It was noted that, ten (10) out of 22 (equivalent to 46%) of audited projects were not completed on time (i.e., within 3 months); four (4) out of 22 projects equivalent to eighteen 18% were timely completed; and eight (8) projects (equivalent to 36%) were not completed due shortage of funds (refer Table 2.5). According to **Table 2.5**, one project was completed one month before time. Whereas delayed projects were late by one (1) to ten (10) months. Details on uncompleted projects are provided in sub-section (c) hereunder.

Generally, a project may be considered to have delayed if the duration set was comprehensively computed considering all aspects of the project and site. In this case it was not very clear why there were longer delays in Mpwapwa District Council.

In any case this is a matter requiring detailed evaluation to establish the source and cause of the delays in order that the same may be addressed with the view of improved performance in future projects.

Table 2.5: Variation between Planned and Actual completion Status

LGA	Name of Project	Start date	Actual Completion Date	No. of months	Completion Status
Bariadi TC	SQA-Office building	June, 2019	September, 2019	3	Timely completed
	Simiyu SS	February, 2019	Not completed	-	Not Completed
	Sima B PS	August, 2016	October, 2016	2	Timely completed
	Kidinda PS	August, 2016	November, 2016	3	Timely completed
Nzega TC	Kitangili SS	April, 2019	Not completed	-	Not Completed
	Bulunde SS	April, 2017	August, 2017	4	Delayed
	Mwanzoli SS	July, 2017	February, 2018	7	Delayed
Morogoro MC	SQA-Office	July, 2017	February, 2018	7	Delayed
	Morogoro SS	June, 2019	October, 2019	4	Delayed
	Mafiga SS	June, 2019	Not completed	-	Not Completed
Tanga CC	Usagara SS	June, 2019	December 2019	6	Delayed
	Tanga Tech SS	May, 2017	Not handed over	-	Not Completed
	Galanos SS	July 2019	November, 2019	4	Delayed
Nachingwea DC	SQA-Office	August, 2019	December, 2019	4	Delayed
	Nachingwea TTC	April, 2018	Not completed ¹¹	-	Not Completed
	Nachingwea Girl SS	May, 2019	Not completed	-	Not Completed
Iringa MC	Klerruu TTC	April, 2018	Not completed	-	Not Completed
	Mawelewele	April, 2018	Not handed over	-	Not Completed
	Tagamenda	March, 2017	June, 2017	3	Timely completed
Mpwapwa DC	Mpwapwa TTC	September, 2016	February, 2017	5	Delayed
	Mazae SS	April, 2017	February, 2018	10	Delayed
	Berege SS	April, 2017	February, 2018	10	Delayed

Source: CAG Special Audit (March, 2020).

c) Uncompleted Projects

Based on **Table 2.5**, eight (8) projects were not completed at the time of audit. Physical verification to the visited projects during the audit showed that the complex structures (multipurpose halls) together with hostel buildings were the uncompleted and there were no construction activities that were going on during audit period in all visited projects. The status of uncompleted projects is presented in **Table 2.6**.

Table 2.6: Progress Status of uncompleted projects during audit period

S/N	Name of School/College	Uncompleted Building(s)	Remained works
1	Simiyu SS	2-Hostel Buildings	Ceiling, flooring, painting, plumbing and water system installation, electrical installation, aluminum windows
2	Kitangili SS	1-Hostel Building	Ceiling, plastering, flooring, painting, plumbing and water system installation, electrical installation, aluminum windows
		Multipurpose hall Building	Ceiling, plastering, flooring, painting, plumbing and water system installation, electrical installation, windows
3	Mafiga SS	Administration and Library	Painting, electrical and aluminum windows
4	Nachingwea TTC	Girls hostel Building	Mortice locks, fixing of Hand Wash Basins, water connection, fixing of ventilation to doors
		Water storage Tank	Fixing of fibre tank on the water tank tower
5	Nachingwea Girls SS	1-hostel Building out of two (2) hostel buildings	Ceiling, plastering, flooring, painting, plumbing and water system installation, electrical installation, aluminium windows
6	Mawelewele SS	Multipurpose hall Building	Ceiling, external plastering, flooring, painting, plumbing and water system installation, electrical installation, aluminium windows

Source: Auditors analysis for uncompleted projects, 2021 by CAG special audit march, 2020

Table 2.6 shows that, the completed projects had the main structural work completed waiting for finishing activities. This was caused by inadequate consideration of Engineers Estimates resulting into funds disbursed being insufficient for completion of projects. It should be noted here that there is no single estimates fits all sites even for similar buildings. The good practice would be to accept the submission of Engineers Estimates for scrutiny and approval so that project budgets are based on actual prices, risks, and costs as prepared by qualified professional.

