

**A STUDY ON TECHNIQUES USED TO MANAGE INFORMAL  
CONSTRUCTION WORKERS IN TANZANIA**

**Magreth John**

**M.Sc. (Construction Economics and Management) Dissertation  
Ardhi University  
November, 2017**

**A STUDY ON TECHNIQUES USED TO MANAGE INFORMAL  
CONSTRUCTION WORKERS IN TANZANIA**

**Magreth John**

**A Dissertation Submitted in Partial Fulfilment of the Requirements for Degree  
of Master of Science in Construction Economics and Management of Ardhi  
University**

**Ardhi University  
November, 2017**

**CERTIFICATION**

The undersigned certify that he has read and hereby recommend for acceptance by Ardhi University a dissertation entitled: “**A Study on Techniques Used to Manage Informal Construction Workers in Tanzania**” (Case of **Kinondoni Municipality in Dar es Salaam Region**) in fulfilment of the requirements for the degree of Master of Science in Construction Economics and Management of Ardhi University.

.....

Dr.Khalfan Amour

(Supervisor)

Date.....

**DECLARATION AND COPYRIGHT**

I, **Magreth John**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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eventuality, as well as my fellow colleagues and comrades whose iterative supportiveness, encouragement and commitment saw me through. Regardless, any errors, omissions and misrepresentations contained herein are entirely the author's liability.

## **DEDICATION**

To the Almighty God for whom I live and move and have my well-being,

To my precious parents (John &Prediganda)

To my lovely husband and our son (James &Jansen)

To my Brothers (Jastin &Innocent John),

To my lovely sister and his Son (Joyce &Jovin)

### **Philippians 4:13**

“I can do everything through God who strengthens me “

## **ABSTRACT**

The significance of informal construction industry in provision of affordable shelter and employment is paramount and cannot be overstated. However, while commendable efforts are exerted to aggrandize the formal construction sector, no matching measures have been introduced to improve the informal construction sector. Nevertheless, entry barriers, legal pluralism, market unreliability, and incompetent skills continue to derail the practice. In tandem, this research delves into managerial approaches applied on informal construction workers to accentuate pervasive bottlenecks and possible remedies.

The study adopted qualitative research strategy under which personal interviews were conducted on informal construction workers and managers traced at the construction sites, whom were obtained through purposive sampling from target population of Kinondoni Municipality. Furthermore, in-depth content analysis was conducted to discern the research issue and gather secondary data.

The findings established that 70% of informal construction workers lack permanent premises to effect managerial functions. Moreover, there are no pre-determined management and recruitment criteria, with 60% of the workers possessing primary level of education. Additionally, the practice is plagued by mediocre compensation, lack of career development, health and safety threats, job seasonality, labor mobility, funding hardships, triple constraints overrun, inefficient market penetrability, and non-constructive interactivity.



Hence, the study recommends for adoption of a mixed enforcement approach, "*carrot and stick*", not only constituted of collaborative and clear regulations, but also motivating programs to enhance registration and recognition towards formalization. In addition, promotion of management knowledge, on-the-job training, health and safety measures, satisfactory remuneration, workers unions and discussion forums, and deliberate apportionment of public tenders to informal construction workers by the authorities, can be gate-way to effectiveness.

This research adds value to the existing body of knowledge on informal construction sector, inculcating effective managerial applications not only for improvability of informal construction workers, but also overall performance of informal construction groups or enterprises. Nevertheless, it recommends for further research on; nature and sources of technology and skills; possibility of undertaking major construction projects; nature of existing stakeholders' relationships, and suitable training programs for the informal construction workers.

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## ABBREVIATIONS AND ACRONYMS

AQRB	Architects and Quantity Surveyors Registration Board
CIB	The International Council for Building Research and Innovation
CPM	Critical Path Method
CRB	Contractors Registration Board
EC	European Commission
ESRF	Economic and Social Research Foundation
FMB	Federation of Master Builders
FSE	Formal Sector Enterprises
GDP	Gross Domestic Product
GERT	Graphical Evaluation and Review Technique
GNP	Gross National Product
GOT	Government of Tanzania
ILO	International Labor Organization
LAPF	Local Authority Provident Fund
LDC	Least Developed Country
MSE	Medium and Small Enterprises
NBS	National Bureau of Statistics
NCC	National Construction Council
NHIF	National Health insurance Fund
NSSF	National Social Security Fund
OHS	Occupational Health Safety
	Program Evaluation and Review Technique

PERT	
PPF	Parastatal Pensions Fund
PSPF	Public Service Pension Fund
SNA	System Network Architecture
TACECA	Tanzania Civil Engineers Contractors
TAICO	Tanzanian Association of Informal Construction Workers
TAMICO	Tanzanian Mines and Construction Workers' Union
UK	United Kingdom
UN	United Nations
VETA	Vocational Education and Training Authority
WB	World Bank
WBS	Work Breakdown Structure
WIEGO	Women in Informal Employment: Globalizing and Organizing

## **CHAPTER ONE**

### **GENERAL INTRODUCTION**

#### **1.1 Background Information**

The construction sector is immensely significant in stimulating socio-economic advancement of a country, and provisioning of employment opportunities. Its imperativeness emanates from its transformation of various resources into constructed physical, economic and social infrastructure vital for overall development. Typically, construction practices in least developed countries (LDCs) tend to be more fragmented, entailing regulated formal construction and unregulated informal construction. In this context, the study delves into informal construction hereby referred to as construction works undertaken without adherence to formal construction contracts and regulations, and by persons devoid of professional qualifications (Mlinga and Wells, 2002; Mlinga & Lema, 2000).

Alluding to empirical evidence, it suffices to posit that informality is a phenomenon commonly associated with developing countries. In tandem, Arthur Lewis, in his seminal work "*The Theory of Economic Growth, 1955*", informality is presented as an inherent transitional feature of developing countries, hence, as economies become modernized and development advances, the formal sector is expected to dominate while the informal sector declines (Tokman, 1994; Maloney, 1998).

Succinctly, Arthur Lewis articulated a dualistic perspective of informality which he posited as a separate and marginal sector in nascent economies. The informal sector is conceived as transitionally linked to the emerging modern sector, and those who cannot have instant access to the modern sector end up working in the informal one.

Within this dualistic view, informal workers are showcased as queuing for formal-sector jobs, however, the view also expects the workers to be modernized before they can transform to the modern sector, which is a process that may last for more than a generation (Bromley, 1978; Bangasser, 2000). Hence, those who work in the informal sector are considered marginalized from the expanding, more productive, and better-organized modern sector.

Nevertheless, the International Labour Organization (ILO) 2002 postulates that the informal economy comprises half to three-quarters of all non-agricultural employment in developing countries. Although it is hard to generalize pertaining to the quality of informal employment, oftentimes it implies hostile employment conditions associated with poverty. Further, the ILO observes that some of the conspicuous features of informal employment are absence of protection in the event of non-payment of wages, compulsory overtime or extra shifts, lay-offs without notice or compensation, unsafe working conditions and the absence of social benefits such as pensions, sick pay and health insurance. Hence, the ILO profoundly relates informal employment to miserable employment conditions and even to abject poverty.

The ILO's view is vehemently reflected in South Africa, where the informal sector is perceived as an economic activity that occurs outside purview of state regulation and formal employment, hence, presented as employment originating from a business or firm not registered with the state (South Africa statistics, 2001 & 2007). It is considered incapable of recouping capital or stimulating economic growth, thus ultimately categorized as a liability for the overall economy (Kingdom & Knight,

2007). In tandem, Thabo Mbeki, former President of South Africa, described South Africa's informal sector as one that is characterized by; under-development ,contributing little to GDP, containing vast percentage of population, incorporating the poorest of rural and urban poor, structurally disconnected from both the first and the global economy, and incapable of self-generated growth and development (Devey, Skinner and Valodia,2005).

However, in contemporary years, the informal construction sector has grown in size and significance in many African countries (Ngare, 1998). While small, unregistered construction enterprises were previously involved in the building, maintenance and renovation of individual residential houses, they are now increasingly engaged in the construction of complex and much larger commercial buildings (Wells, 2001). Additionally, due to unpredictable workloads in the construction industry and high costs involved in keeping idle labor, formal registered enterprises are resorting to sub-contracting to the informal sector (Wells, 2001).

In the context of Tanzania, the construction sector takes center-stage in economic growth. For example, congruent to CIP (2003), the mean growth rate for the construction industry picked up by about 10 percent from 1994 to 1998. Likewise, contribution of the construction sector in employment creation climbed up by 8.9 percent. Importantly, the informal sector employed more than 21 percent of the total work-force, and contributed about 32 per cent of the total economy value added for the country. Generally, about 7 per cent of employees and 2 per cent of value generated in formal sector originate from the construction industry. Studies indicate that informal construction sector in Tanzania continue to intensify

and contribute substantially to the economy (Mlinga 2000; URT, 1991). For instance, figures for the period 1991 to 1995, exhibit that Total Gross Output, Total Value Added and Total Capital Formation are climbing at 185 per cent, 244 per cent and 173 per cent respectively (Mlinga 2000). On top of contributing towards some of magnificent urban properties (Wells 2001), the informal construction sector is positioning itself adept at catching up with propensity towards modern housing preference that if compared with traditional "Swahili" houses built using poles, thatch and mud, requires more skills to build. The clients for these modern houses are oftentimes private house-owners.

In case of Kenya, the informal sector has been expanding faster than the formal industry, subsequently availing more opportunities for employment. Liberalization and privatization processes have culminated to the state's failure to create employment, allowing the private sector to dominate the role. Unfortunately, the private sector has been overweighed by the exploding numbers of jobseekers, hence, the informal sector stepped-in to fill the gap. Consequently, the number involved in the informal sector escalated to 4.2million in the year 2000 translating to annual growth rate of 11%.This indeed is the premise why informal sector should be supported and promoted rather than marginalized Kombo, D.K. and Tromp, D.L.A. 2006.

The construction industry in Kenya comprises vast number of enterprises with various sizes, and owned along ethnic lines. Kenyans of foreign ancestry, mostly Asian, still dominate the industry. Also, the private sector clients in Kenya are highly diverse and fond of investing in construction through the informal system.

Wachira (2000) and Wells (2001) observe that client's access to financing for construction projects is highly unpredictable. This implies that construction schedule is uncertain and oftentimes projects experience a myriad of "stops" and "restarts" depending on availability of funds. This has shifted the equilibrium of industry to informal construction, thus generating inquisitiveness to studying how informal system operates, and its role in economic development and poverty alleviation. Examination of government data exhibits that between 1995 and 1999, the informal private sector made significant contribution to GDP and employment in Kenya.

Beyond the African continent, the construction industry in the United Kingdom is marked by extensive subcontracting, large numbers of self-employed workers and a strong pressure to drive prices over lower. For instance, in 1977 self-employed labor comprised under 30% of the construction workforce, but by 1995 the level had risen to over 60%. The proportion of manual workers who are self-employed and working for labor contractor is even higher (Harvey, 2000).

According to the Small Business Council (2005), about half of the UK informal economy is located in the construction sector, particularly in home improvement and maintenance sphere. The results provided by the Rockwool Foundation Research Unit in 2003 (EC 2004) revealed that 46.7 per cent of undeclared work among 18-74 year olds in Great Britain is attributable to construction. Of this, 17.2% is found in painting and decorating, 11.1% in carpentry and joinery, 1.3% in bricklaying, and 17.2% in other trades like electrical and plumbing work.

Likewise, the English localities survey identifies similar results in relation to the domestic service sector. Examining eleven affluent and deprived urban and rural

areas, 43% of all informal work was found to be clustered in the home repair and maintenance/construction sector (EC 2004). The tasks pinpointed as most frequently using informal rather than formal labor were; attic conversions (1 in 4 are done informally); installing bathroom (24%); plumbing (13%); electrical work (12%); and plastering (12%). Estimates indicated that 80% of informal economic activities in the private domestic sector were by illegally unregistered firms, with the remaining 20% being occasional 'cash-in-hand' work by registered firms (FMB, 2003).

In nutshell, the expanding demand for skills resulting from technological revolution and global competition, places numerous workers at risk of exclusion from employment or segregation into low-paying and insecure segments of the labor market. In industrialized countries, this process is manifested in escalating rates of unemployment, low wages, and rampancy of part-time and temporary jobs. In developing countries, according to ILO (1998-99) "The lack of jobs in the formal sector of the economy as well as the lack of skills in a large part of the labor force has resulted in the growth of a substantial informal sector in which most workers are in low-paid employment under unregulated and poor working conditions" (Faida 2008)

In the same line, effective management not only requires experience in industry of specialization, but also in various management techniques. Management techniques are not short-term tricks used to motivate employees, but rather effective methods of management that assist in developing a productive workplace. There is no single management technique that works in all situations, which is why it is imperative to



become acquainted with diverse techniques. The following are key Management techniques in Construction:

- Workforce development
- Growth management
- Personnel management
- Team building
- Organizing people, projects and teams

### **1.1.1 Workforce Development**

In accordance with Dun & Bradstreet Small Business Solutions (Bradstreet, 2013), building an effective workforce translates to managing employee's development prior to even hiring them. Develop a comprehensive job description for each position you intend to recruit for, and then put a monitoring system in place that allows you to track employee's progress. Use annual performance reviews as tools to create a stronger working relationship between management and employees, and to guide individual employee development. Your monitoring system should also include weekly meetings with individual employees to discuss their progress and offer your assistance in their development.

### **1.1.2 Growth Management**

Creation of growth within a corporation is a critical role of the management team. Growth can be signaled by an increase in revenue, employee population, number of locations, or larger main location, or a combination of the trio. Referring to an online business resource "All Business", the management team ought to anticipate corporate growth and install measures in place to sustain the growth. Likewise, management

techniques like; assessing the competition, tracking of historical data on sales in different target markets, projecting changes in target markets, and comparison of available resources to needed resources, are all part of growth management.

### **1.1.3 Personnel Management**

Managers apply a myriad of techniques to motivate and manage employee performance. This is in line with a free management library resource titled "*Free Basic Guide to Leadership and Supervision*". A manager is obliged to utilize his workforce appropriately by ensuring the allocation of qualified personnel to various departments and projects. Moreover, the manager should create schedules that bring together personnel resources when they are required, while motivating employees to improve productivity and assist their respective departments to achieve the corporate goals.

