DBA ASSIGNMENT
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THE CONSTRUCTION INDUSTRY IN KENYA AND TANZANIA: UNDERSTANDING THE MECHANISMS THAT PROMOTE GROWTH.

The construction industry is a very important one. Globally the annual value of the construction industry is of the order of 1.5 trillion dollars constituting about 8% of GDP and about 60% of fixed capital formation. It is one of the most relevant forces of the world economy representing 7% of its total employment. In Kenya and in Tanzania, the construction industry is a key indicator and driver of economic activity and wealth creation

The construction sector involves the construction of a wide range of public and private sector facilities including but not limited to:

- Transport and communications sector – roads and public works, bridges, airports and sea-ports, telecommunications systems, etc
- Water and sanitation projects- dams, portable water schemes, sewage schemes, irrigation systems, etc
- Energy – Power stations, power transmission lines, renewable energy schemes, etc
- Buildings- Residential buildings and estates, slum redevelopment, hospitals, schools and other educational facilities, hotels and touristic facilities, factories, shops and other commercial and industrial facilities

Thus the output of the construction industry has a profound impact on our lives: the homes and offices we live and work in, the transport systems that we use to travel, the water we drink, and the electricity that makes our lives bearable.

Given the breadth of the construction sector, it does, as can be expected attract many players.

FIGURE 1 - MAIN PLAYERS IN THE INDUSTRY

- The main players in the CONSTRUCTION industry are:

- Clients and business promoters including the public sector which is an important client, the private sector and individuals from many stations in life.

- Contractors who execute the work. These include:

    - Small scale contractors handling small projects upto us$ 1million
    - Medium scale contractors handling medium contracts –us$ 1-10 million.
    - Large contractors handling large contracts – us$ 10 and above at both national and international levels.

- Professionals from the building and construction industry including engineers, architects, quantity surveyors, land surveyors and lawyers

- Resource input manufacturers for construction materials, machinery and Transport. Resource input manufactures are many and varied. They include small and medium scale quarry owners and operators for building stone aggregates and murrum, and marble products, cement and cement product makers, logging, timber and timber products manufacturers and a wide array of transporters all of whom are add value. In addition there are machine manufacturers who bring into the market machinery required by the construction industry.