2.4 QUALITY CONTROL

Section 4a (3) (c) of Public Procurement (amendment) Act no.5 of 2016, requires PEs when executing their duties to strive to achieve value for money in terms of quality as per set criteria. Likewise, part 6(e) (i) of the force account guideline issued by the ministry of education science and technology (MoEST), 2017 required LGA engineer to ensure quality of executed works was according to conditions of contracts. This also included ascertaining quality of material procured for construction meet construction standards. The study noted the following weaknesses in relation to quality control.

a) Material Testing

Buildings and other structures are designed and constructed to withstand different agents of failure (loads and environment conditions), as such the sizes, strengths, material qualities and workmanship are specified based on these design and construction requirements. To ascertain structural requirements have been met, inspection, tests and acceptance procedures have to be strictly followed. Based on CAG Special Audit (March, 2020) it was noted that there were few tests conducted mainly of sand-cement block strength as indicated in Table 2.7. It is alarming to note that concrete and reinforcements which are the major structural elements were not tested.

Table 2.7: records for material testing in visited projects

LGA	Name of Project	Testing of Materials Conducted
Bariadi TC	SQA-Office building	Tested
	Simiyu SS	Not Tested
	Sima B PS	Not Tested
	Kidinda PS	Not Tested
Nzega TC	Kitangili SS	Not Tested
	Bulunde SS	Not Tested
	Mwanzoli SS	Not Tested
Morogoro MC	SQA-Office	Tested
	Morogoro SS	Not Applicable
	Mafiga SS	Tested
Tanga CC	Usagara SS	Not Applicable
	Tanga Tech SS	Not Applicable
	Galanos SS	Not Applicable
Nachingwea DC	SQA-Office	Tested
	Nachingwea TTC	Not Tested
	Nachingwea Girl SS	Tested

Source: CAG Special Audit (March, 2020).

Based on Table 2.7 tests were conducted in all the three (3) office building projects and two (2) secondary schools. Further, no tests were conducted in Nzega Town Council, Tanga City Council, Iringa Municipal Council and Mpwapwa District Council. Testing the strength of sand-cement blocks, concrete and reinforcement was crucial to ascertain quality of the projects. Interviews with the LGA engineers noted that, failure to test construction materials was contributed by inadequate preparation of BoQs that did not consider providing item for material testing thus there was no set amount for testing.

Furthermore, the study noted that, test results of sand-cement blocks at Bariadi SQA office failed but the construction proceeded. Using sand- cement blocks that failed the tests will affect the strength of the structure. For other projects, all tests undertaken passed.

b) Quality Assurance

Regulations and by laws 59(3) of 2010 of ERB Act No. 15 of 1997 requires that every stage of construction that requires approval by the supervising engineer at site should be evidenced by issuance of site instructions. Besides, part 6(e)(i) of Guideline for Implementation of Force Account Projects, 2017 required the engineer to ensure the construction or rehabilitation standards are according to conditions of contract including quality of the executed works.

Based on CAG Special Audit (March, 2020) it was noted that there were no instructions or documented approvals of execution procedures by the supervising technical personnel. The audit team expected to be availed with evidence of step-by-step approvals by the supervising technical personnel.