Nevertheless, managers should also be conscious of any changes in employee's skill-sets through training or further education, which would make employee more valuable to other parts of the company. Staff members should as well be inspired to develop their own priority lists in order to ensure necessary tasks are executed on daily basis, and important projects obtain the deserved attentiveness. Generally, management is all about organization, whether it means organizing a workforce to get a job implemented, organizing a project to achieve desired deliverables, or organizing a team to focus on a specific issue. Hence, having effective organizational skills is imperative for any manager in a competitive business context.

#### **1.1.4 Organizing People**

A core area of organization for management is the organization of people which necessitates the implementation of the corporate organizational chart. Corporate organizational chart provides documentation of the structure that indicates the corporate hierarchy, how departments are organized and how the chain of command flows. Effectively organizing personnel to accomplish the work of an organization, regardless of its size, is an "improvement" management and organization technique as per Lin Gensing-Pophal, author of "*Human Resource Essentials*." Beyond the organizational chart, the organization of people involves distinguishing specific skill required for specific job and finding persons with the fitting skills to occupy the position. Those skills require both knowledge of the job functions and inter-personal skills to interact effectively with employees and customers, as opined by Gensing-Pophal.

#### **1.1.5 Organizing Projects**

Managers must be adept at organizing projects to get the work done. The organization techniques they apply will determine how productive they are and will impact the cost of delivering goods and services to the end-users. Organizing projects requires an in-depth understanding of the business goals, the identification of the resources (people, tools, equipment and supplies) needed to accomplish the task, and the ability to communicate expectations effectively. Besides, managers must be engaged in the project, however remotely, to ascertain that it proceeds as planned.

Moreover, managers can take advantage of various tools to help organize projects, from Gantt charts to software products like the Microsoft Project Software. Begin by

identifying the desired end result, then list the steps required to achieve that result, the time-frame for each of the steps, the resources and associated costs, and the staff required to get the project done. (Genever, 2017)

### **1.1.6 Organizing Teams**

Management and organization techniques require the ability to effectively coordinate teams toward the accomplishment of some goals. Rarely can a single individual accomplish a task alone. Bringing people together with a common purpose and providing them with the motivation and resources to accomplish their task is a vital management technique. Organizing teams effectively requires a clearly defined and well-communicated goal, the selection of the right people to participate on the team, organization of the work to be undertaken, explicit instructions, ongoing monitoring of progress, as well as evaluation and follow-through.

Start by identifying the people within the organization who have the right skills, knowledge, background and interests to contribute to the project. Gain approval from their superiors as necessary. Explain the purpose of the team, the expected outcomes of the team's work and the contributions expected of each individual team member. Be available to offer guidance, support and resources to team members as the project moves forward.

This study delves into management techniques for informal construction workers in Tanzania. The subject of study is the individual workers. Such individuals work in the informal construction industry as employees, self –employed workers or owners of small enterprises employing other workers. The concern of this research is to

study the existing managerial techniques with an intent of finding solutions to some managerial problems of informal construction sector.

### **1.2 Statement of the Problem**

Prominence of informal sector in creation of jobs and propulsion of entrepreneurship in urban areas, particularly in developing countries, is paramount. For instance, in case of Africa, the informal employment accounts for over 60% of total urban employment. Likewise, among others, countries for which statistics are available include, 75.1% in Bolivia (year 2006), 73.6% in Madagascar (year 2005), 76.2% in Tanzania (year 2005/2006), 59.6% in Colombia (year 2010), 42.3% in Thailand (year 2010), 47.5% in Venezuela ( year 2009), 69.4% in Uganda (year 2010), 32.7% in South Africa (year 2010), and 51.2% in Egypt (year 2009/2010) (Pais, 2002; Mlinga, 2001).

Nevertheless, the investigation by Economic and Social Research Foundation (2011), exhibited that informal economy accounted for 42 per cent of Gross Domestic Product (GDP) in sub-Saharan Africa (SSA), and specifically 34 per cent of the national economy in Tanzania. Furthermore, about 40 per cent of all non-agricultural sector workers in Tanzania are involved with informal sector employability, particularly the mid and small enterprises (NBS, 2007).

Concurrently, the informal construction industry inculcates immense support for housing construction practices undertaken by the informal construction workers. For instance, the informal construction sector is the core provider of residential housing units in most parts of Dar es Salaam. However, while significant efforts have been fronted to improve the formal construction sector, no matching measures have been

initiated to develop the informal construction industry (Mlinga, 2001). Entry barriers, legal pluralism, market scarcity, inadequacy of skills, among others, continue to exacerbate its marginalization. At the back-drop of multiple bottlenecks, this research examines management techniques applied by informal construction managers in Dar es Salaam, to establish shortcomings and respective remedies.

### **1.3 Research Objectives**

The objectives of this study are categorized into two parts, main objective and specific objectives as detailed in sub-sections 1.3.1 and 1.3.2 below;

#### **1.3.1. Main Objective**

The main objective of this study is to examine management approaches for the informal construction workers in Dar es Salaam to determine their shortcomings and respective remedies.

#### **1.3.2 Specific Objectives**

To address the main objective above, this research has the following specific objectives:-

1. To examine the factors influencing management techniques applied on informal construction workers.
2. To explore the nature of interaction among informal construction workers within and among their groups.
3. To establish perceptions of informal construction workers and managers on bottlenecks and possible solutions for management approaches.

## **1.4 Research Questions**

The objective of this research question is supported by two main types of research questions, general and specific research questions as indicated in subsections 1.4.1 and 1.4.2 below;

### **1.4.1 General Research Question**

The general research question for this study is; how inadequate are the management approaches for informal construction workers?

#### **1.4.1 Research Questions**

1. Which factors and to what extent do they influence the management techniques applied on informal construction workers?
2. What is the nature of interaction among informal construction workers within and among their groups?
3. What are the perceptions of informal construction workers and managers on bottlenecks and possible solutions for management approaches?

## **1.5 Significance of the Study**

The research findings and recommendation of this study would be important in enriching literature and stimulating further research on management of informal construction workers. In addition, the findings and recommendations of this study would be useful in following ways:

- 1) Provision of awareness to the construction industry and the government in general on management techniques on informal construction workers in Tanzania. This might bring changes to the Tanzania informal construction sector because most researchers put more effort to the formal construction

sector and ignore informal sector but the effects of informal construction on the community and construction sector is quite substantial.

- 2) Creation of awareness to the government that informal construction sector is leading due to the fact that most people do construct their residential houses informally so by knowing management techniques on informal construction workers, the government can establish the policy on how to formalize the informality in the construction industry.
- 3) Generation of knowledge on good management techniques for informal construction workers in Tanzania, hence it will inculcate quality, add value, reduce wastage, and optimize profit.
- 4) Formal construction managers and construction professionals would understand the challenges that face the informal construction workers and thus the appropriate measures to overcome the constraints may be explored.
- 5) Academic significance to scholars who may prefer to further their research on management of informal construction workers within the construction industry.

### **1.6 Scope and Limitation of the Study**

Due to limitation of time, budget and labor resources, as well as complexity of the discipline itself, the geographic coverage of research encompasses the study of informal construction sites found in Dar es Salaam. The selection of Dar es Salaam is based on the fact that it has a booming construction industry including informal construction firms or groups. Nevertheless, Dar es Salaam has a problem of unregistered building activities despite being the biggest city. Also, the study applies



qualitative research approach through interviews and content analysis as a constructivist worldview to uncover multiple realities from respondents, although this might be susceptible to biasness thus compromising the objectivity of the study.

## **1.7 Theoretical and Conceptual Frameworks**

### **1.7.1. Theoretical Framework**

Fox and Bayat (2007), defined theory as a set of interrelated propositions, concepts and definitions that accentuate a systematic point of view by specifying relationships between variables with purpose to predicting and expounding on subtle phenomena. Likewise, the study of informal sector is a complicated phenomenon, partly because there is no consensus on its definition (Lubell, 1991), hence for long, scholars have been arguing over the blue-print definition of the informal sector and the concepts it encloses (Thomas, 1995; Bangasser, 2000). This has resulted to a myriad of theories relating to informality as explored in this study.

- **Dualistic Labour Market Theory**

In his seminal work "*Economic Development with Unlimited Supplies of Labor (1954)*", Lewis posited the Dualistic Labor Market theory as a general model of development in less developed countries. Lewis' model categorizes the economy into two sectors; a modern, industrial sector and a traditional, agricultural sector. The modern sector is identified by capital modes of production, capital accumulation and economic growth, while the traditional sector is distinguished by subsistence agriculture, pre-capitalist modes of production and an absence of economic growth. Lewis assumed that an unlimited supply of unskilled labor was readily available in the traditional sector. Since the traditional sector was crowded with labor, the

average product of each worker was very low and the marginal product summed to zero. Hence, capitalists from the modern sector could acquire unskilled labor at a subsistence wage.

Lewis believed that economic development was due to reallocation of unskilled from traditional sector to the modern sector. The increasing thrive of modern sector would increase demand for unskilled workers from the traditional sector. This process would continue until all surplus labor in the traditional sector was reallocated to modern sector and wages in the traditional sector began to rise above subsistence levels. The eventual result would be modernization, an increase in the extent of employability, and an increase in average income per capita. Succinctly, this perspective centers on the assumption that the informal economy is a leftover from earlier mode of production and consumption and will disappear as a result of economic advancement.

This theory concurs with the theory of binary oppositions by Derrida (1967) where one is considered super-ordinate (formality) and the other as subordinate (informality). Informality is viewed as a negative phenomenon associated with underdevelopment as opposed to the formal economy considered positive and connected with progress (Williams and Round, 2007). However, many scholars like Potts (2008) have refuted this theorization and criticized the dualistic theorization of less developed economies as fallacious view of "disconnection" between the two sectors. Potts (2008) exudes that though the dualistic theory has descriptive value, but it is dangerously misleading by asserting that the sectors are functionally separate. In that line of reasoning, Chen et al. (2004) argues that the dualistic theory

has to be rethought due to the truth that the informal economy not only grew but also emerged in unexpected places and in various forms. Indeed, today the informal economy is not considered as some feeble and disappearing reality, but robust, persistent and even expanding in current global economy (Williams and Round, 2008).

- **The Alternative Theory**

Also referred to as "*neo-liberal approach*" as posited by Chaudhuri and Mukhopadhyaya (2009), was developed in response to the failure of dualistic theory to acknowledge the ability of informal workers to engage in job creation, innovative enterprises and accumulation of capital in urban areas. Articulating the perspective, Keith Hart (1973) attributed the formal employment to salaried jobs and informal sector to self-employment. The theory viewed the informal sector as one that contained low barriers to entry for entrepreneurs. Thus, the sector was presented as one where low levels of physical capital would be rewarded by higher levels of human capital and ingenuity. Hence, the theory presented the sector as a voluntary strategy where savvy entrepreneurs could start their business at minimal cost.

Adding upon this original perspective, Hernando De Soto in his book "*The Other Path.....,1989*", attributes the development of the informal sector not to surplus labor, but to costly government regulations such as healthcare requisites, high minimum wage, lengthy incorporation formalities, collective bargaining agreements, among others. Hence, basing on this theory, the informal sector is not an involuntary substitute for insufficient job creation, but a voluntary cost-savings strategy for

entrepreneurs and small business owners trying to avoid stringent and excessive government regulations, and can thus contribute to economic growth.

Kingdon and Knight (2007) found that informal sector workers have both higher income and well-being than their unemployed colleagues.

However, the subtleness remains as to the reasons why the surplus labor cannot be absorbed into the informal sector. Chandra et al. (2002) identifies the lack of access to capital, low level of demand, lack of access to infrastructure and corporate services, and lack of training as core constraints to the growth of informal sector. However, scholars like Kingdon and Knight (2007) are of the view that neo-liberal perspectives can be discerned differently from one country to another. For instance, its reality in most of Latin American countries, varies from that in sub-Saharan countries like South Africa.

- **The Structural Theory**

The structural theory emerged due to the shortcomings of the dualistic and alternative perspectives on "informality. Though the theory depicts the informal economy negatively, it views it as an integral part of the formal economy. The informal economy is thereby seen as arising in late capitalism and due to increasingly deregulated global economy in which the standards of labor are lowered with the intent of cost reduction. The marginalized population's acceptance of the exploitative work conditions is a part of their strategy for survivorship.

The theory tend to major on the waged informal employment and necessity-driven informal self-employment. Chen et al. (2004), posit waged informal employment as

inclusive of workers without worker benefits or social protection who work for either formal or informal firms, for households or without fixed employer, including informal enterprises employees, other informal wage workers (casual or day labourers, domestic workers, unregistered or informal workers, part-time or temporary workers), and industrial out-workers or home-workers.

In line with the ILO (2007) which also depicts informal work negatively and promotes formal employment as decent and progressive, this author coincides with the structural theory thus examines management techniques utilized by the informal construction sector in Dar es Salaam to establish their shortcomings and respective panacea.