- Banks and financial institutions

FIGURE 1 THE MAIN PLAYERS IN THE CONSTRUCTION INDUSTRY`AND THEIR INTER-RELATIONSHIPS

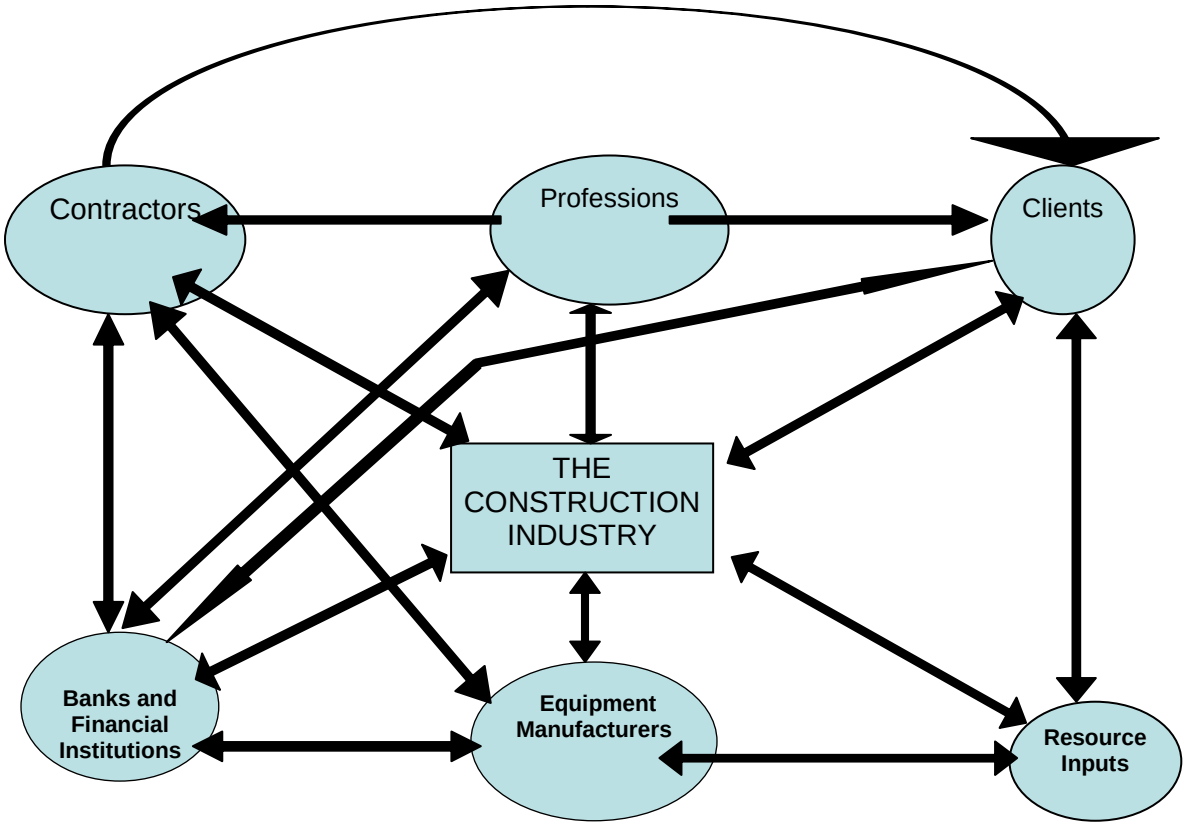


FIGURE 2: THE CONSTRUCTION INDUSTRY VALUE CHAIN - POSITIONING OF THE VARIOUS ACTORS

- The contractors are dependent on a number of basic resource inputs. each of these resource inputs has its own value chain. the contractors access these inputs either directly or through wholesale/retail traders.
  - the manufacturers of steel and steel products
  - the quarry operators who provide sand, building stone, aggregates, marble, etc
  - the cement manufacturers
  - the timber and timber products sawyers and traders

- Transport is an important ingredient in the industry and is essential to both recourse manufactures and contractors

- The professions [consultants] are commissioned by the clients to formulate, design and supervise projects on their behalf. contractors also use them as advisors and in assisting in project management

- Client comprise the public sector [government] , the private sector as well as individuals

- Banks and financial institutions provide financial services and advice to resource manufactures, contractors, consultants and clients
- Recourse manufacturers, transporters and contractors all require a variety of equipment and machinery as well as spare-parts. These are provided for by the
- Equipment manufacturers and retailers.