Failure to give approvals was caused by shortage of engineers and technicians to supervise the projects. Lack of approvals at different stages of construction casts doubt on quality assurance of the executed works. High risk was on construction of thirteen (13) structures which are considered to be relatively complex, such as, multipurpose halls involving activities which needed to be executed to the satisfaction of a professional engineer.

c) Use of Unqualified Professionals

Section 12(a) of the ERB Act no.15 of 1997 (as Amended) requires every Professional Engineer or Consulting Engineer to possess a valid practicing certificate or license when discharging duties. Based on CAG Special Audit Report (March, 2020) it was noted that two (2) out of four (4) engineers and three (3) out of three (3)

technicians were practicing (supervising technical personnel) without being registered with ERB. Table 2.8 gives registration status of civil engineers and technicians who were involved in projects supervision of visited LGAs.

Table 2.8: registration status of engineers and technicians involved in projects supervision of visited LGAs

LGA	Supervising Engineer(s)/Technician(s)	Status of Registration (ERB)
Bariadi TC	Civil Engineer	Unregistered
Nzega TC	Civil Technician	Unregistered
Morogoro MC	Civil Engineer	Registered
Tanga CC	Civil Engineer	Registered
Nachingwea DC	Civil Technician	Unregistered
Iringa MC	Civil Engineer	Registered
Mpwapwa DC	Civil Technician	Unregistered

Source: CAG Special Audit (March, 2020).

Table 2.8 shows that in the sampled seven (7) LGAs, three (3) LGAs including Nzega Town Council, Nachingwea District Council and Mpwapwa District Council, projects were supervised by civil technicians. The number of projects supervised by technicians was thirty-three (33) at times narrated in Section 3.5.1 of this Report.

Furthermore, Table 2.8 shows that three (3) out of seven (7) visited LGAs had engineers who were not registered with ERB. The audit team is of the view that use of unregistered engineers was caused by lack of enforcement on the use of registered engineers in the project implementation. Working with unregistered engineers in projects implementation was on-compliance with the ERB Act no.15 of 1997 (as amended).

2.5 SUSTAINABILITY OF PROJECTS

The Audit Team examined sustainability after completion of whole or part of the projects and the following weaknesses were noted:

a) Existence of Early Defects after Project Completion

Defects arising during construction needed to be rectified before the project are considered as completed. During site visit, audit noted a number of defects in various projects as shown in **Table 2.9**.

Table 2.9: Defects noted in the Visited PEs

Name of Procuring Entity	Noted defect(s)
Defects due to unsatisfactory workmanship	
Berege SS	Floor cracking on parts of completed works such as toilet Corridor.
Bulunde SS,	Cracking of floor at washing area.
Mazae SS	Wall crack at hostel building.
Klerruu TTC	Waste pipe having leakage at one of the toilets of hostel Building.
Klerruu TTC	Stagnation of water in one of the toilets of hostel Building.
Simiyu SS	Wall tiles of Laboratory tables peeled off.
Mwanzoli SS	Floor cracking in one of the hostel buildings.
Mpwapwa TTC.	Peeling off of Bituminous Painting at foundation in one of the buildings.
Klerruu TTC.	Peeling off of internal painting in one of the hostel Building.
Sima B PS	Floor cracking in one of the classrooms.
Tagamenda SS	Floor crack in one of the classrooms.
Mpwapwa TTC	Door frame termite attack.
Uncompleted works defects	
Simiyu SS	Gas system pipes hanging at one of the Laboratory rooms.
Mpwapwa TTC	Electrical conductor or wire is bared due to switch left Open.
Kitangili SS	Trusses members jointed with unsatisfactory number of nails, one or two
Nachingwea SQA	Switch left open in meeting room of Nachingwea SQA Building.
Improper Usage and Mishandling defects	
Simiyu SS	Water taps destructed, water systems not functioning.
Berege SS	Improper usage and mishandling of toilets facilities.
Mwanzoli SS	Miss use of the hostel room.
Morogoro SS	Shower rose removed in the bathrooms
Mpwapwa TTC	2 out of 4 numbers of water corks had been removed.

Source: *Auditors' Analysis of defects in visited projects, 2020/21.*

Table 2.9 shows that, defects were noted in different schools during post-construction stage of the projects which is the time when the projects were used by occupants. Unsatisfactory workmanship by the artisans; uncompleted works; and improper usage and mishandling of facilities infrastructure were among the factors that led to presence of early defects after project completion.