**Table 1.1:** Theorization Summary of Informal Sector

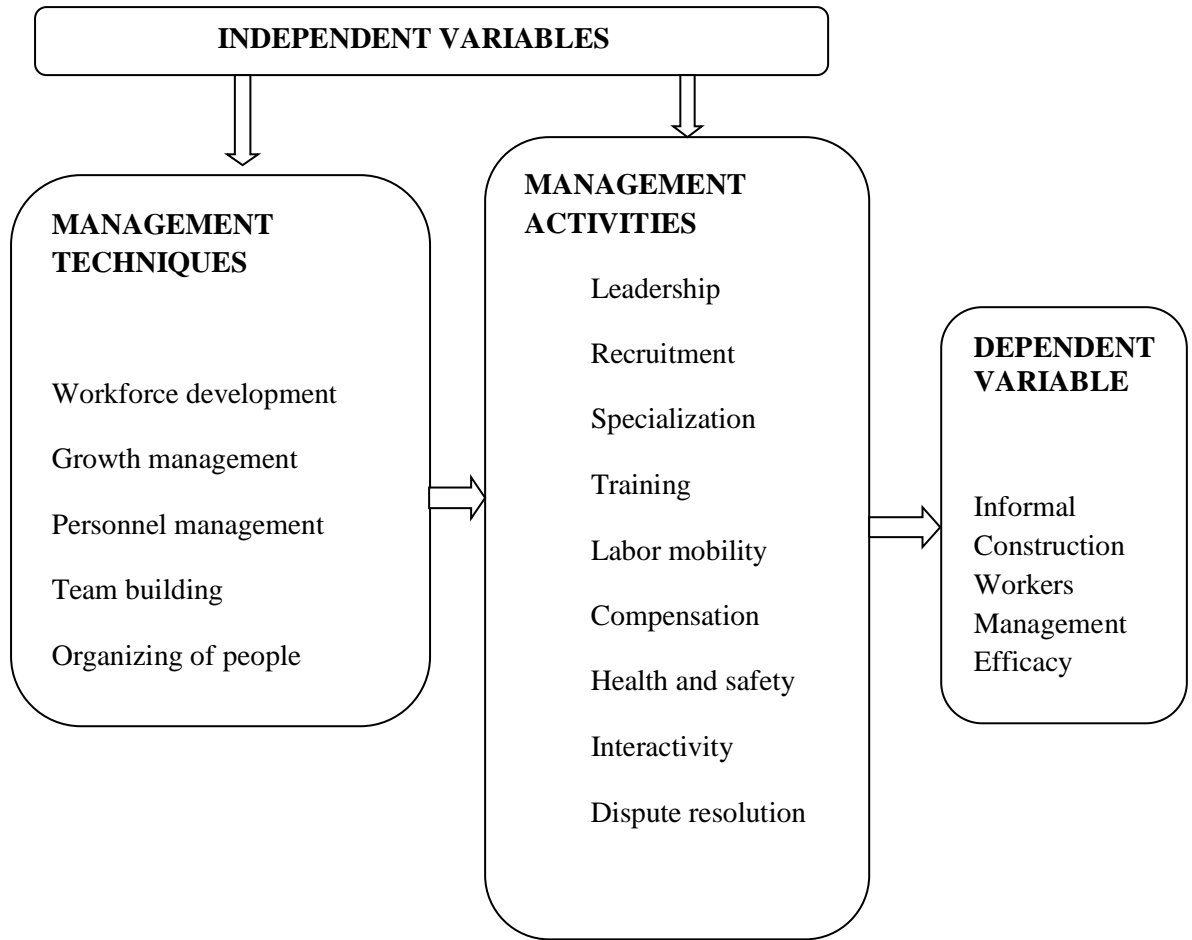
	Chen (2007)		Williams & Round (2008)	Williams (2010)	Key Features
1	Dualism		a residue of pre-capitalist society	Modernization thesis	-binary hierarchy of formal super-ordinate and informal subordinate; -formal work is in long time decline; -formal and informal are not linked; -informal is primitive, marginal, weak, negative; -informality is an exclusion.
2	Structuralism		a by-product of formal economy	Globalization and marginal theses	-informal work is in long-term growth; -informality is an exclusion; -formal and informal are intertwined; -informality is negatively viewed; Informality is a survival strategy; -informality is a result of deregulation and globalization.
3	Post-structuralism		compliment to formal economy		-informality is positively viewed; -informality is in direct relation with formal; -informality is result of social networking; Informality is an exit.
4		Legalism (neoliberalism)	alternative to formal economy		-formal and informal are relatively separate; -informality is positively viewed; -informality is an exit; -deregulation is promoted and bureaucracy criticized.

**Source:** Olga Onoshchenko (2012).

### **1.7.2 Conceptual Framework for the Study**

Kombo and Tromp (2006) elaborated that conceptual framework contributes to the formulation of the research design thus providing benchmark points for discussion of research design and analysis of data. Conceptual framework summarizes the whole theme of the research problem and its execution. It can be showcased in schematic or narrative form to illustrate the main components to be studied, mainstay factors, variables, and likely relationships among them (Miles and Huberman, 1994).

When clearly articulated, a conceptual framework has a potential usefulness as a tool to support research thus assisting researcher to discern meaning of subsequent findings. Such a framework should be positioned as a starting locus for reflection about the research and its content. Alternatively, conceptual framework is a research component intended to assist researcher to develop understanding of the situation being scrutinized and how to communicate it. In the context of this study, the conceptual framework is built by insightful integration of reviewed literature on the concept of management techniques on the informal construction workers. Hence, the conceptual framework links the independent variables and dependent variable, with the general intent to examine the management approaches applied on the informal works to accentuate the shortcomings and possible remedies.



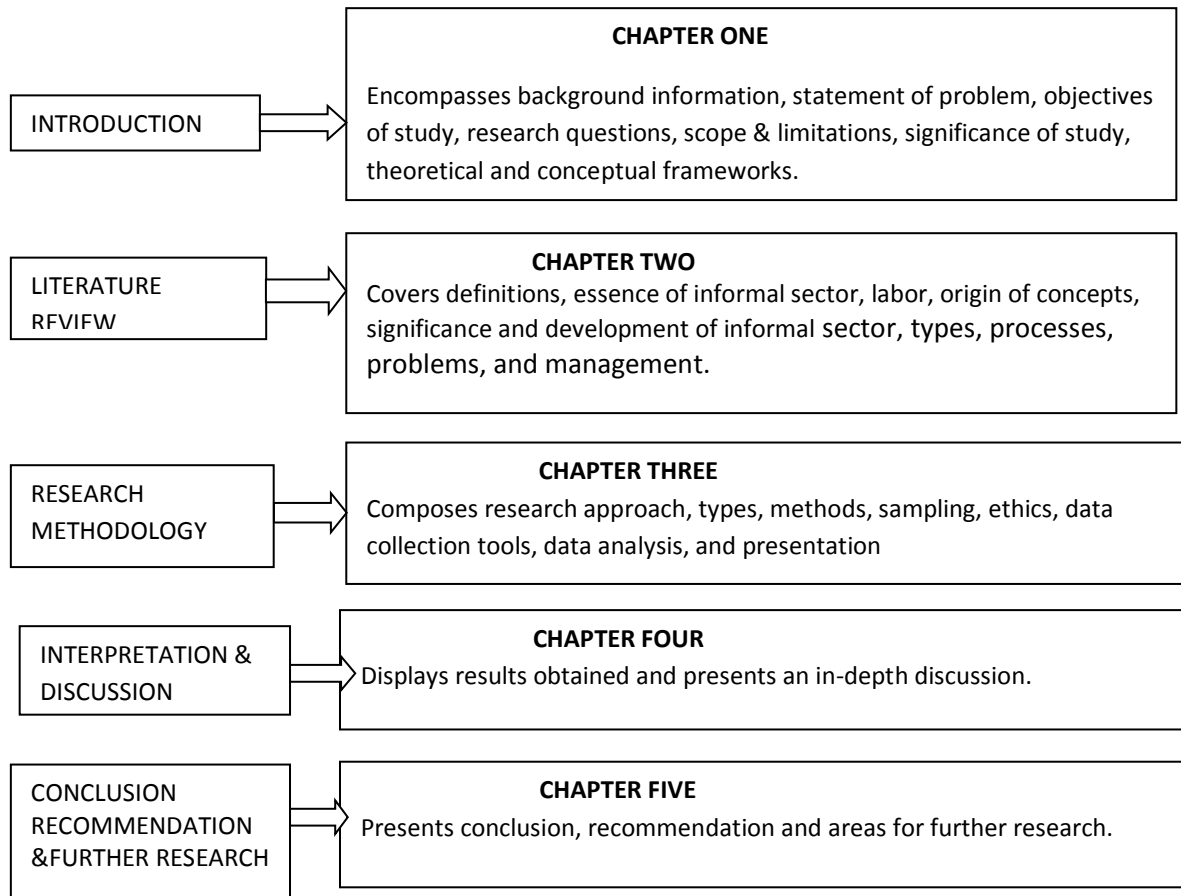
**Figure 1.1:** Schematic Conceptual Framework for the Study. **Source:** Author (2017)

The conceptual framework showcase the relationship between the adopted management techniques and related activities hereby considered as the independent variable, and how it impacts on the efficacy of the informal construction workers management referred to as dependent variable, thus informing the basis of this research.



## 1.8. Structure of the Research

The layout of the research report is presented in figure 1.2 below. It was important to structure the report as exhibited to facilitate proper coverage and presentation of various contents:



**Figure 1.2:** Diagrammatic Research Structure. **Source:** Author (2017).

## 1.9 Chapter Summary

This chapter has explained in detail the background information to this research, The chapter further explained statement of the problem, objectives of the study, research questions, scope and limitations, significance of the study, as well as theoretical and conceptual frameworks was discussed in detail

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1. Chapter Introduction**

Literature review entails selection and effective evaluation of relevant documents published on particular topic by accredited or authentic researchers and/or scholars (Willis, 2010). In tandem, the core purpose of literature review is for the researcher to convey to the readers the depth of knowledge and ideas established regarding the research topic, and to accentuate their pros and cons, showcase the researcher's understanding on the issue of study, and exhibition of critical analysis with eventual establishment of the gap from the literature reviewed. Similarly, this chapter presents the definition to significant terms, overview of the informal sector, and explores the construction industry, focusing on the informal construction sector. It delves into various aspects of the informal construction industry, narrowing to the context of Tanzania.

#### **2.2. Definition of Significant Terms**

##### **2.2.1 Informal Sector**

Informality encompasses divergent views. It was first introduced by Hart in 1971 who described as being unremunerated and unorganized sector characterized by self-employment (Mlinga, 2001). On the other hand, the ILO (1972) came with the new definition based on various aspects such as easy of entry, the use of indigenous resources ,family ownership, small scale operations, unregulated and competitive markets ,the use of labor intensive and adopted technology and skills acquired outside the formal school system.

Nevertheless, Heintz and Valodia (2008) refer to informal sector as all economic activities that are in practice not covered or insufficiently covered by the formal arrangement, while Wohimuth and Urban (2009), describe informal sector as a firm comprising limited ownership and utilizing unpaid family members, domestic servants, less skilled employees and have less than five workers. Additionally, Mlinga (2000) opine that informal sector constitutes of urban and rural, non-farm, small scale and self-employed activities, with or without hired labor. They operate with low level of organization, low technology and often from temporary premises, and often neither supported by financing institutions nor measured in official government statistics. Practice is confined to private sector.

### **2.2.2 Informal Construction**

According to the first meeting of the CIB Task Group 29 (Wells, 1999), the informal construction was defined as comprising the unregistered and unprotected individuals and small enterprises that supply labor and contribute in various other ways to the output of the construction industry. Likewise, in the context of this research, informal construction was defined as the construction works undertaken without the use of formal construction agreements and construction works carried out by persons lacking professional qualifications.

### **2.2.3 Informal Construction Workers**

In this research, informal construction workers are mentioned to mean individual workers or human labor, executing the construction operations with neither formal construction agreements nor professional qualifications.

#### **2.2.4 Informal Construction Labor**

Informal construction labor in construction industry refers to a group which is neither officially recognized by the government nor registered by respective institutions. The informal construction labor has oral contracts or agreements, and payments are done mostly on daily basis. Informal construction labor includes skilled and semi-skilled artisans, unskilled labor, gang leaders, foremen, labor sub-contractor, and inclusive of building materials producers.

Succinctly, the definition of informal construction workers adopted by this research implies any individuals or groups who are not registered or officially recognized by the government, and characteristically unregulated with no formal contracts as they work on verbal contract agreements. The mode of payment is mostly on basis of piecework, social security is minimum and sometimes no health benefits provided under given contract/assignment. Building owners buying materials and hire them directly to construct or repair the whole or part of the building.

#### **2.2.5 Construction Management**

Construction management refers to the process of planning, organizing, directing, coordinating, and controlling human and material resources throughout the life-cycle of a construction project through application of modern construction management techniques to attain predetermined deliverables within scope, cost (budget), time (schedule), and quality, and participants' satisfaction. Hence, construction project management encompasses a set of objectives which may be accomplished by implementing a series of operations subject to resource constraints. There are potential conflicts between the stated objectives with regard to scope, budget, time

and quality, and the constraints imposed on human, material and financial resources. These conflicts should be resolved at the onset of a project by making the necessary trade-offs or creating new alternatives. The construction management techniques are useful to professionals in the construction field in their day to day construction endeavors<sup>1</sup>.

### **2.2.6 Construction Management Tools**

Construction Management is a challenging tasks with many complex processes and responsibilities. Hence, there are many techniques and/or tools used to assist in undertaking the tasks including; the Gantt chart, Program Evaluation and Review Technique (PERT), Critical Path Method (CPM), Line of Balance, Work Breakdown Structure (WBS)

, Network Analysis, Graphical Evaluation and Review Technique (GERT), Project Sensitivity Analysis, and Cost-Benefit Analysis. Moreover, other factors like, among others, size of the project, location of the project, type of client, source of finance , complexity of the project, suitability of materials, improper planning, materials storage, and transportation cost, can influence the efficacy of construction management techniques.

### **2.3. General Overview of Informal Sector**

Roberts (1990) presents the "informal sector" as a confusing and debatable concept referred to by some scholars as an exploitation of the poor, while others acknowledge

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<sup>1</sup>[https://www.researchgate.net/publication/230688983\\_ASSESSMENT\\_OF\\_CONSTRUCTION\\_MANAGEMENT\\_TECHNIQUES\\_IN\\_THE\\_NIGERIA\\_CONSTRUCTION\\_INDUSTRY](https://www.researchgate.net/publication/230688983_ASSESSMENT_OF_CONSTRUCTION_MANAGEMENT_TECHNIQUES_IN_THE_NIGERIA_CONSTRUCTION_INDUSTRY) [accessed Apr 17, 2017].

it as a means of economic progress. In this context, informal sector was applied to signify segment of an economy that is neither taxed, nor monitored by any form of government. Unlike the formal economy, activities associated with informal economy are excluded in the Gross National Product (GNP) and Gross Domestic Product (GDP) of a nation. Informal sector can also perpetuate grey labor market.