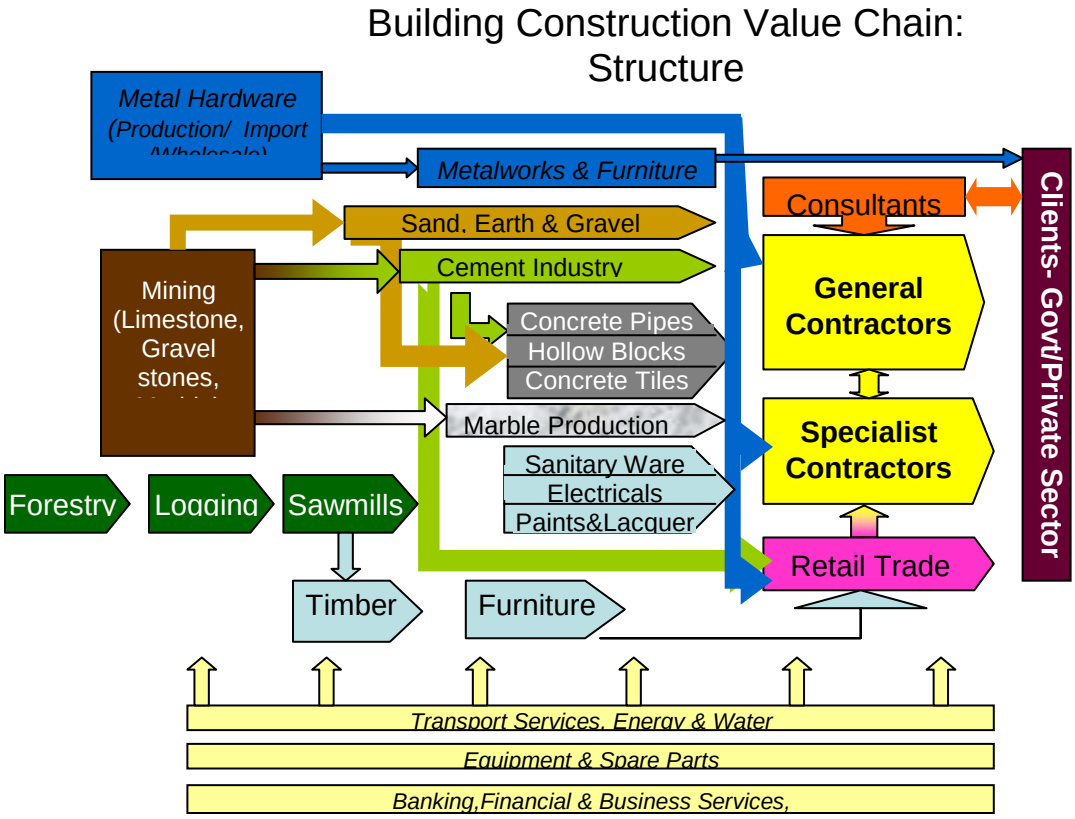
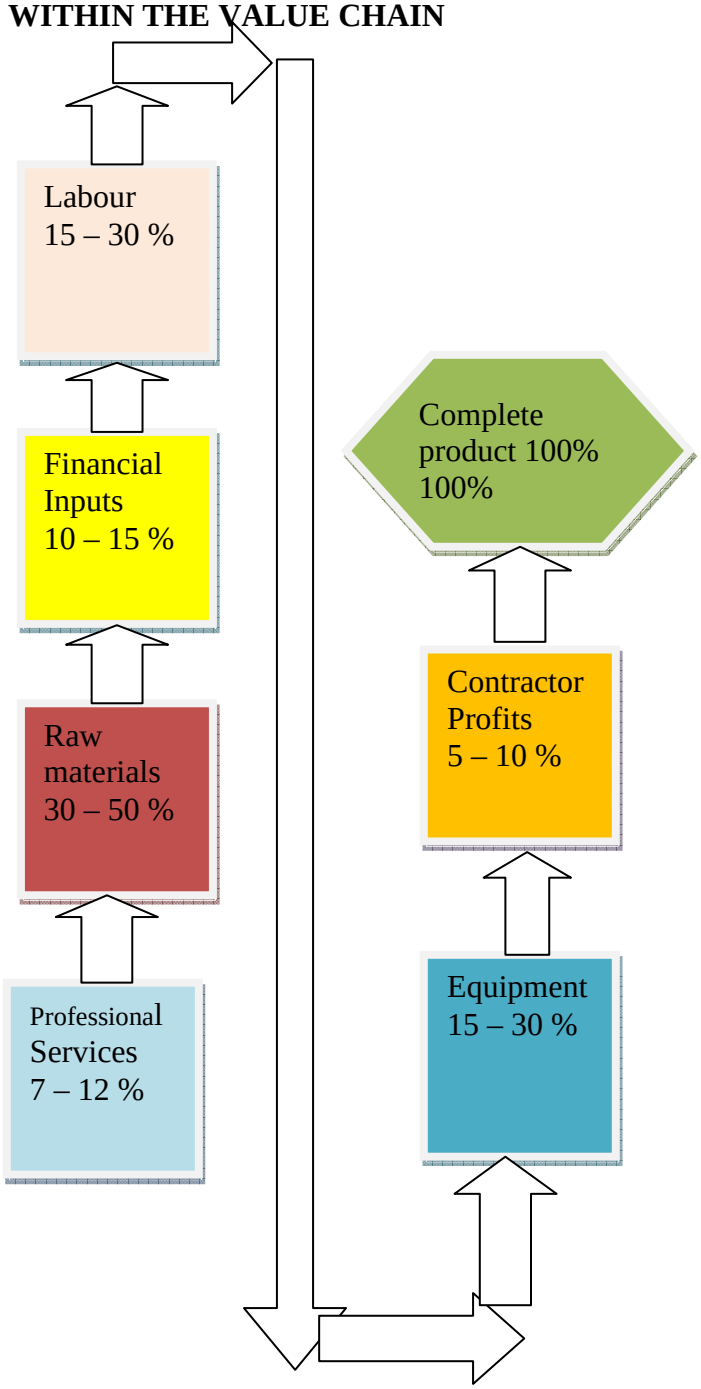