The report pointed out that Interviewed headmasters or headmistresses indicated that, inadequate supervision of engineers led to quality concerns of implemented

projects. Furthermore, there was unsatisfactory workmanship on truss joints which put the roof structure at risk of being blown away by wind in case strong winds.

b) Use of completed Buildings for Unintended Purpose

The study noted that there were buildings which while complete were not used as intended. This is an indication that project needs analysis prior to execution was not properly done. It was learnt that PEs received funds and instructions on what scope of facilities they were supposed to build without being involved in the design of the project. They implemented instructions of project scope as directed, consequently, the some completed buildings were left unused which would lead to deterioration if left unused for long time.

2.6 ENVIRONMENTAL AND SOCIAL IMPACT MATTERS

This aspect requires client to conduct Environmental and Social Impacts Assessment (ESIA) to ascertain the possible impacts that may be caused in implementing the proposed project and make commitment by preparing and implementing Environmental and Social Impacts Management Plan (ESIMP) as means for mitigating them. The study observed that there was no evidence from the reviewed reports on whether the implemented projects had conducted ESIA prior to their implementation.

2.7 COMPLIANCE OF LAWS REGULATING THE INDUSTRY

2.7.1 PPA of 2011, Regulations and Guideline

Section 64 of the PPA of 2011, as amended in PPA 2016, defines force account as a process of carrying out work by a public or semi-public departments or agencies using its human resources and equipment in collaboration with another public or private entity.

Section 64(5) of the Public Procurement Act, 2011 (As Amended) provides that:

The use of force account may be justified where:

- (a) Works are small, scattered, and in remote location for which qualified construction firms are unlikely to tender at reasonable prices;
- (b) Work is required to be carried out without disrupting ongoing operations;
- (c) There is an emergency that needs immediate attention.

Regulation 167 of the Public Procurement Regulation, 2013 (As Amended) provides that:

- (1) The force account may be used upon satisfying any of the following conditions:
 - (a) the required works are scattered or are in remote locations for which qualified construction firms are unlikely to tender at reasonable prices;
 - (b) work is required to be carried out without disrupting ongoing operations;
 - (c) risks of unavoidable work interruption are better borne by a procuring entity or public authority than by a contractor;
 - (d) there are emergencies which require a prompt attention;
 - (e) the procuring entity has qualified personnel to carry out and supervise the required works; or
 - (f) the maintenance or construction is part of the routine activity of the procuring entity.
- (2) Force account means a process where works are carried out by a public or semi-public departments or agencies by using its personnel and equipment or in collaboration with any other public or private entity.

Prior to decisions on choosing FA the procuring entity has to make cost and benefit analysis in order to determine whether it is cost effective to use it rather than to execute the works by contracting out. A review of the plans (Annual Procurement Plans) showed that the plans stipulated the methods to be used to acquire the materials and/or services, budgeted costs and timeframe which were critical towards successful works completion. Through plans, the requirements were consolidated (where possible) in order to economize transactions and lead times during implementation. Moreover, a number of associated methods are used depending on the context, timing and expected outcomes. The associated methods involve shopping/competitive quotation (reg. 163); mini-competition (Regulation. 131-(5)); minor value procurement (Regulation 165); micro value procurement (Regulation 166); and community participation (Regulation. 168).

2.7.2 Industry Regulatory bodies (AQRB, CRB and ERB)

The National Construction Policy (2003) gave power for establishment of regulatory bodies which include AQRB, CRB and ERB. This policy to establish AQRB Act No. 4 of 2010, Contractors Registration Act No. 17 of 1997 with its Amendments and Engineers Registration Act No.15 of 1997 (revised 2007). Implementation of any construction projects therefore is supposed to comply with the requirements of these laws.

a) AQRB Act No. 4 of 2010

Section 12 of AQRB Act of 2010 necessitate all practicing professionals and firms to register as professional, semi-professionals architects, Quantity Surveyors and allied

professionals in order to monitor and regulate their conduct. Sections 20, 37 and 34 of the AQRB Act of 2010, require any developers, consultants or public or private entity who design or construct any buildings to do so using qualified professionals and to register the projects with AQRB. It was however, established that some of these projects were implemented without being registered with AQRB as provided in Section 2.7.4.

b) CRB Act No. 17 of 1997

The Contractors Registration Board (CRB) was established by the Act No. 17 of 1997. The Board is a regulatory body charged with responsibility for registration, regulation and development of contractors. The Board also keeps track of all construction projects executed in the Country.