Pertinent to the International Labor Organization (ILO), the term “informal sector” is applied to encompass a multitude of characteristics that are specific to the urban “non-modern sector” of developing economies. According to report by then Director –General to the International Labor Conference in 1991 (ILO, 1991) the term "informal sector" refers to very small-scale units producing and distributing goods and services, and consisting largely of independent, self-employed producers in urban areas of developing nations, some of which also employ family labor and a few hired workers or apprentices, operating with very little capital, or none at all. While also utilizing low productivity level, and generally providing very low and irregular incomes and highly unstable employment to those who work in them. They are informal in the sense that they are for the most part unregistered and unrecorded in official statistics, they tend to have little or no access to organized markets, credit institutions, formal education and training institution, or many public services and amenities.

Furthermore, they are neither recognized, supported nor regulated by the government. They are often complained for operating outside the legal framework, even when they are registered and agree to respect certain aspects of the law. They

are almost invariable beyond the bounds of social protection, labor registration, and protective measures, at the places of work.

Similarly, the concept presented later by the ILO for statistical purpose referred to "informal sector" as consisting of small and mid-units engaged in the production of goods or services with the primary objective of generating employment and income to the individuals concerned. These units typically operate as grass-root organizations, with little or no distinction between labor and capital as factors of production under small scale. Whereas labor relations exist, they are mostly based on casual employment, kinship, or personal and social relations, rather than contractual arrangements and professionalism.

Also, the production units of informal sector tend to have the unique features of the household enterprises. The fixed and other assets used do not belong to the production units such as to their owner's expenditure for production, often indistinguishable from household expenditure.

Activities performed by production units of the informal sector are not necessarily performed with deliberate intent to evade the payment of levies or social security contribution, or infringing labor or other legislation or administrative provisions. Accordingly, the concept of informal construction sector activities should be distinguished from the concept of activities of concealed or underground economy (ILO, 1993).

The SNA (1993) characterizes the informal sector as part of the household sector as unincorporated enterprises owned by households. This definition of the informal

sector is based on the legal status of the enterprise. This perspective of the informal sector while focusing on the enterprise, tends to miss out a large proportion of workers in equally informal low quality work situations, and either unable to distinguish their status by enterprise or remain undeclared by the formal and informal enterprises.

Hence, while retaining this view of the informal sector, this study also applied a broader concept of informal employment to include both workers in the informal sector (SNA, 1993) and other forms of low quality employment. The latter, would include both workers undeclared by the informal sector units (that is, within the definition of the informal sector) and certain vulnerable groups of workers not included in the concept of the ‘informal sector’, such as “home workers” (outworkers), domestic workers and precarious workers in the formal sector.

### **2.3.1 General Characteristics of Informal Sector**

ILO (2003) gives the following as characteristics of the informal sector:

- Informal sector enterprises usually employ fewer than ten workers, mostly immediate family members.
- The informal sector is heterogeneous (major activities are retail trade, transport, repair, and maintenance, construction, personal, and domestic services, and manufacturing).
- Entry and exit are easier than in the formal sector.
- Capital investment is generally minimal.
- Work is mostly labor intensive, requiring low-level skills.
- Workers learn skills on the job.

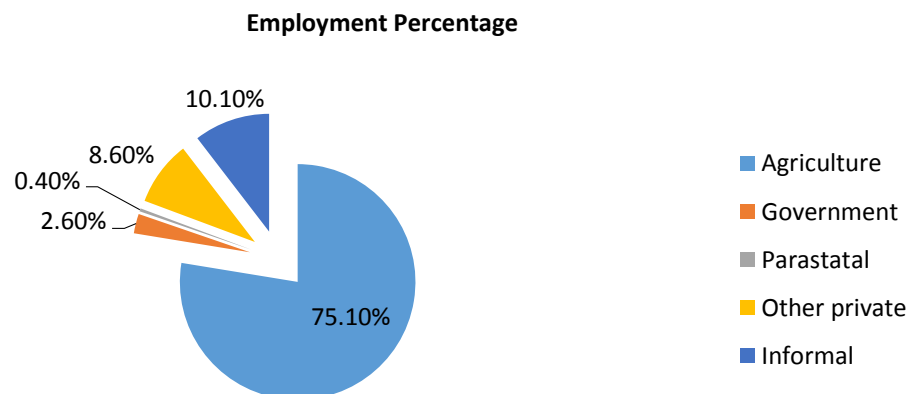


- The employer-employee relationship is often unwritten and informal, with little or no appreciation of industrial relations and workers' rights.
- The informal sector works in conjunction with, rather than in isolation from, the formal sector.

#### 2.4. Insight into Informal Sector Trends

The informal sector participation is extremely significant since it provides housing and other infrastructural facilities to the 80% of the population which lives in rural areas. It is plausible to assert the indispensability of informal economy particularly in developing nations. For instance, investigations by Becker (2004) and the Economic and Social Research Foundation (ESRF) (2011), exhibited that informal economy accounted for 42 per cent of Gross Domestic Product (GDP) in sub-Saharan Africa (SSA), and specifically 34 per cent of the national economy in Tanzania. Besides, the official statistics from the ILFS (2006) showcased that about 40 percent of all non-agriculture sector workers in Tanzania are involved with informal sector employability, largely availed by the mid and small enterprises (MSEs).

**Figure 2.1 Employment Percentage**



**Source:** National Bureau of Statistics (NBS), 2007

Nevertheless, in the first half of 2011, the ILO compiled statistics by gender on extent of employment in the informal economy from 47 mid and low-income countries. Statistics related to the number of individuals who in their main job were employed in a **non-agricultural** informal sector (employment in the informal sector) and number of individuals whose main job was informal (informal employment). Explicitly, employment in informal sector and informal employment imply different aspects of informality. Employment in the informal sector is an enterprise-based concept and covers persons working in units that have “informal” features in relation to, among others, operation, legal status, registration, size, recruitment, and accounting practices. Informal employment is a job-based concept and encompasses those persons whose main jobs lack basic social or legal protection or employment benefits, and may exist in the formal sector, informal sector or households.

Almost all individuals employed in the informal sector are under informal employment. However, not all those in informal employment belong to the informal sector, there may be persons working outside the informal sector (that is either in the formal sector or in households producing for own end-use) but classified under informal employment.

Hence, ILO (2011) established that six countries inclusive of India, Brazil, Mexico, Vietnam, Pakistan and Philippines constituted three-fourths of the overall informal employment estimated for the group of 47 mid and low-income countries. Thus, looking at informal employability by sector in largest developing nations, the composition of women in informal employment in manufacturing activities is typically higher than men. For example, in Brazil, 48.6% of women have an informal

job in the manufacturing sector, as compared to 31.7% of men. In India, the share of women with an informal job in the manufacturing sector even reaches 94% per cent.

Echoing similar findings, Becker (2004) articulates that cross-country data tend to suggest that informal employment is inter-twined with mediocre income per capita and high poverty rates. There may be a myriad of interpretations, but people cornered in extreme poverty may have no other option than informal employment. Paradoxically, they may not be aware of their rights to certain legal and social protection as well as worker benefits, or how to access such protection and benefits, whereas these may actually be existing in their respective countries.

Significant to pinpoint is that, due to possible existence of some formal wage employment in the informal sector, total informal employment may be slightly lower than the sum of informal sector employment and informal employment outside the informal sector.

Employment in the informal sector encompass the total number of individuals who as their main job, worked in an informal sector enterprise. The informal sector comprises of units that are unincorporated (that is not constituted as separate legal entities of their owners), produce goods or services for sale or barter, and satisfy a number of criteria, for instance, they are unregistered, small, have unregistered employees, and they do not maintain a complete set of accounts.

An enterprise is inferred as unregistered when it is not registered under specific forms of national legislations like, among others, corporate acts, tax or social security laws, and professional bodies regulatory statutes. Issuance of trade license or

business permit under local regulations may not absolutely qualify as registration. Furthermore, an enterprise is considered small when its size in terms of employment is below a predetermined threshold, for instance, five individuals engaged to be determined according to national circumstances.

In this research report, informal employment implies the total number of individuals whose core job was informal. A job is informal when it lacks basic social or legal protection or employment incentives and may be found in the formal sector, informal sector or households. Persons in informal employment includes; (i) own-account workers employed in their own informal sector enterprises; (ii) employers employed in their own informal sector enterprises; (iii) contributing family workers, irrespective of whether they work in formal or informal sector enterprises; (iv) members of informal producers' co-operatives; (v) employees holding informal jobs in formal sector enterprises, informal sector enterprises, or as paid domestic workers employed by households; (vi) own-account workers engaged in the production of goods exclusively for own end-use by their households, are considered employed given that the production comprises an important contribution to total household consumption.

As regards (v) above, employees are considered to have informal jobs if their employment relationship is, in law or in practice, not subject to national labour legislation, income taxation, social protection or entitlement to certain employment benefits like advance notice of dismissal, severance pay, paid annual or sick leave. The reasons may be, among others, non-declaration of the jobs or the employees; casual jobs or jobs of a limited short duration; jobs with hours of work or wages

below a specified threshold; employment by unincorporated enterprises or by persons in households; jobs where the employee's place of work is outside the premises of the employer's enterprise; or jobs for which labor regulations are not applied, not enforced, or not complied with for any other reason.

National definition of the informal sector and informal employability differ across countries. However, they are within the parameters of the international definition and therefore, the statistics can be considered sufficiently comparable across nations.

Persons in informal employment encompass all persons employed in informal sector except for those who have formal jobs. Additionally, they include employees holding informal jobs in formal sector enterprises (FSE); contributing family workers working in FSE; paid domestic workers employed by households in informal jobs; and own-account workers engaged in production of goods exclusively for own final use by their households.

**Table 2.1:** Relational Framework for Informal Employment

Production units by type	Jobs by status in employment									
	Own-account workers		Employers		Employers Contributing Family		Employees		Members of Producers' Cooperatives	
	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal	Informal	Formal
Formal Sector					1	2				
Informal Sector	3		4		5	6	7	8		
Households	9					10				

**Source:** ILO (2003).

**Source:** Thomas (1995).

Definitions of numbered cells in the framework above are as follows:-

*Cells 1 and 5:* Contributing family workers: no contract of employment and no legal or social protection arising from the job, in formal sector enterprises (Cell 1) or informal sector enterprises (Cell 5).

*Cells 2, 6 and 10:* Employees holding informal jobs, whether employed by formal sector enterprises (Cell 2), informal sector enterprises (Cell 6), or as paid domestic workers by households (Cell 10).

*Cells 3 and 4:* Own-account workers (Cell 3) and employers (Cell 4) employed in their own informal sector enterprises.

*Cell 7:* Employees holding formal jobs in the informal sector enterprises.

*Cell 8:* Members of informal producers' cooperatives. The informal nature of their jobs follows directly from the characteristics of the producers' cooperative.

*Cell 9:* Own-account workers engaged in the production of goods exclusively for own final use by their household (for example, subsistence farming).

Summarily, in least developed countries (LDC), the debate on the informal industry has been mainly conceptual, while in developed countries it has been methodological focusing fundamentally on measurement techniques. In other words, the contention in developing countries is over what the informal sector comprises, thus its employment distinction is difficult to make evolving to a myriad of terms like informal, parallel, black, shadow, underground, unrecorded, irregular, hidden, and subterranean economy (Bernabe, 2002). Contrastingly, for developed countries there

is universal consensus on what it comprises but no agreement on what to call it thus often referred to as employment.

However, at the backdrop of this subtleness, the informal sector has contributed tremendously to socio-economic development of unprecedented urbanizing vicinity of emerging economies. For instance, it has fostered the construction of housing units and spearheaded the entrepreneurial talents. Furthermore, it suffices to posit that the essence of "informality" is absence of fit-for-purpose regulation and effective management methods.

### **2.5. Informality versus Criminality**

The informal sector offers panacea to urban employment problems and similarly may provide platform for the emergence of local entrepreneurial talent. However, some writers like Hart (1973) associated the informal sector with criminal activities. It is imperative to distinguish informal sector from criminal activities as depicted by table 2.2 below:-

**Table 2.2: Schedule of Informality versus Criminality**

Sector	Market transaction	Output	Production
Household	No	Legal	Legal
Informal	Yes	Legal	Quasi-legal
Irregular	Yes	Legal	Illegal
Criminal	Yes	Illegal	Illegal

**Source:** Thomas (1995).

### **2.6. The Essence of Informal Sector**

The government can be identified as a significant driving force towards the emergence of informal sector, because as a major force in employability and income

generation, it contributes to the emergence and growth of informal sector. However, in developing countries, the informal sector proxies a significant component of the economy. For instance, in most cases it provides gainful employment to people well over 50 per cent of workforce, and contribute significantly to industrial output, commodity contribution, food supply and services provision (UN,1996).

The Pan-African News Agency (1997) reported that the informal sector in Zimbabwe, previously looked down as inferior with no organizational structure, was gradually dominating commercial and industrial sectors as the leading employer. For instance, in 1996, it employed 1.56 million people compared to 1.2 million in the formal sector. Ashworth (2000) define industry based on different processes involving; planning, regulating, designing, manufacturing, constructing and maintaining. Hildebrandt (1988) and UNCHS (1996) delineated the construction industry into building and civil engineering according to its products. In line with this research issue, Hildebrandt (1998) reported that building accounted for about 70 per cent of the construction sector in both developing and developed countries.

## **2.7. General Overview of Construction Industry**

Construction industry is a segment of the economy that transforms various resources into constructed physical, economic, and social infrastructure necessary for socio-economic development. It embraces the process by which the said physical infrastructure are planned ,designed, procured, constructed or produced, altered, repaired, maintained, and demolished (GOT,2003).The constructed infrastructure include:

- Buildings for residential, commercial, industrial, among others.



- Transportation systems and facilities such as airports, harbors, highways, subways, bridges, railroads, transit systems, pipelines and transmission and power lines.
- Structures for fluid containment, control and distribution such as water treatment and distribution, sewage collection and treatment distribution systems, sedimentation lagoons, dams, and irrigation and canal systems. Underground structure, such as tunnels and mines.