FIGURE 2: THE BUILDING CONSTRUCTION VALUE CHAIN AND THE POSITIONING OF VARIOUS ACTORS

Part 2- THE CONTRIBUTION AND POSITIONING OF THE VARIOUS PLAYERS WITHIN THE VALUE CHAIN



MARGIN CONTRIBUTIONS

1. PROFESSIONAL SERVICES

   In a typical Building/ Civil Engineering works, professional services account for 7-12% and generally are in the region of 10%. Professional services include preliminary designs and feasibility studies, detailed design which involves teams of experts [architects, civil and structural engineers, land surveyors and quantity surveyors] preparation of bidding documents and assistance with the bidding to get the lowest evaluated bidder. Contract award as well contract supervision after award.

2. RAW MATERIAL INPUTS

   This involves the procurement and transportation of raw materials to site. Raw materials include building stone, sand, cement, aggregates, timber and timber products, steel and assorted steel products, plumbing pipes and sanitary fittings, electrical piping and assorted ducting and fittings, roof, wall & floor tiles and finishings. Raw materials constitute 30-50% depending on the type of building construction. Generally the higher the quality of the building the higher the percentage accounted for by material inputs as the fittings are much more expensive.

3. LABOUR

   Labor is an important component of the construction process. It includes skilled and semiskilled labor necessary to construct the foundations, mix concrete and lay slabs, fix steel, build walls, lay plumbing and electrical pipes and ducts and carry out fixing of the fittings to give high quality finishing. Labor generally accounts for 15-30% of the cost of contract and typically around 20% in building projects. In other civil engineering projects, the percentage accounted for by labor goes down to 15%.

4. EQUIPMENT

   The cost here represents the operation costs [Petrol/diesel+ tyre use+ depreciation + maintenance costs] plus equipment ownership costs [Interest on capital + depreciation + drivers' wages + overheads].
   In building works, use of equipment is restricted to use of trucks for transport of raw materials and use of light equipment such as cement mixers and vibrators. Use of cranes is only called in high rise buildings. For this reason equipment costs account for a much smaller percentage and typically less than 10%.
   In civil works however, such as the construction of roads, use of heavy equipment is the norm. Such equipment include heavy trucks, graders, heavy compacting equipment, motorized shovels to work in quarries and earthworks, heavy earth-moving dozers and rippers as well as water tankers.

In this case equipment accounts for a much higher percentage and is critical to timely completion of the works. In this case equipment costs account for typically 20-25% of the works. In some cases labor is substitutable with equipment

5. FINANCIAL COSTS

Financial costs are made up of the cost of capital ie interest on money borrowed and overdraft facilities extended to the contractors by banks and financial institutions. Interest charges in Kenya and Tanzania are in the region of 15-20% per annum on outstanding balance. Financial costs also include the cost of bid security issued by the Banks [typically 2% of the contract value for which the banks will charge 1-2% of the value of the security amount], security for advance payment and also performance securities required by many contracts to guard against faulty or poor performance by the contractor, as well as the cost of All-risks and third party insurance for works taken as a condition of the contract.

In general, contractors are required to own and maintain liquid assets equivalent to at least three times the monthly cash flow of the contract. This is so because contractors have to pre-finance the works and then lodge a payment certificate for processing and payment by the employer. This process takes 2-3 months during which the contractual activities must continue.

6. CONTRACTORS PROFIT

In order to remain in Business contractors are expected to make profit. While they may make a loss on one or two jobs they must recover this by making profit on subsequent jobs. Without this kind of pattern, the contractor will become bankrupt which unfortunately is the case with many upcoming contractors. Contractors also cannot grow without making profit from which they can make savings. Such savings are then used to finance the cost of growth and expansion including the procurement of capital equipment as well as the hiring and retention of technical staff which is a preliquisite for eligibility to bid for larger contracts.