Section 22 (1) of Act No. 17 of 1997 requires any person or firm or trades who carries on business as contractor in Tanzania to be registered with CRB. In this regard, the contractor is defined as *“any person who for reward or other valuable consideration undertakes the construction, installation or erection, for any other person”*.

c) ERB Act No.15 of 1997

The ERB is a regulatory body established under the Engineers Registration Act, No. 15 of 1997 and has been given the responsibility for regulating the engineering activities and conduct of engineers and engineering consulting firms.

Section 25 (1) of ERB Act No. 15 of 1997 requires all practicing professionals to register as professional in order to monitor and regulate their conduct.

It is thus imperative that the activities of engineers be regulated in a manner that will ensure safety to life, property and the environment and at the same time enhance the quality of engineering works and services.

2.7.3 Occupational Safety and Health Authority (OSHA)

Section 16(1) of OSH Act of 2003 requires all workplaces to be registered by OSHA. Sections 24, 25, 26 and 27 of OSH Act of 2003 requires that first aid facilities were available at all times at the site and that Suitable arrangements were made for all necessary welfare and hygiene requirements and for the prevention of epidemics.

Section 12(i) of OSH Act of 2003 requires that accidents near-misses, injuries, illnesses, deaths, and non-compliance be reported to the inspector.

2.7.4 Study observation on compliance

According to PPRA, CAG audit reports and MoWT study, the following issues were observed:

a) Number of qualified professionals

Insufficient qualified registered professionals and semi-skilled labours compared to the number of projects required to supervised and executed as well as lack of transport facilities for these professionals.

b) Qualification of supervising team

Works being supervised by unqualified personnel

c) Project registration

FA projects were not registered with the professional's bodies, Also the report identified lack of proper Planning i.e., Action Plan, Procurement Plan and Project/Work Plan in these projects. This leads to failure in project planning and monitoring, frustration of projects, delays in these projects and escalation of costs.

d) Documentation

Most of projects being executed in LGAs (health and education sector related building projects), lack necessary project and contract documentations such as Schedule of Materials/BoQs, Works Plans, Quotations, Contracts, documents supporting payments (invoice and GRN) were missing or not prepared at all leading to lack of involvement of PMU and TB in the processes.

e) Procurement Procedures

PPRA special Audit report pointed that, the recorded average compliance level is below the targeted compliance level of 80% which is considered by PPRA as satisfactory compliance level. The overall average compliance level of all 175 audited health facilities was fair at 73.5%.

Out of one hundred and seventy five (175) audited health facilities, forty two (42) health facilities equivalent to 24 percent were assessed to have satisfactory performance with score equal or above 80 percent, one hundred and twenty seven (127) audited health facilities equivalent to 72.6 percent were assessed to have fair compliance level with scores between 60% and 79.9% and six (6) audited health

facilities equivalent to 3.4 percent were assessed to have poor performance with scores below 60%.

The average compliance levels for the six performance indicators were as follows: Institutional Set up at lower level (Establishment of Committees) was satisfactory at 91%; Preparation and implementation of Annual/Activity Action Plan was fair at 72.6%; Appropriateness of the tender process was fair at

60.4%; Appropriateness of contract preparation, formation and implementation was poor at 51.4%; Quality of executed works and supplied goods was satisfactory at 88.2%; and Management of procurement records was poor at 54.5%.

Building materials were not procured from reliable sources; lack of approval of contracts by TB, legal officers were not involved in contract vetting, improper signing of the contract, project managers were not preparing progress reports, payments to casual workers were effected without inspection of materials bought; advance payment were paid without stated in contracts; inspection reports for works done were not prepared (PPRA, 2019).

f) Permits

FA projects did not comply with requirement of requiring building permits prior to commencement to construction which lead to lack of inspection from LGA's. The study noted that, from the CAG report 1 (one) project out of 22 (equivalent to 95.5%) of the projects were implemented without having building permits.