The construction industry is comprised of organizations and persons who include companies, firms and individuals working as consultants, main contractors and sub-contractors, material and component producers, plant and equipment suppliers, builders and merchants. The industry has a close relationship with clients and financiers. The government can be involved in the industry as purchaser (client), financier, regulator and operator.

The increase in the use of subcontractor (specialist or labour only contractor) in the construction industry worldwide is posing challenges to the stability of employment and skill development in the industry. During the tripartite meeting of ILO in Geneva 2001, entitled, “*The Construction Industry in the Twenty –first Century: Its Image, Employment Prospect sand Skill Requirements*”, the usability of labour sub-contracting and its impact on the status of construction workers featured prominently. Evidence from China exhibits that the proportion of employees in the Chinese construction industry declined drastically, from 72 per cent in 1980 to 35per cent in 1999, (Lu and Fox, 2001).

In the case of Tanzania, the construction industry plays a significant role in economic growth. For instance, according to Tanzania National Bureau of Statistics (NBS), the

average contribution of construction sector to GDP from 2002 to 2011 was 5.6%, second only to manufacturing sector under industry and construction category. Compared to other East African countries, the share of Tanzania's construction sector was 7.3% in 2012 higher than Kenya's 4%, and was about half of Uganda's share in the fiscal year 2011/2012 which was 14.9% (Ndaiga, 2012; Uganda Bureau of Statistics (UBS), 2014).

Nevertheless, the construction sector contributed 13.6% (over US\$ 6billion) during 2015 relative to 7.8% (US\$ 1.6b) in 2010. Again it contributed 12.5% of the GDP during 2014 with US\$ 6 billion, with the real estate component itself accounting for 3.7 per cent of the country's GDP, while in 2008 the construction sector had accounted for 8.8 per cent of the country's GDP or US\$ 1.9 billion. However, while the sector's growth rate was 23.2% in first quarter of 2015, it drastically plummeted to 4.3% during the first quarter of 2016. According to the National Construction Council (NCC) and NBS, the plummet was due to reduced investment in construction activities. To remedy this, for the fiscal year 2016/2017, the government had allocated TZS. 5.47trillion equivalent to 25.4% (a quarter) of the total budget, excluding public debt service, for construction projects. This signifies the prominence of construction sector in the economy of Tanzania, just like in other countries.

Concurrently, in order to regulate the construction Industry the government has formulated bodies such as Contractors Registration Board (CRB), National Construction council (NCC), Tanzania Civil Engineer Contractors (TACECA), Architects and Quantity Surveyors Registration Board (AQRB) aiming at promoting

construction industry and raising the capacity of local contractors to a level where they can handle any construction project within the country.

## **2.8. Insight into Informal Construction Sector**

According to Wells, (2001) and Jason, (2005), the *informal construction sector* has been defined as comprising unregistered and unprotected individuals and small enterprises that supply labor and contribute in other ways to the output of the construction sector. These small enterprises and individuals are mostly engaged in housing and building construction activities in the *informal construction system*. In this system, contractors are not involved, building owners (or foremen appointed by them) procure materials and hire workers explicitly to construct or repair the whole or part of the building.

However, it is now recognized that informal construction enterprises and workers also supply labor and materials to contractors engaged in larger projects in other sectors of the industry. Thus, definitions of informal construction workers adopted also includes all those working in the construction sector but are not on the regular payroll of contractors or other employers.

According to the UNCHS (1981), informal construction sector entails people or groups of people involved in direct construction, preparation of building designs, extraction of construction raw materials, and manufacture of building materials and components. Unfortunately, operators in the formal industry, are often not licensed and /or registered with any government body/organization, hence, their activities and output escape the government statistical recordation. This tantamount to overall

underestimation of the magnitude and contribution of the construction industry to the national economy.

Wells (1998) articulates that the group involved in direct construction, herein referred to as informal contractors, undertakes the construction and repair of low cost private houses. Some carry out maintenance and repair of middle and high-income groups. The informal construction sector can therefore be taken to encompass building or housing activities which take place without proper planning or building permits, or constructions which take place without formal contracts. Although most informal contractors are labor contractors, there are a few engaged as general contractors who supply labor as well as materials (Cattell,1994).This group would also offer their services as labor sub-contractors to the more established formal contractors .It consists of individuals with varied academic backgrounds, but many are skilled construction trades men (ILO,1987;Cattell,1994).

## **2.9. Origin of Informal Construction Concept**

The existence of labor –intensive informal construction sector was recognized in the 1970s following the observation in developing countries that massive additions to the urban labor force failed to reveal the informal sector unemployment statistics.

This was majorly due to the new entrants into the urban work-force who seemed to create their own employment individually or worked in small-scale family businesses. These individual workers and businesses encompass vast array of small-scale economic activities that are often neglected by the formal sector. Many of such businesses are lucrative small-scale family or individual operated enterprises with several employees who tend to be relatives.

A portion of them was eventually successful enough to enter the livelihood for lower income earners in lower –class urban areas, who would otherwise have no reliable means of income.

### **2.10. Size of Informal Construction Sector**

The construction sector in developing country is estimated to contribute about 3-6 per cent of the GDP. Of that figure, housing was estimated to account for one third, and of that proportion the informal sector contribution is estimated to be as high as 80 % (Habitat, 1991).

According to Marten (1995), the informal construction industry in Tanzania in year 1991 employed 1.5% of the total labor force in the country, contribute 1.1%and 1.4%of the annual gross output and annual value added respectively for the economy.

An interesting finding in the 1991 informal sector study is a 2% contribution of the informal sector to the official gross capital formation for the entire economy, of which the share of the informal construction industry is only 0.06%.These figures look very low, and one of the pointed reasons is the under-estimation of the magnitude of capital formation in building (Planning Commission and Ministry of labor and Youth Development, 1991).

The data on size of the informal sector requires checking and further refinement to make sure it really represents the contribution of the informal sector to the economy. Although it has not been justified through literature, the author is of the view that the figures given under-estimate the contribution of the sector especially when you take

into account the majority of the houses in Tanzania are built by the informal sector (Christopher, 2011).

### **2.11. Informal Construction Processes**

These small-scale enterprises and individuals are centrally engaged in housing and building construction activities. According to Mlinga and Wells (2002), it is now ascertained that they also supply labor to contractors involved in larger projects in other branches of the industry.

Relevant studies of building construction on the newly broadened concept of “informal employment” as conceptualized by WIEGO (Women in the Informal Economy; Globalizing and Organizing (2002) and ILO (2002), where “informal employment” is defined as employment without secure contracts, worker benefits, or social protection. It comprises two basic components of self-employment in informal enterprises and paid employment in informal employment relations. The self-employed comprises of two basic groups inclusive of micro-entrepreneurs or employers who hire others and own account workers who do not hire others. This accords priority in defining “informality” to employment status rather than in earlier definitions basing on enterprise characteristics.

Furthermore, WIEGO (2002) argues that as opposed to the earlier views, the informal entrepreneurs are not disregarding formality, particularly registration and taxation. Instead, it is the employer who attempts to avoid legal obligations including payroll taxes and other employer contributions. Multiple informal workers would prefer being formalized if doing so guaranteed secure contracts, worker benefits, social protection, and the right to organize and be represented WIEGO (2002). This

scenario is particularly valid in the construction industry where employers around the world have disbanded their directly employed work-forces in favor of “outsourcing ” labor through subcontractors (ILO, 2001)

In most developing countries, especially in Africa, it has been underlined that the informal construction sector has been growing rapidly. The pace has been swift, especially during depressed economic periods when building owners often begin with simple structures as time and finance permits. The work is executed by individuals and small-scale firms that are able to adapt to unpredictable demands of clients, including halting work whenever funds are not available. Large proportion of these type of constructions are incrementally developed residential, while others are residential cum commercial developments. Procurement of work is mainly based on informal, verbal relationships and agreements. This situation, referred to by Wells (2001), has signified “the informal construction system” as being prevalent in many developing countries, including Tanzania.

An array of activities in the informal construction system, though not all, occur outside the framework of planning control. Buildings are erected without building permits or planning permission and often without legal title to the land parcel. In Kenya, a substantial percentage of buildings/houses are constructed in “informal settlements”. In these settlements there are no clear ownership titles to land, and there is no land put aside for public utilities.

In accordance to Nguluma (2007), the informal construction workers operate in different forms, the first segment is independent workers who are hired for certain skills. If the workers need assistance, he/she may hire labor-force himself/herself and

it is his responsibility to pay him/her. The second category is the worker with group of skilled and unskilled labor. In this category, the workers perform together with a group of skilled and unskilled labor-force. The third category is a worker with specialist job. He /she often specializes in particular specialty.

Contextually, notwithstanding the significance of informal construction sector in urban Tanzania, its dominance continues to be encumbered by a myriad of constraints including, among others, the absence of protection in the event of non-payment of wages, compulsory overtime or extra shifts, retrenchment without notice or compensation, unsafe working conditions, and the absence of social benefits like pensions, sick-pay, leave permits and health insurance. Nevertheless, the obscurity is exacerbated by; scarcity of markets for their services and products, stringent registration requisites, over-regulation and legal pluralism, usage of low technology and rudimentary equipment/tools, lack of sufficient capital to establish competitive firms, mediocre knowledge and skills, and incompetent management.

In order to revitalize the informal construction industry against the backdrop of these multiple encumbrances, collaborative initiatives by all stakeholders like, among others, the Government, TAICO, TAMICO, NCC, CRB, and VETA, should ensure fit-for-purpose on-the-job-training and educational sponsorship for informal workers, coordinate with financial institutions for improvability of capital accessibility and financial services through the provision of affordable credits and information dissemination and/or outreach to MSEs. Furthermore, the Government should consider to allocate part of its construction works to the informal enterprises, and this can as well be supported by large companies sub-contracting some of their works to



MSEs. However, these efforts can only be successful under proper management of the informal construction sector. In tandem, this research studies the techniques applied in the management of informal construction workers, with focus on human workforce.

### **2.12. Output of Informal Construction Sector**

The output of the informal construction sector is pre dominantly housing and especially informal housing in the rural and urban areas. In the urban areas and especially in major towns the informal housing takes the form of illegal extensions to existing building and slums. The other output of this sector comprises of non-residential building such as shops, market stalls, clinics and schools, maintenance and repair works in both rural and urban areas.

A substantial amount of the building materials that are utilized in producing this output is also produced by the informal sector. An example of such materials is building stones, which is produced by small scale artisanal quarry operators (Kanuti, 2007).

### **2.13. Growth of Informal Construction Sector**

In most of the developing countries informal contractors have always been important in construction as they have traditionally undertaken much of the work of house construction, maintenance and repair. The evidence from these countries to indicate that the informal sector may be growing in importance as the small enterprises and individuals that comprise the sector take on new tasks. The developments are complex but take two main forms.

First, is the face of declining workloads many main contractors have shed their permanent workforce, preferring instead to employ workers on short term contractors when they need them. This has opened new opportunities for informal contractors in the provision of subcontractors and labor supplies to formal sectors. One of the most notable developments in Dar es Salaam is the growth of specialized enterprises offering labor and equipment for common tasks such as concreting or blocks laying (Mlinga, 1998).

The second development is perhaps even more significant. With the increase in subcontracting by the larger firms, and in a context of reduced effective regulation of the building and planning process, an increasing number of private sector clients are choosing to bypass the larger firms and more formal procedures for awarding contracts, in favor of commissioning directly small firms and individuals in the informal sector.

The usual practice is to engage these enterprises or individuals on a 'labor only' basis, while building materials purchased by the owner himself or herself. Plans may be purchased 'off the shelf' or commissioned for a small fee from architects, engineers, planners or technicians-who may be unqualified and operating entirely in the informal sector or qualified professionals offering their services in their spare time for a reduced fee. This method of procuring buildings has been described as the informal construction system.

#### **2.14. Significance of Informal Construction Sector in Tanzania**

The imperativeness of informal construction sector in Tanzania cannot be overstated. For instance, in 1991, the informal sector employed more than 21 per cent of the total

work force and contributed about 32 per cent of total economic value added nationwide. Concurrently, Marten (1995) noted that in 1991, the informal construction sector in Tanzania employed 1.5 per cent of the total labor-force nationally, subsequently contributing about 1.1 and 1.4 per cent to the annual gross output and annual value added respectively to the economy.

A myriad of studies like; UNCHS (1981); Mlinga (1998); Ngare (1998) and Wells (1998) have accentuated the significance and necessity to develop informal construction sector in least developed countries (LDGs) like Tanzania. Factually, this sector has been conspicuous towards the provision of housing units for both rural and urban populace at affordable costs (GOT, 2000). Elsewhere in Africa, in 1981 Ghana reported that the informal construction industry was dominating about 90 percent of construction practices in the rural vicinity.

Nevertheless, overwhelming number of literature on informal construction sector portrays its pivotal contribution to provisioning of housing units for the urban inhabitants. Reiterating similar perspective, Thomas (1995) uncovered that most urban residents in emerging economies were increasingly engulfed by abject poverty due to nature of economic restructuring programs being implemented by those countries. This has continuously pushed them to inevitably depend on commodities and services provided by the informal sector.

Appropriate and affordable construction technology necessary for erection of residential buildings together with ever-growing demand for housing in developing nations necessitate the indispensability of the informal construction. The situation

resembles other countries in Africa, for instance, in 1998 the informal sector developed about 57 per cent of properties in Ghana.

The discernment of features associated with informal sector is vital in order to develop fit-for-purpose policies and determine appropriate mechanisms through which government can accelerate its development. Vast number of small-scale products typically characterizes the informal economic sector, or services often possessed by persons or families inclusive of those who frequently migrate from rural areas or those residing in urban places but are unable to secure immediate employment in the formal sector.

Nevertheless, the products in the informal sector tend to be quite simple, capital investment is generally minimal, and employment relationships are mostly unwritten and orally. Workers tend to have little or no education, and usually unskilled, or tend to learn their skills on the job. Nonetheless, business entities in the informal financial services, as well as productivity and wages, tend to be lower contrasted to the formal sector.