Due to the very severe competition experienced in the industry particularly for small and medium sized jobs, the profit margins are fairly moderate and varies in the range of 2.5-10%

FIGURE NO 3

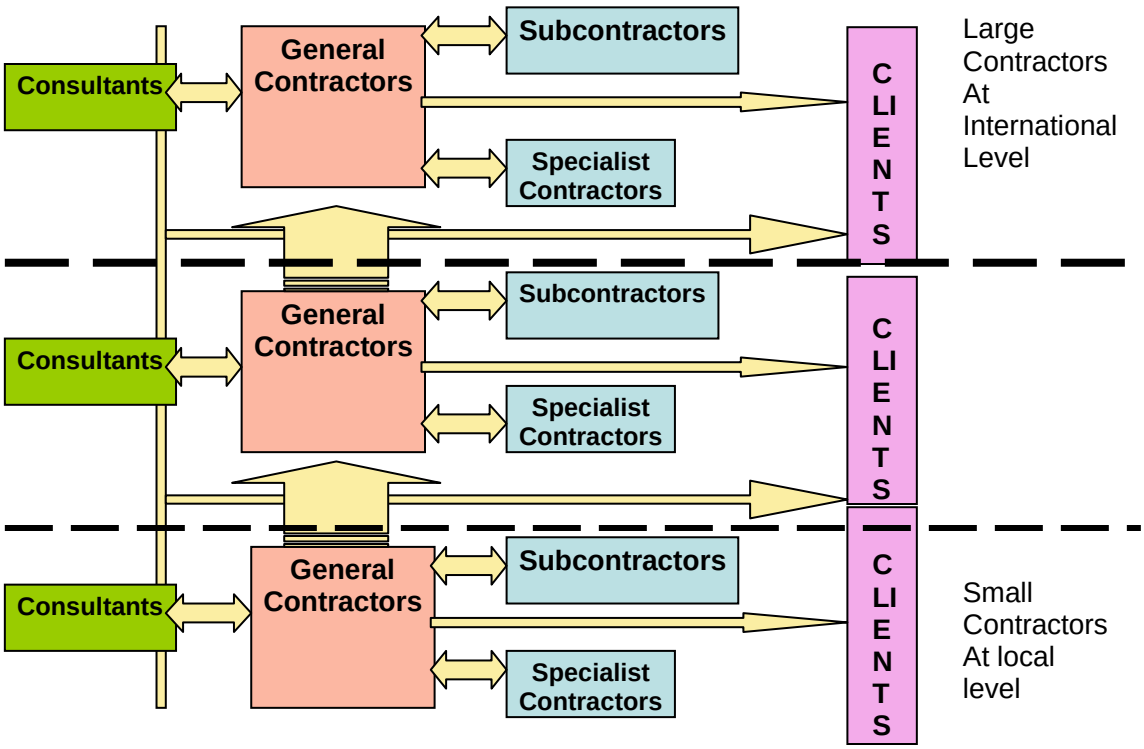
CONTRACTORS PROGRESSION PATH

- Most contractors in Kenya and Tanzania are small contractors operating at local level and undertaking small building contracts either independently or as sub-contractors. They begin here and end here.

- The next level is contractors operating at national level and handling medium contracts of up to us$ 10 million. Some contractors start here, but others graduate from the lower level.

- The final level is large scale contractors operating at national and international levels and with capacity to undertake projects of unlimited value well in excess of 10million dollars. the bulk of contractors operating here are foreign contractors