The report noted out that from the Interviewed supervising LGA's Engineers, the construction of public buildings without building permits was caused by wrong perception that government buildings especially those owned by LGA did not need permits.

g) Health and Safety

The study noted that Health and Safety Issues were neither Recorded nor Reported, there were no site Accidents Register Books and progress reports did not include issues concerning health, safety, and welfare of persons, and damage to the property. This was contributed by weakness of Contracts because they lacked clause covering Health and Safety issues in the conditions of contracts.

2.7.5 Inadequacy of Acts, Regulations and Guideline on FA

a) Project Size

In regards to the size of Force Accounts projects, there inconsistency between PPR 167 of 2013 as amended and the Force Account Guideline May 2020 where the Guidelines insist on the use of Force Account for small projects where PPR is

accommodative of project sizes. The size criteria need to be carefully evaluated as complexity, nature and risks may render even small projects to be unqualified for FA method.

b) Qualification of Personnel

Regulation 167 (1) (e) state that “the procuring entity has qualified personnel to carry out and supervise the required works” the word “qualified personnel” should also mean qualified registered professional as stated in the Force Account guideline of May 2020. There is a very crucial criteria, in fact it should be a pass or failure criteria meaning is a PE has no qualified personnel then it should not consider to implement projects using FA without engaging them first.

c) Individual Practice of Professional

AQR Act restricts independent individual practice of the registered professionals, meaning that the registered professionals must discharge their professional duties under a registered professional firm. This reduces risks of errors, omissions and mistakes in designs, specifications and instructions, as in the firms designs and instructions will be reviewed before being issued.

d) Project registration with regulatory bodies

According to AQRB CRB & ERB Acts projects registration should be done through registered firms: a condition which is not fulfilled in the setup of FA method as observed in inspected/audited FA projects.

2.8 RISKS OF FA PROJECTS UNDERTAKEN

A project risk is an uncertain event that may or may not occur during a project. Contrary to our everyday idea of what “risk” means, a project risk could have either a negative or a positive effect on progress towards project objectives. Risk management in project management starts with identifying project risks. If a known project risk does occur during the project, the project manager should then use measures devised during project planning to mitigate negative effects and maximize positive effects.

A review from the studies/audits done by CAG, PPRA and MoWT special team (AQRB, ERB & CRB) enabled the identification of the following risks;

2.8.1 Contractual Management Risks

Failure to identify and manage contractual management risks through proper preparation of contracts may lead to possibility of non-completion of works and non-compliance to oral agreed terms, delivery and acceptance of inferior materials, late deliveries or delay of delivery of materials, possibility of assigning or hiring of inexperienced and incapable fundis, vandalism and lack of security on site, that caused damage of works and materials was stolen from the site, Possibility of unavailability of work plan and progress of work, Possibility of poor works due to shortest time to implement the projects, Possibility of suspension of projects, because the labourers are paid in daily bases, Possibility of imprisonment to the projects implementers resulted from political pressure, Loss of evidence and easy escape of responsibilities due to lack of written instructions to “local fundis”.

2.8.2 Financial risks

Failure to identify and manage financial risks through proper financial planning and procedures lead to possibility of losing all materials, properties, equipment's and loss of life once an accident occurs due to absence of Insurance, Possibility of high price compared to the market price due to non-transparent and lack of competition, Possibility of high operation costs/ maintenance cost resulted from poor workmanship, Possibility of poor materials and poor work due to no warranties, Financial loss due to absent of defect liability period, Risk of receiving defective due to absence of competent inspection teams.

2.8.3 Social risks

Failure to identify and manage social risks through proper consideration of social issues during planning and project execution lead to, Possibility of high staff turnover as a result of harassment by politicians leading to demoralize public officers and resigning from employment, Possibility of loss of life due to poor health and safety measures to workers, Possibility of suicide, when are supposed to give account to professionals issued for non-professionals, Possibility of non-participatory of the societies to provide their power or resistance

CHAPTER THREE

3.0 FINDINGS AND RECOMMENDATIONS

3.1 FINDINGS

The overall objective of this study was to study audits and previous studies on the performance of projects implemented using FA method. The findings reported in this report are based on the CAG Special Audit on Education Sector (March 2020), the PPRA Special Procurement Audit on Health Sector (2020), and the report prepared by a Team of experts from AQRB, CRB and ERB on Government building and houses (2020).