### **2.15 Employment Relationships & Organizing Strategies in Informal Construction**

In recent years there has been a significant shift in employment practices in construction industry, paralleling development in other sectors of the economy. Construction enterprises around the world have shed their permanent labor forces in favor of employing on a casual (often daily) basis or of outsourcing their labor supply through intermediaries. These trends have led in many places to a proliferation of small enterprises supplying labor and a consequent increase in the

number of workers in these enterprises. They also render employment relationships in construction sector diverse and complex (Wells, 2001; Jason, 2005).

### **2.16. Chapter Summary**

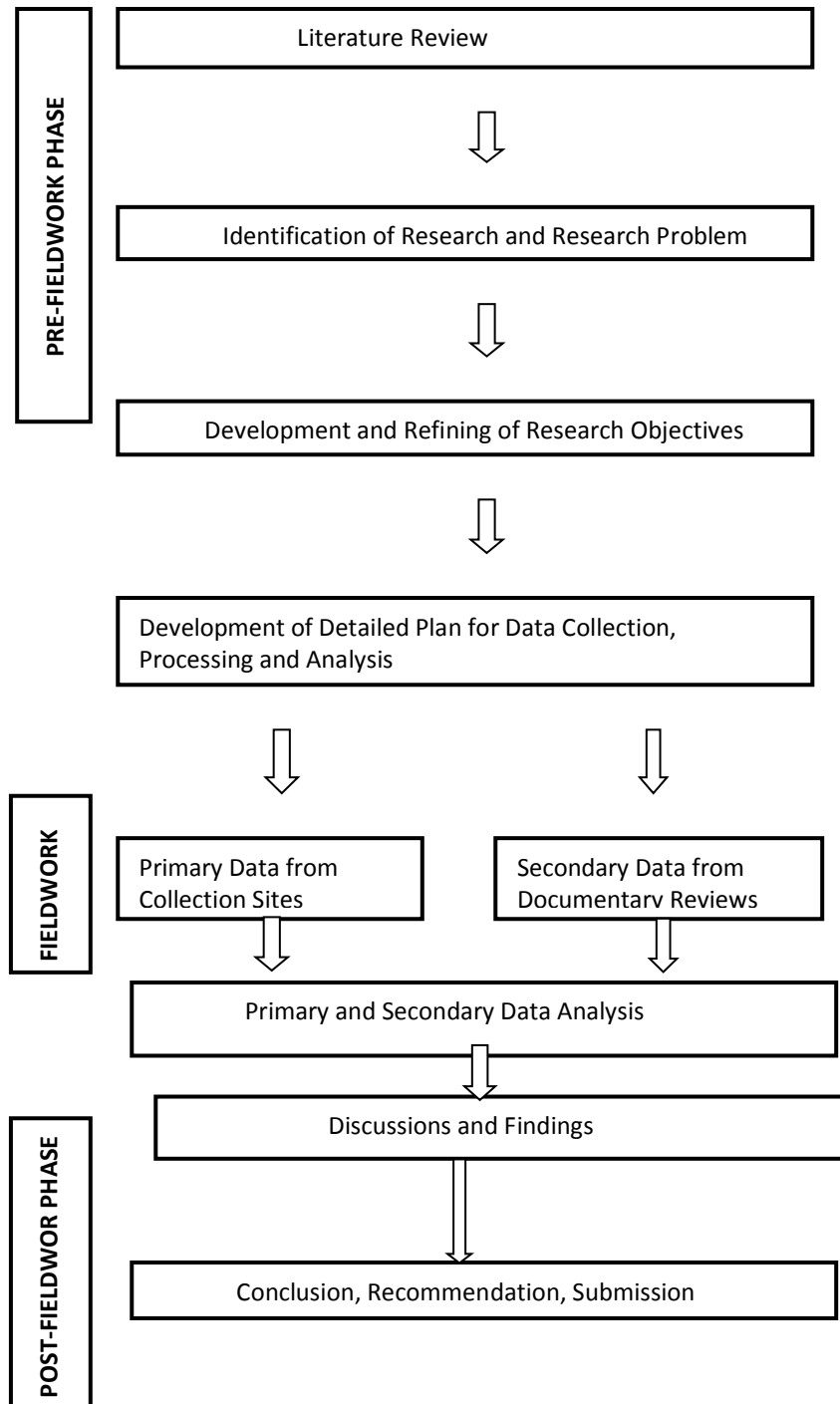
This chapter has presented an in-depth definition of significant terms as per the context of this research, vividly describing the divergent perspectives regarding the informal sector, while also distinguishing the "informality" and "criminality". Nevertheless, the chapter delves into the construction industry exploring multiple aspects with focus on informal construction sector. In harmony with the research issue, it unfolds various components of the informal construction sector in tandem to the empirical scenario in Tanzania.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter articulates research methodology applied in this study logically adhering to systematic rules and procedures as per the research paradigm selected, in order to examine the management approaches applied on the informal construction workers in Kinondoni Municipality. Interviews were conducted on informal construction managers and workers through interview guides to gather primary data, while documentary reviews were undertaken to collect secondary data. Methodology herein entails information about the research strategy, design, population, sample size, pilot study, location of research, data collection methods and instruments, data measurement and analysis, validity, reliability, and research ethics.



**Figure 3.1:** Framework for Methodological Triangulation of Research.

**Source:** Author (2017)

### **3.2. Research Strategy**

Research strategy can be viewed as the mechanism or approach through which the research objectives can be questioned. Two types of research strategies are quantitative and qualitative approaches (Naoum, 2007). Quantitative research approach centers on positivist worldview and seeks to gather raw data in order to study relationships between facts or variables and how such facts and relationships concur with theories and the findings of any research executed previously. On the other hand, qualitative research approach centers on constructivist research paradigm seeking to gain insights and to understand people's perception of "the world", multiple realities, from individuals or groups (Fellows and Liu, 2008). It is significant to understand that some scholars adopt mixed research approach in order to bridge both the quantitative and qualitative research strategies (Creswell, 2009; Ibis, 2003).

Qualitative research approach was adopted for this study. This approach was selected because the research was designed to explore multiple realities from target respondents to understand the perceptions of the informal construction managers and workers on the efficacy of the informal construction management approaches in order to determine if they are suitable or not suitable, and possible remedies in the context of Tanzania. The study was *inductive* rather than *deductive* to accord respondents a platform to fully express their responses.



### 3.3. Area of the Study

This research was conducted in Kinondoni Municipal Council in Dar es Salaam Region. This is partly because it is among the local authorities in Tanzania characterized by numerous informal construction activities pertinent to this research. Nevertheless, the selection of Kinondoni Municipality was convenient as far as resources were concerned, and access to primary data on the grounds that the researcher is familiar with the localities and could suitably identify and reach the targeted units of study (construction sites) as depicted in the below plate.



**Plate 3.1:** An Interview with Informal Construction Workers at the formal Construction Site

**Source:** Fieldwork (2017)

Alluding to Plate 3.1, the availability of research resources like funds for various expenses like data-gathering materials, devices, transport cost, as well as familiarity and accessibility to research location are indispensable determinants in research so as to collect raw data from field.

### **3.4. Research Population**

According to Best and Khan (1998), a population is a group of individuals/subjects/units with one or more characteristics in common that are within the interest of the researcher. The targeted population for this research included the informal construction managers and informal construction workers operating in Kinondoni Area, Dar es Salaam Region. Likewise, the target group for this research encompassed the ongoing informal construction projects undertaken by the informal construction workers within Kinondoni Municipality.

### **3.5. Research Design**

The term "research design" refers to the plan or organization of a scientific investigation. Process of designing a research involves the development of a plan or strategy that will guide the collection and analyses of data (Creswell, 2009; Id., 2003). Similarly, Kothari (2004) articulates that research design is an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure. Succinctly, the research design is a structure of any type of research and holds together the elements of a research project. Hence, it should be designed so as to structure the research, showcase all the main components of the research work in order to address the central research questions (Tromp and Kombo, 2006).

In tandem, the central theme of this research was to study the management techniques applied on the informal construction workers in Kinondoni, Dar es Salaam, hence, the descriptive research design as a strategy for carrying out this

research was adopted. A descriptive study is concerned with describing the characteristics of a particular individual or group (Kothari, 2004).

Centrality for the adoption of descriptive research was to describe the state of affairs as it exists. Kerlinger (1986) pinpointed that descriptive studies are not only restricted to fact findings, but may also result to the formulation of important principles of knowledge and remedies for significant problems. They encompass measurement, classification, analysis, comparison and interpretation of gathered data. Concurrently, Orodho (2003) clarifies that descriptive research involves a method of gathering data or information by conducting interviews or administering questionnaires to a sample of targeted respondents.

Furthermore, the descriptive design is considered suitable for this study because it enables the collection of relevant evidence with minimal expenditure of efforts, time and funds as compared to other designs like experimental design, correlation design and case study design.

### **3.6. Sampling and Sample Size**

#### **3.6.1. Sampling method**

Sampling is defined as the selection of a part of the whole target population (universe) for study such that the selected group contains elements representative of the characteristics found in entire population. Naoum (2003) emphasizes the importance of selecting a sample size for research stressing essence of carefulness when choosing the type of sample design. Nevertheless, it is imperative for researchers to ascertain that the characteristics of the sample are representative of the target population so as to fully represent the phenomenon to be researched. Likewise,

in the context of this study, the researcher applied non-probability (non-random) sampling technique in which purposive/judgmental sampling method, basing on extreme knowledge of the researcher and experienced consultants to minimize bias and subjectivity, was adopted for selection of respondents. Kerlinger (1986) posited that "non-probability" samplings are necessary and unavoidable. Sample for this research population comprised 25 informal workers managers, and 35 informal construction workers.

### **3.6.1.1 Non-probability sampling**

According to Kombo and Tromp (2006), in non-probability sampling the researcher is interested in the representativeness of the concepts in their varying forms. Non-probability sampling aims at finding out how a small group or representative group is doing for the purposes of illustration or explanation.

This researcher employed non-probability sampling method premising on the practicality that the population size of informal construction workers tend to be small ranging from 2 - 10 workers to the informal sites .But to the formal sites informal construction workers ranging from 5-and above depending on activities carried out on site,. Besides, the researcher targeted the informal construction workers leaders/managers enriched with relevant information concerning the management approaches and impact on the informal construction workers.

### **3.6.2 Sample size**

Creswell (2003) refers to sample size as the number of elements representative of the sample population. Larger sample size produces more reliable and diverse results than smaller sample, however, it is not necessary to acquire the entire target

population. Basing on time, cost and labor limitations, a sample size of sixty (60) respondents, comprised of twenty (25) informal construction managers as well as thirty (35) informal construction workers was selected as being suitable for the data collection. This is supported by Sekeran (2000) who proposes that a sample size within a minimum of 30 and maximum of 500 respondents is valid for data gathering. However, 50 respondents were interviewed comprised of 20 informal construction managers and 30 informal construction workers.

The premise behind the selection of this sample size emanates from the difficulty of researching the whole population due to limitations like schedule, budget, labor, and other operative determinants explicitly or implicitly impacting the execution of the study (Mugenda, 2003).

### **3.7. Data Collection**

Kothari (2004) defines data collection as a process that involves obtaining the relevant information needed either from primary (field) or secondary (documentary reviews) sources in order to solve the research problem. In this context, various data collection methods and tools were adopted as a means of acquiring information. Hence, data regarding management techniques of informal construction workers in Tanzania was basically obtained as follows:-

#### **3.7.1. Primary data collection**

Pertinent to this research, the primary data was gathered through the interview guides conducted on managers or leaders and workers working in the informal construction enterprises, and on-going projects or sites in Kinondoni Area in Dar es Salaam Region.

### a) Interviews

Interview guides each scheduled for a session of about fifty-five (55) minutes were used by the researcher to collect data. This technique of data collection through verbal exchange was conducted on respondents from sampled informal construction managers, leaders/foremen, and workers who consented to express their opinions on the study issue. Prior to interviewing, the respondent's permission was requested. Questions were presented in different orders depending on the flexibility of the respondents, sometimes with different wording to interviewees for clarification. This was to enable the interviewer to have full control on the questions throughout the entire process of the interview. In this study, the interview technique of data collection was deemed appropriate because it gives room for an interviewer to clarify questions to the interviewee, enabling in-depth responses and relatively high response rate (Kothari, 2004).



**Plate 3.2:** Round-the-Table Interview with Informal Construction "Advent" Group.

**Source:** Fieldwork (2017).

Plate 3.2 is a depiction of interview session held for about sixty (60) minutes with informal construction manager and workers of *Advent Group*. Questions were distributed to respondents for familiarization before researcher commenced the questioning.

### **3.7.2 Secondary data collection**

Secondary data are readily available data or information. They tend to be easy to gather, inexpensive, time and effort saving. The shortcomings of this type of data are associated with lack of credibility or non-authenticity of the source of the information, failure to fit into research objectives, out-datedness of data, non-control over the data quality, and unreliability.

#### **b) Documentary Review**

In accordance with Sounders (2009) documentary review is a tool of data collection from the secondary data sources like through use of documents. They refer to the data that were collected and analyzed by someone else, which may be either published or not published. Oftentimes, published data are available in varying official documents, and researcher may find publications of international bodies and their subsidiary organizations, public records, journals, books, magazines and newspapers, research reports and historical documents, pamphlets, research papers, and other official reports. Unpublished data may be found in diaries, unpublished letters, and biographies.

Secondary data obtained is used to enhance and verify data and any information gathered from primary sources. In this context, the key sources of secondary data

included; books, peer-reviewed journals, past research reports, authentic records, and internet sources relevant to the informal construction practices.

### **3.8 Data Analysis**

Data analysis involves examining, categorizing, tabulating, testing, or otherwise recombining both quantitative and qualitative evidence to address the initial propositions of a study (Yin, 2003). Data analysis entails an array of logical operation that is undertaken with intent of summarizing the raw data collected in an organized manner such that it reflects and tackle the aim and objectives of the research.

Basically, the researcher applied thematic analysis in which qualitative data gathered through interviews and documentary reviews were identified, analyzed, and patterns or themes within the data were reported as recommended by Braun and Clarke (2006). The researcher reviewed the themes in relation to data gathered, refined the specifics of each theme and its overall content, thereby developing clear name for each theme as per the research objectives and questions. In tandem, Microsoft Excel was used to analyze the dichotomous-based responses "Yes" or "No", rating to measure strength of opinions in case of itemized issues, and processing of tables, pie-charts and other graphs to present the research findings for discussion.