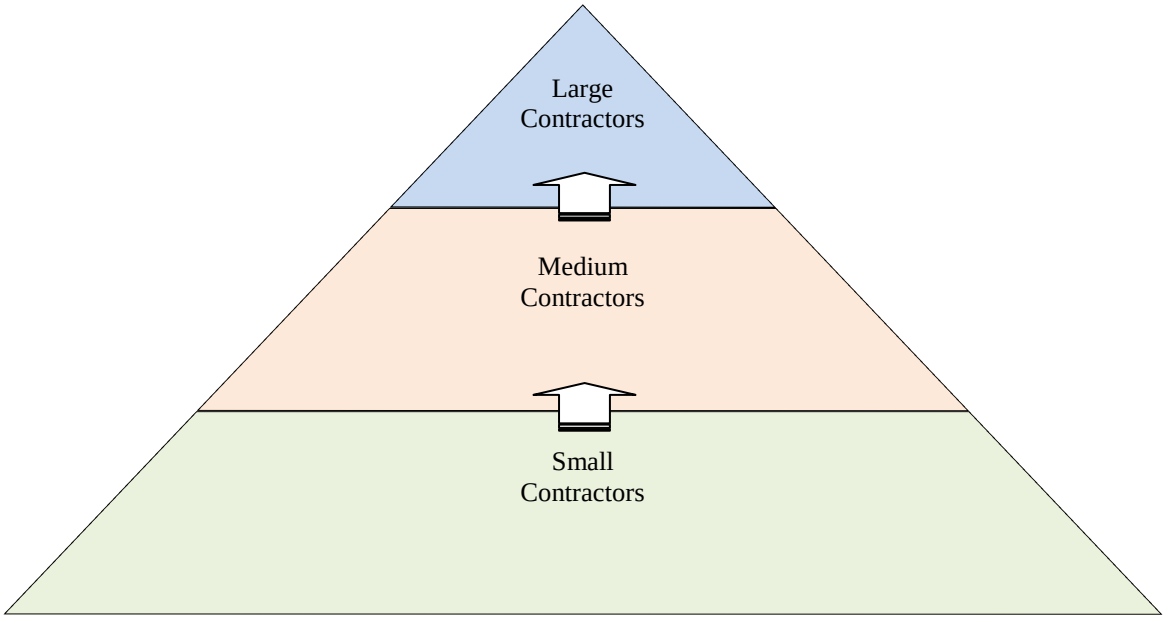
CONTRACTOR PROGRESSION PATH



PART 3 – THE CONTRACTORS PROGRESSION PATH

THE PROCESS OF TRANSITIONING FROM SMALL TO MEDIUM TO LARGE SCALE CONTRACTORS

Here, the contractors are seen as forming one pyramid. The large majority of them are at the bottom of the pyramid. Except for a very small number who enter the industry at medium level, majority enter at the bottom of the pyramid and unfortunately remain there. My proposal is concerned with looking at the factors that inhibit or promote the transitioning process from small to medium to large. It is not concerned with Part 2 of the Value Chain.



INDUSTRY PERSPECTIVES: ISSUES AND CONSTRAINTS

- Poor reputation - substandard work, well above budget delivered years after contractual completion time hence the term “cowboy contractors”.
- Poor relationship between Government, contractors and public.
- Use of old decrepit construction equipment
- Corruption - More than half of contractors regularly make unofficial payments worth more than 6% of revenues
- The cost of labor is comparable to East African countries, but uncompetitive with Asia.
- Real wages have doubled or tripled since 1994 but firm productivity has remained stagnant.
- Relative to other poor countries, Kenya has a well-developed financial sector and a falling cost of capital.
- High crime rate - a third of firms experienced a crime in 2002.

Construction Industry in Kenya – Reforms & Opportunities

Reforms

- Roads: Establishment of three Semi Autonomous Agencies.
- Housing: Kenya Slum Upgrading Program, Civil Servants Housing Scheme & Development of Appropriate Building Technologies.
- Energy: Consolidation of Electric Power & Petroleum Acts and creation of Rural Electrification Authority, Energy Regulatory Board and Energy Tribunal.