3.1.1 FA Method can Implement Projects with Satisfactory Performance

Generally the three reports have indicated that FA method can be used to implement works project with satisfactory performance. Despite the fact that most of projects visited recorded several shortcomings, there were, for example 24 projects among the 175 projects visited by the PPRA which passed the procurement compliance threshold score. This is a very useful finding as it justifies the need to learn from these good performance projects to emulate their practices in order to improve those future projects.

3.1.2 Lack of Adequate Construction Management Planning

The study has noted that most PEs implemented projects without proper construction and contract management plans. This was evidenced by lack of engineers estimates (cost planning), lack of bills of quantities, payments without valuation and payment certificates, lack of work programmes, lack of specifications, lack of inspection and acceptance plans. It is obvious that without these important plans, projects management would be very difficult and mostly suboptimal and based on experience and skills of the inspector.

3.1.3 Lack of Project Documentation

Most of project audited lacked appropriate project documentations making it difficult for review teams to determine some important performance measures. Some sites did not keep record of inspection and test results, some did not keep site diaries, some did not keep updated work programmes, and others did not keep supervision instructions. Lack of these important documentations is indication that most PEs are not aware of the importance of the documents in project performance.

3.1.4 Payments Not Based on Measurements and Payment Certificates

It was noted that some LGA were making payments to Artisans without measuring works built by the paid artisan. This is an indication that employment of these artisans was not properly made in order that their payments are paid on piece work. It further indicates that works was not inspected before being paid. This may result in paying for works with of poor workmanship.

3.1.5 Variability of Labour Costs

The study noted huge variability of overall labour costs in projects particularly in rehabilitation projects. Generally, construction costs (material, labour, equipment) do vary from one project to the other. However, in FA projects one would expect that labour costs are relatively lower than in projects implemented by contractors because of the fact that the risks are more borne by the employer than in other procurement arrangements. So where projects record overall labour cost at more than 30% requires scrutiny. Unfortunately, most projects lacked enough details to do the required scrutiny.

3.1.6 Misconception of One Project Budgets Fits All

The study has identified problems associated with similar buildings implemented at different locations being allocated equal budgets. This has caused some projects not to be completed. Basically this practice is professionally correct, as budgets have to consider site specific conditions and risks. Instead of allocating equal budget to projects of similar design, implementing entities should be allowed to submit detailed budgets for scrutiny and approval so that projects are allocated sufficient budget to complete projects.

3.1.7 Compliance to Legislations Governing Construction Projects

The study has noted challenge in complying with legislations governing construction projects. Of particular concern is non use of registered professionals in implementing projects. It was noted that some projects were supervised by persons who are not professionally qualified and licensed to do so. This is an indication that PEs misconceived the use of FA in implementation of construction projects. It can be judged that LGAs thought FA is a method which does not require strict professional practices during project implementation. This is also evidenced by lack of construction and contract documentations.

3.1.8 Studies are not detailed enough to learn sources and causes of shortcomings

The three reports which formed the bases of this report generally lacks detailed evaluation of sources and causes of weaknesses in projects. Mostly, the report has identified the weaknesses without adequate discussion of reasons resulting into these shortcomings. Lack of details leaves room for supposition and individual opinions which may be misleading. It is imperative that detailed original information concerning the project and conditions leading to shortcomings are collected to enable sources and causes of shortcomings to be correctly identified. It is from these details that opportunities for improvement are identified and practical improvement programs are designed.

The review of the report among other things have noted that the reports have had very little information that could assist in quantifying the actual cost of projects implemented, this is due to the reason that the information/data collected by the

previous studies done had no proper tool for collecting the total project costs i.e Design and document preparation cost, Total Material cost including transportation and handling cost, Total labour cost, Project Supervision cost and Permits and project registration cost.

3.1.9 Procurement Shortcomings

The review observed that the FA projects were characterized with questionable competition during procurement of materials and labour. In most entities there was no evidence for price negotiations coupled with improper management of materials.