### **3.9 Instrument Validity and Reliability**

#### **3.9.1 Instrument Validity**

Burns and Grove (1993) termed the validity of an instrument as determination of the extent to which the instrument actually reflects the abstract construct being examined. Additionally, Bell (2005) gives another definition that, "Validity tells us



whether an item or instrument measures or describes what it is supposed to measure". Sapsford and Jupp (1996) offer a more precise definition that 'validity' means 'the design of research to provide credible conclusions. In this research, the developed design provided the conclusion whether the evidence which the research offers bearded the weight of the interpretation that is put on it. The research approach and methods employed in this research provided required responses since the right inputs were applied on the right approach with the right sampling methods. Therefore, the research methodology employed provided the responses to research questions and at the end the research problem was solved.

### **3.9.2 Instrument Reliability**

Reliability of an instrument is the degree of consistency with which it measures the attribute it is supposed to be measuring (Polite & Hunger, 1985). Similarly, Bell (2005) defined the reliability as the extent to which a test or procedure produces similar results under constant conditions on all occasions. The less variation an instrument produces in recurring measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. Hence, by adopting the nominal and ordinal scale of measurement it will allow different researchers performing an exercise to discover identical results thereby creating stability for the study. Reliability can be influenced by the nature of the research questions applied, research objectives and approach employed.

### **3.10 Ethical Consideration**

The in-depth nature of this study and the sensitive information that might have been collected during this research, necessitated ethical dimensions to be taken into account. Researcher, ensured voluntarily participation, confidentiality, privacy, and protection of respondents from harm while establishing mutual trust between researcher and people studied as recommended by Silverman (2008). Likewise, this researcher's access to all confidential information from primary sources was by informed consent from the relevant respondents or firms through an introduction letter procedurally obtained from Ardhi University.

### **3.11. Chapter Summary**

The chapter has exhibited the methodology adopted to execute the research and respond to research questions thus assisted to achieve the objectives set. It presents how qualitative research approach was applied to gather primary and secondary data through various collection techniques like interviews (interview guides), and content analysis (literature reviewing). Moreover, it highlights how sampling, reliability, validity, and ethical dimensions were applied to enable successful completion and conclusion of research vis-à-vis pre-determined objectives.

## **CHAPTER FOUR**

### **DATA ANALYSIS, INTERPRETATION AND DISCUSSION**

#### **4.1. Introduction**

This chapter presents the analysis, interpretation and in-depth discussion of data obtained from conducted personal interviews, physical observations of informal construction workers, as well as, content analysis on diverse relevant literature. The information was purposely gathered to solve the research problem and draw the conclusions and recommendations from the study. In order to examine various approaches applied in the management of informal construction workers, the course of action centered on the management functions of; planning (decision making), organizing, staffing, directing (actuating/coordinating), and controlling.

In tandem, the particular areas of concern covered in this research included; premises/location; leadership qualifications and styles; recruitment/staffing requisites; division of labor; remuneration criteria; workers skills development; health and safety measures; workers mobility; workers interactions; conflict resolution mechanisms; financing mechanisms; market acquisition; directing/coordinating methods; control techniques; encountered problems; and possible solutions in the context of informal construction practices in Dar es Salaam.

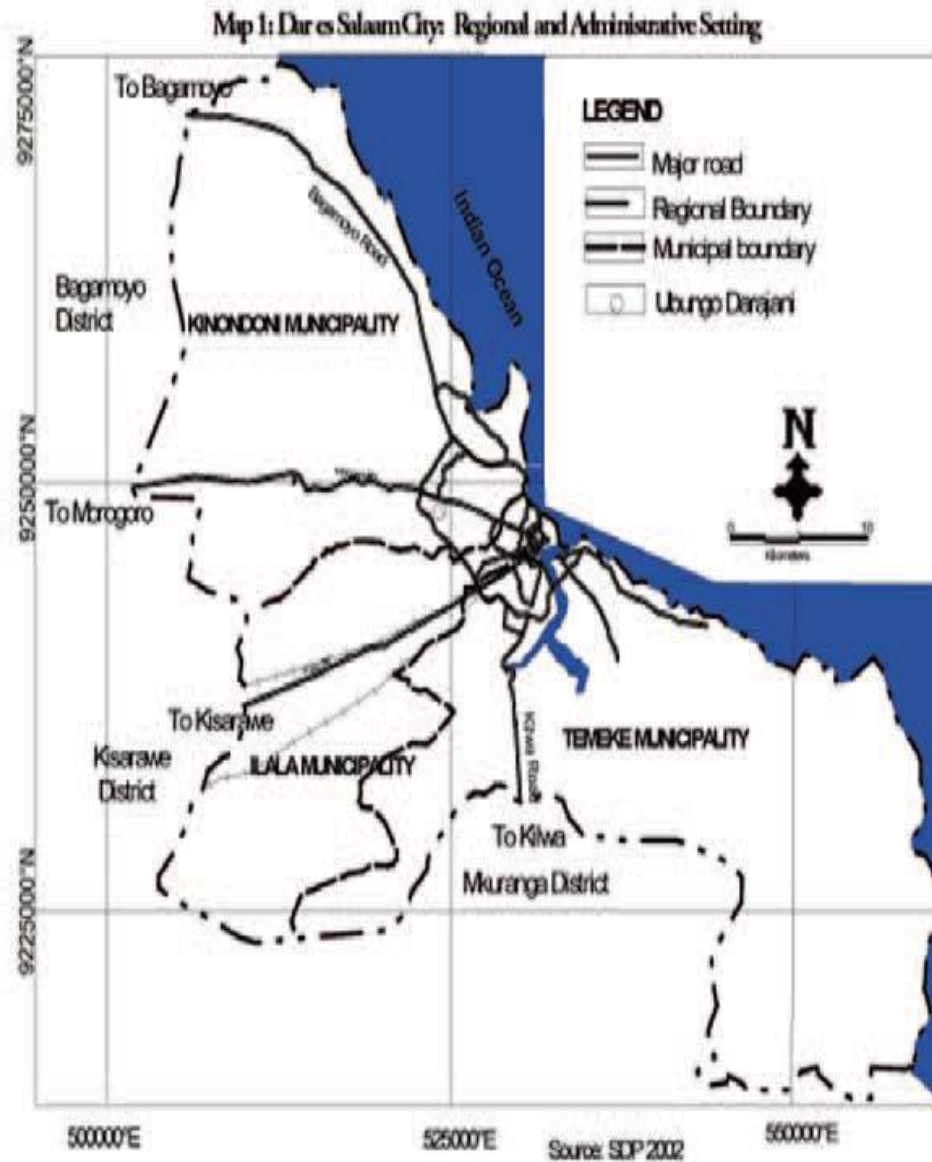
#### **4.2. Description of the Study Area**

The study was conducted in Kinondoni Municipal Council in Dar es Salaam Region which is located along the Indian Ocean coast and covers a total of 1,393 km<sup>2</sup>. Administratively, the region is delineated into five (5) districts namely; Kinondoni, Ilala, Temeke, Ubungo and Kigamboni. Dar es Salaam region is located between

Latitude 6.15° and 7.40° south of the Equator and Longitude 33.30° and 39.30° East of Greenwich (Faidia, 2011). Dar es Salaam Region lays along the shore of Indian Ocean in the East and borders Pwani Region in the West, South and North.

According to Tanzania Population and Housing Census (2012), it had about 1,095,057 households with Kinondoni District leading (446,504 households), while the population of Dar es Salaam Region was approximated to be 4,364,541 growing at the rate of about 5.6 per cent per annum. The region is characterized by high temperatures almost throughout the year, ranging from 19°C to 33°C with the maximum temperature being experienced in October and November. Average temperature is 25.4°C and rainfall is bimodal with short rains falling from November to December, and long rains from March to June. Humidity is around 96% in the morning and 67% in the afternoon (PMO-RALG Report, 2014).

Nevertheless, according to URT (2004), Dar es Salaam resonates as the leading economic hub of Tanzania identifiable by economic activities like, among others, internal trading, manufacturing, tourism, transport and communication, urban agriculture, fishing, quarrying, utility services, real estate and construction, finance and insurance. This combination of primary, secondary, tertiary and quaternary modes of economic production and tradability, has stimulated influx of people into the region ear-tagged by unprecedented urbanization. Hence, promoting the thrive of uncontrolled informal settlements typical of informal entrepreneurial and construction practices, thus the premise for this research.



**Figure 4.1: Map Exhibition of Kinondoni Municipality, Dar es Salaam Region**

Source: UN-Habitat (2014)

### 4.3. Research Response Rates

Since this research intended to explore responses from the informal construction managers/leaders/foremen and workers, the researcher attempted to keep non-response rate low to achieve highest response rate in order to determine the effectiveness of management approaches applied on informal construction workers.

In this context, response rate is determined by the number of people who actually

responded to the interview divided by the number of people in the sample who were eligible to participate and ought to have provided response. In tandem, the response rate for this research is as depicted in table 4.1 below:

**Table 4.1:** Research Respondents Profile

<b>Sample Selected</b>	<b>Expected Respondents</b>	<b>Actual Respondents</b>	<b>Response Rate</b>
Managers	25	20	80%
Workers	35	30	85.71%
<b>Total</b>	<b>60</b>	<b>50</b>	<b>83.33%</b>

**Source:** Author (2017)

The researcher mainly conducted personal interviews on target respondents to gather the primary data as depicted in the table above. 60 respondents were expected for the interview including; informal construction managers (25), and the informal construction workers (35). However, during the study, 50 out of 60 respondents (83%) participated in interview.

#### **4.4. Research Findings**

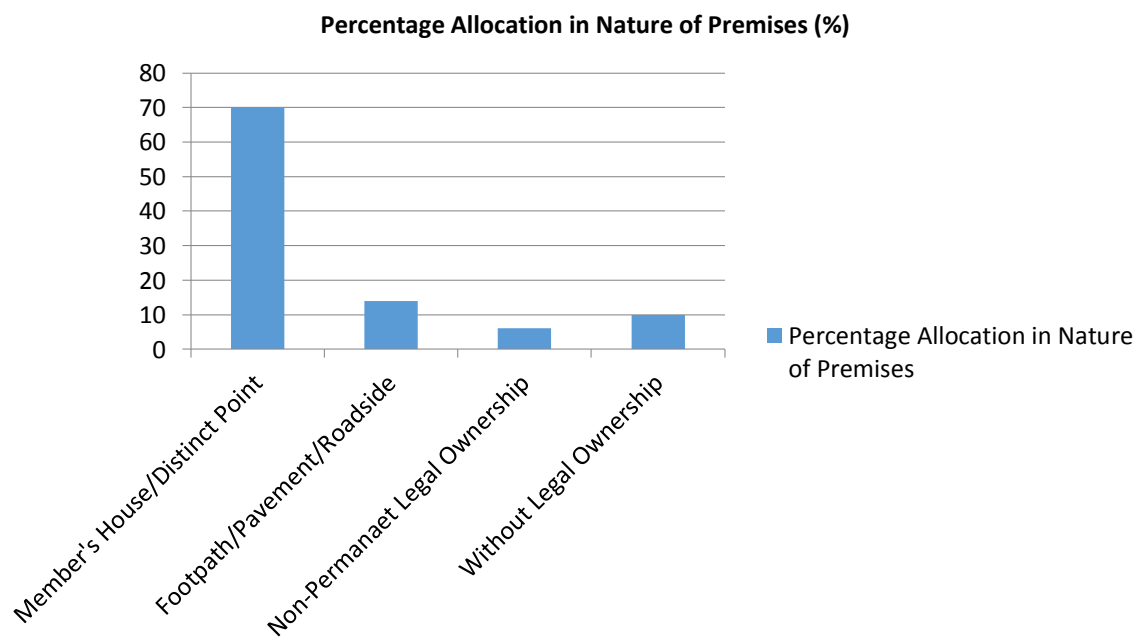
This research was purposely designed to study the management techniques applied on informal construction workers in Dar es Salaam. It aimed at uncovering shortcomings and accentuating respective remedies towards improvability of the effectiveness of the management approaches. The presentation, explanation and discussion of the findings are exhibited in accordance with specific research question tested:

##### **4.4.1. Research Question 1:**

- Which factors and to what extent do they influence the management techniques applied for informal construction workers?

- **Premises**

The premises or location is an imperative necessity for managerial activities of a group of informal workers, and for easy access by customers. This research discovered that most informal construction groups or workers lack permanent premises or location for management functions. Most groups tend to meet at one of the members house, along the roadside, under a tree, or at a distinctive point on street. 35 out of 50 respondents (70%) mentioned pick-up points "vijiweni" inclusive of, among others, road junctions, open fields, hardware shops, under a tree, as their convergence locations. Other categories of location mentioned include; foot path, pavement or road-side (7 out of 50); structures without legal ownership (5 out of 50); and structures with non-permanent legal ownership (3 out of 50).



**Figure 4.2:** Percentage Allocation on Nature of Premises for Informal Construction Workers.

**Source:** Author (2017).

The findings showcase that most informal construction groups in Dar es Salaam do not have permanent and legally recognized premises where they can effectively carry out the managerial activities like planning, organizing, staffing, directing, and controlling. In addition to negative impact of absence of permanent premises on management, it often makes it difficult for customers to recognize them from vagabonds thus obstructing their marketability. Nevertheless, this also insinuates disturbance and harassment from authorities like the police force.

- **Leadership Qualification**

Management and leadership though separable, are inter-twined and co-exist. Management involves the process of planning, organizing, staffing, coordinating, and controlling, while leadership implies the ability of an individual to influence and guide other members of a group to abide by their vision and established goals. In tandem, the study found that most informal construction managers (16 out of 20) acquired their position because of, among others; their experience in the sector; the assistance they can give to the group; the influence they command within and outside the group; and in few instances, leaders standing as entrepreneurs or businessmen thus taking likely risk in order to make profits.