Opportunities

- Since 2003, budgetary allocations for the sector, has increased tremendously.
- Implementation of key reforms
- Private sector participation through Public Private Partnership
- Sector is a key pillar to economic development

PLANNED GOVT INVESTMENT IN THE CONSTRUCTION SECTOR

Subsector	2006/7 $MILLIONS	2007/8 $MILLIONS	2008/9 $MILLIONS	2009/10 $MILLIONS
Roads & Public works	$504	$ 495	$ 434	$528
Water and Sanitation	$120	$148	$190	$231
Urban infrastructure	$33	$57	$69	$83

Transport	$29	$71	$94	$113
Energy	$130	$132	$218	$264
Housing	$9	$46	$55	$68
Total	$824	$882	$993	$1,223

CONSTRUCTION INDUSTRY IN TANZANIA: REFORMS CONSTRAINTS AND OPPORTUNITIES

Reforms and Opportunities

- Major and ongoing institutional reforms spaning over 25 years starting with the National Construction Council in 1981 to promote the development of the industry, the establishment of the Contractors Registration Board and the formation of various Executive Agencies in the Sector notably The Tanzania national Roads Agency {TanRoads} in 2001 and the National Housing and Buildimg Research Agency [NHBRA]
- Formulation of the Construction Industry Development Strategy [1991] and the enactment of the Construction Industry Policy in 2003 to steer the development and growth of the industry.
- Mobilization of donor support in financing infrastructure projects and liberalization of the economy to attract local and foreign private investors in the sector
- Addressing of shortage of skilled manpower by establishment of vocational training centers, expansion of technical training institutes and relevant

university departments as well as promotion of professional and trade associations

- Commercialization of road construction and maintenance works weaning it from Force Account and thus creating opportunities for private contractors to participate

Performance Constraints

- Dominance of foreign players in the industry
- Widely fluctuating work flow due to poor planning- This affects job opportunities for all players in the industry
- Weak or poorly implemented construction industry policies
- Corruption which affects the entire industry resulting in uncertainty and unfairness and generally increasing the cost of doing business.
- Local contractors are constrained by many factors including:
    - ❖ Inadequate financial capability and high cost of capital if availed
    - ❖ Poor availability of construction materials
    - ❖ Poor access to construction equipment for lease or hire. The majority of the local contractors do not own any equipment
    - ❖ Poor management and financial control at firm level leading to low productivity of labor

ISSUES

- From the value chain and available data many of the contractors operate at the bottom of the scale. They are small in size, underfunded and unable to graduate to the next level. The issue is why does this situation persist and what can be done about it? What determines the transition from small contractor to medium/large contractor?

- How competitive are the contractors at this level and how do they compare with those at higher levels?

- What are the factors that promote growth of the construction sector in a country? Have these factors been applied to advantage in Kenya and Tanzania?

FACTORS RELEVANT TO GROWTH AND PERFORMANCE OF THE CONSTRUCTION INDUSTRY

- From literature and mind mapping, the following factors have been identified to be relevant:

  - Government construction Industry Policies.
    - Support though preferences to national contractors
    - Contractor training and assistance in securing bonds
    - Harmonization of design standards
    - Establishment of equipment hire schemes
    - Investment [work-flow] planning and funding allocation

  - Contractor Related Performance Indicators
    - Productivity
    - Liquidity and cash flow management
    - Quality of output and workmanship
    - Customer satisfaction

  - Corruption in the construction Industry

  - Construction Industry Players

  - Procurement Procedures

PROPOSITIONS/RESEARCH QUESITIONS

THE PROPOSITIONS DERIVE DIRECTLY FROM THE ISSUES LISTED IN PAGE 11 AND THE FACTORS IDENTIFIED IN PAGES 11 AND 12.

- Government construction industry policies in Kenya and Tanzania do not enhance the growth of national contractors.

- National contractors in Kenya and Tanzania are not competitive

- The construction industry is more developed and competitive in Kenya than in Tanzania.

FOCUS

- The focus of the study will be construction industry in Kenya and Tanzania for comparative purposes. Although the industry has many players, the focus will be on the contractor, the environment he endures and the many challenges he faces in moving up the ladder. Emphasis will be given to contractors in the building industry as distinct from contractors specialized in roads, power projects, etc

METHODOLOGY

- The analytical value chain method will be used. We will endeavor to seek views and factual information from a representative sample of national contractors in Kenya and Tanzania related to their business plans performance, financing, returns on investment and views on the challenges facing the industry. Extensive literature search will be done on construction industry policies and interviews held with industry policy makers. Competitiveness and performance indicators for this group of contractors will be collected and analyzed.