3.1.10 Quality of Works

The study identified that most projects were implemented with relatively unsatisfactory quality. Some projects had already started indicating defects. There also sites whose projects were not completed. This jeopardized the achievement of value for money during implementation of construction projects mainly in education sector.

3.1.11 Challenge of Handling Defects and Other Risk

Common works contract contain defect rectification clause, where by contractors are apportioned the risk of quality of materials, quality of workmanship and performance of structure. However, in FA method, the Employer is impliedly required to guarantee the quality of materials and components, as well as to supervise works to attain quality of workmanship and proper functioning of facilities. This calls for strict selection of skilled labours under close supervision of experienced qualified professional. This challenge is not well understood by most implementing agencies, and may pose a huge risk to the durability of most structures implemented through FA.

3.2 RECOMMENDATIONS

This study makes the following recommendations:

3.2.1 Detailed Feedback of Shortcomings and Best Practices

A Report containing detailed shortcomings of the projects implemented by FA countrywide accompanied by detailed best practices should be prepared and made available to all implementing Agencies. This can be used together with the issued Guidelines to enable PEs to improve their project performance.

3.2.2 Capacity Building

In order to reduce the problem of repeated failures or shortcomings, it is important that the capacity of each PE to implement envisaged projects using FA is assessed to identify gaps. These gaps may be eliminated through capacity building programs. Where professionals are lacking, arrangements should be made to make them adequately available during the project planning and project implementation. Where

personnel lack experience and skills appropriate training should be arranged for them. The idea is FA should only be implemented where public entities have the required capacities. Additionally, there should be trainings on related laws, issued guideline and practices from time to time to all staff and stakeholders involved in projects planning, procurement and construction transactions.

3.2.3 Project Lifecycle Management

Any successful project requires proper lifecycle management, that is, project concept, feasibility study, planning, design, procurement, implementation and closure are supposed to be properly managed. Particular emphasis should be in project planning, where project scope, cost (cost estimation and enumeration), quality (specification), duration (work programme) and risks are professionally established to form basis for project and contract management. It should be a requirement that these are prepared and appropriately approved as requisite for project financing and implementation. The Guidelines should therefore detail the requirement of these Plans in their implementation. In essence this embodies the need to involve professionals who are qualified, experienced and licensed.

3.2.4 Preparation of Simple Standard Contracts

With the peculiarity nature of the setup of force account the Government through PPRA should develop standard form of contracts that will be used in engaging skilled labours and professionals in supervision of construction works. The contract should also address the aspect of performance guarantees in workmanship, requirements for payments using certificates, use of work programmes, keeping site and project records, and other important aspects of contract and works management.

3.2.5 Accreditation and Licensing of Skilled Labourers

In the long run, it will be beneficial if FA projects are implemented by accredited licensed labourers. This will improve the quality of workmanship and reduce the problem of detailed close supervision. This however, requires that labourers are accredited, registered and licensed by a regulatory body like National Construction Council.

3.2.6 Establishment of Labour and Material Price Guidelines

In order to improve budgeting and cost performance of FA projects, it is important that unit prices of labour and materials at different locations in Tanzania are established. These prices will be updated periodically to make sure that they are up to date and reflect the actual variability of prices in a year and across locations.

3.2.7 Adherence to all Legislations

A harmonized Guideline for compliance to all legislations governing the construction projects should be prepared. In this Guideline compliance requirements for different

acts and regulations should be spelt out in simple terms and checklists. Examples of these legislations include Act No 15 of 1997, Act No. 17 of 1997, Act No. 5 of 2003, just to mention a few. The preparation of this Guideline may be coordinated by Ministry of Works as the custodian of the construction industry.

3.2.8 Additional Site/Project Information

In order to comprehensively prepare detailed performance of projects implemented by FA, additional data collected from sites and entities is required. It is the recommendation of the review team that this report should form just the baseline upon which additional analysis would improve findings and detailed analysis. Therefore, NCC in collaboration with AQRB, CRB, ERB and PPRA should arrange to collect additional information from FA projects to improve the details of analysis, findings and recommendations.

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