Furthermore, the study uncovered that most group leaders had some previous experience in the public construction institutions or private construction companies, hence become automatic or elected leaders. In most groups, the respondents affirmed that leaders/managers do not often get extra benefits or privileges, they are entitled to settling conflicts, search for jobs and distribute the available jobs and tasks, and

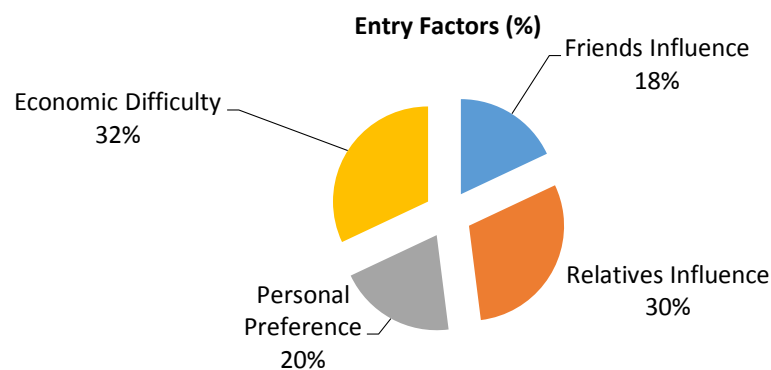


mostly, they are generally part of the group's workforce, and not exempted from duties because of their positions.

However, the study discovered a scent of distrust among some informal construction workers of some groups. 21 out of 30 workers (70%) mentioned lack of transparency on the management of funds, and absence of democracy characterized by dominance of certain individuals in decision making, as the core causes of mistrust.

- **Recruitment**

Recruitment refers to the process of searching or finding candidates for employment or hiring. Pertinently, this research discovered that there are different ways of getting into the informal construction groups. For instance ; 9 out of 50 respondents entered through friends influence (18 per cent); 15 out of 50 respondents entered through relatives influence (30 per cent); 10 out of 50 respondents through personal preference (20 per cent), and 16 out of 50 interviewees entered due to economic difficulties (32 per cent).



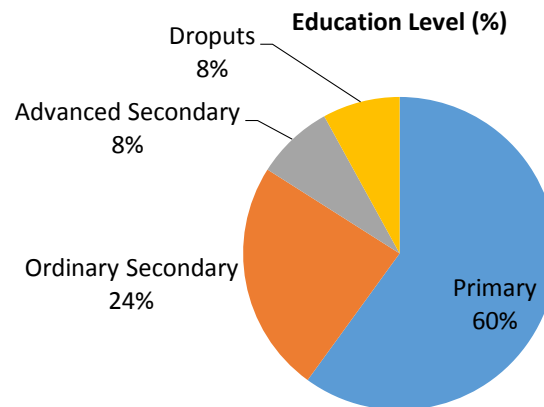
**Figure 4.3:** Percentage Distribution of Informal Construction Workers Entry Determinants.

**Source:** Field Survey (2017)

Hence, there are no pre-set standards, guidelines or benchmarks for joining most informal construction groups, but individuals enter through friends and relatives influence mostly as apprentices, while though some join through their own choice, the study strongly indicate that about a third of the workforce are pushed by economic harshness. In contrast to formal counter-parts, this non-standardized approach can lead to incompetency and substandard workmanship.

Nevertheless, the research determined that most recruits are unskilled or semi-skilled school leavers who could not obtain an opportunity to further their education.

For instance, out of 50 respondents interviewed, 30 respondents (60 per cent) entered the sector upon completion of primary education, 12 respondents (24 per cent) completed ordinary secondary education, 4 interviewees (8 per cent) acquired advanced secondary education, and 4 respondents (8 per cent) were primary school drop-outs. Most of them (35 out of 50 interviewees) schooled in rural areas before migrating to Dar es Salaam, and confirmed to have joined the informal construction groups due to lack of employment chances in other industries.



**Figure 4.4:** Informal Construction Workers Education Levels

**Source:** Field Survey (2017).

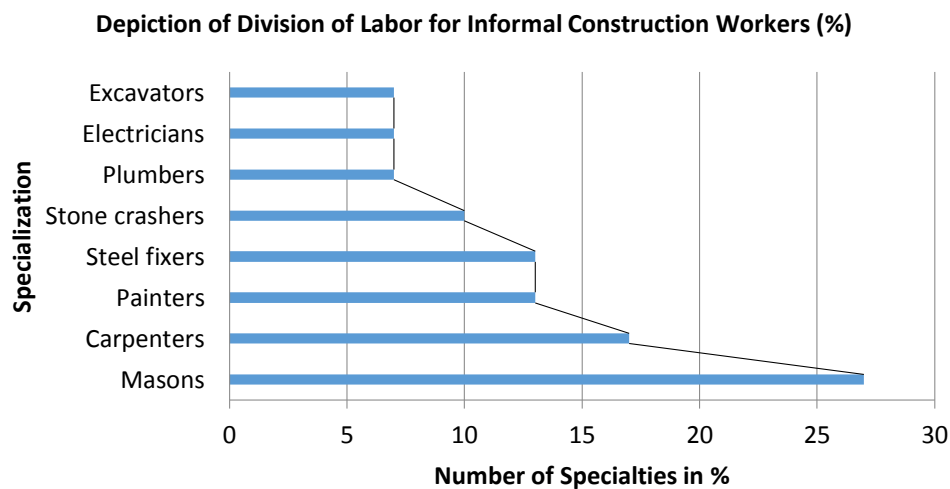
The findings are an indication that the informal construction sector in Dar es Salaam is vastly dominated by unskilled or semi-skilled practitioners, often culminating to low-standard of workmanship in informally built houses. Furthermore, the absence of proper scrutiny during recruitment compromises the efficient growth of the informal construction sector at a time marked by sophisticated construction technology, myriad of customer preferences, huge construction projects, and stringent regulations. The findings on level of education of the informal construction workers concur with Mkenda and Aikaeli (2014) who determined that more than half of informal construction workers had primary level of education.

- **Division of Labor**

According to the Oxford Dictionary of Sociology, division of labor refers to a way of organizing work, particularly making sure that specific types of work are done by specific people. Synonymous with specialization, it is a production process in which a worker or a group of workers is assigned a specialized task in order to increase

efficiency, hence the importance of division of labor is of great significance in management and production.

In this line, the research approved commendable pattern of specialization within the informal construction groups. For instance, out of the 30 workers interviewed exclusive of managers, they mentioned their specialization as; masons (8), carpenters (5), plumbers (2), electricians (2), painters (4), steel fixers (4), stone crushers (3), and excavators (2). Moreover, it was found that some experienced informal construction workers possess more than single specialization. Group leaders or managers are responsible for the allocation and supervision of tasks or activities to an individual or group of workers.



**Figure 4.5:** Depiction of Labor Division for Informal Construction Workers.

**Source:** Author (2017)

As figure 4.5 above demonstrates that masonry is often the core specialization within the informal construction practices. Masons usually lead the group and communicate

with the property owner on matters concerning construction process, and can look for other specialized workers required.

However, most of the informal construction workers interviewed acquired their skills through apprenticeship hence lacks the expected competence which may compromise specialization.

- **Compensation**

In management, compensation refers to the remuneration or payment received by an employee in return for his or her contribution to the work executed. It is an organized practice involving balancing the work-employee relation by provisioning of monetary and non-monetary benefits to employees, thus of immensely impactful. In tandem research found that informal payment methods were applied in compensating workers based on time, task or piecework, depending on the preference of the building owner, contractor, and type of task being under-taken. Most interviewees asserted that they get remunerated on the basis of finished job mostly on weekly basis. That is, they usually have to wait till the task is finalized before they get paid.

However, it was also determined that in some instances, a down payment "advance" is made at the start of the job and the balance cleared upon the completion of the task. The study discovered that most employees are paid weekly and as per piecework through the group leader/foreman/manager, commonly called "sub-contractor" though not registered, who then submit payments to workers. Also, there are some "general workers" or "*vibarua*" hired and paid on daily basis by the group

manager/foreman/leader. None of the informal construction workers interviewed affirmed being paid on monthly basis.

Further, the informal construction workers may be hired as a person or group. In case of group hiring, the individual who obtains the contract is considered the "gang leader" throughout the work duration, and he may not be particularly the leader or manager of the group. Additionally, any individual may get a construction job and inform others to work with him. In this instance, the "gang leader" takes the payment and distribute it to co-workers according to their respective contribution. The instances of leaders getting additional benefits were few, and they were also working as their fellow workers. Of significant finding is that there is a big variation in the payment of informal construction employees, with the earnings differing according to the specialization, qualification and experience of the workers.

Overall, the concern of this study was that the remuneration centered on negotiations based on "intuition" or "instinct" and not pre-determined standards based on the nature of skilled, semi-skilled or unskilled workforce required for the task. The interviewees opined that the payments were lower compared to fees for similar jobs in the formal side and the standard minimum wage. Table 4.2 indicates the range of earnings for some specialties as were mentioned by respondents:

**Table 4.2:** Approximate Range of Earnings per Trade

Trade/Specialty	Minimum Payment	Maximum Payment	Rate/Unit	Addition Remarks
Carpenters	5,000	10,000	Per day	
Masons	7,000	15,000	Per day	
Plumbers	300,000	500,000	Per house	Paid in stages
Electricians	400,000	600,000	Per house	Paid in stages
Painters	6,000	12,000	Per day	
Steel rain-forcers	100,000	250,000	Per job	
Sand suppliers	80,000	150,000	Per lorry	
Stone crushers	60,000	150,000	Per lorry	
"Vibarua"	5,000	5,500	Per day	

**Source:** Field Survey (2017).

Table 4.2 depicts reasonable earnings compared to the national minimum wage for the formal construction workers. For instance, according to the National Bureau of Statistics (2016) the minimum wage (per day) for the construction sector were; class I (TSh.12,500.95); class II-IV (TSh.10,770.05); and Class V-VII (TSh.9,616.10), while minimum wage (per month) were; class I (TSh.325,000); class II-IV (TSh.280,000); and class V-VII (TSh.250,000).

However, the displayed are daily wages and only paid when job is available, which is not usually the case as the informal construction workers can stay for weeks or months without construction work to perform. Nevertheless, 41 out of 50 (82 per cent) of the interviewees claimed to have no major alternative source of earning when the construction task is not available. Hence, the practical income for informal construction workers often fluctuate greatly according to presence of work, thus posing economic hardship to them during such times. Similarly, Mkenda and Aikaeli (2014) observed that informal construction workers received averagely lower earnings compared to formal counterparts. Moreover, the study noted that even

where earnings disparity is small, the irregularity, seasonality and uncertainty of jobs still is a set-back on them. Additionally, Mkenda and Aikaeli (2014) affirmed the variation of compensation according to the level of education of the informal construction workers.

- **On-Job-Skill Training and Development**

In this context, training implies the immediate improvement necessary for employees to gain specific knowledge and skills to perform their allocated tasks, while development implies the process of preparing employees for future responsibilities, thus influential in management. Similarly, the researcher enquired on the optimism of workers and readiness of the group management toward the on-job-skill development and training. The group managers/leaders/ foremen, and workers interviewed responded that there have been some grass-root efforts to enlighten the informal construction workers, for instance, through workshops or seminars often organized by the international organizations like the ILO, WB, UN-Habitat, in collaboration with internal bodies like the NCC, CRB, TAICO and VETA.

However, in line with Mlinga (2001), no landmark measures have been initiated to develop the informal construction sector and workers in Tanzania, irrespective of their dominance and significance in construction industry. In this context, only 20% (10 out of 50 interviewees) attended vocational or post-school training, and 35 out of 50 (70 per cent) of respondents expressed their willingness to develop their informally or formally acquired skills through the colleges (theoretically) and on-site (practically). In contrast, only 10 per cent (5 out of 50) interviewees indicated



satisfaction with their level of skills and were majorly focused on how to reduce encountered limitations and improve the sustainability of their earnings.

In tandem, referring to Nguluma (2003) who questioned the quality of workmanship of informally constructed building like the incrementally built ones, Mselle and Alananga (2017) propose the need for improving the informal construction workers knowledge incubation (apprenticeship) methodologies, to cope up with the growing construction technologies, complexities and typologies.

- **Health and Safety Measures**

In line with the need of management to ensure the health, safety and social welfare measures are provided, the study delved into the issue. 80 per cent of interviewees (40 out of 50), mostly from purely informal construction sites pinpointed the absence of health and safety measures like the first aid kit, safety vests, long pants, safety glasses, ear protectors, safety harnesses, respirators, gloves, helmets, custom hard hats, safety boots, gum-boots, reflectors, and other protective gear resulting to minor, mild or fatal accidents, and accumulative health problems like tuberculosis and bronchitis.

Most informal construction workers tend to work for ordinary clients, rather than sub-contractors or contractors, who cannot be accountable for their health and safety. But even with informal contractors or sub-contractors, the research determined that the health and safety measures on construction sites often entail advisory and cautionary steps rather than elimination of hazards or provision of protective gear. The physical observation of the informal construction workers working to entirely

informal construction sites by this researcher, revealed poor and risky working environment to which the informal workers are subjected.



**Plate 4.1: Unprotected Informal Construction Workers at Work.**

**Source:** Fieldwork (2017)

Plate 4.1 depicts a ground-based photograph of an entirely informal construction site with completely unprotected informal construction workers susceptible to a range of minor, mild and fatal accidents, and respiratory-based diseases like the tuberculosis and bronchitis.

Furthermore, despite the motivation for social health insurance services in Tanzania by the NHIF, Pension Funds like the PSPF, PPF, NSSF and LAPF, as well as other Insurance Companies, most informal construction workers expressed their detachment from the services and insignificant attention from the groups, contractors and subcontractors. This implies that majority of informal construction workers become helpless during serious or fatal accidents, diseases and retiring periods.

Likewise, exploring social protection among informal construction workers, Mkenda and Aikaeli (2014) discovered that only 1% of the informal construction workers were protected by the Parastatal Pension Fund (PPF) and National Security Social Fund (NSSF). Nevertheless, studying the informal construction health and safety situation in Kenya, Wachira (2001) and Kinyanjui and Mutullah (1999) concur that majority of informal construction workers are hired as casual laborers without any benefit, and work under very dangerous conditions that sometimes results to serious accidents or death.

In the same line, Helmer and Fingerhurt (2001) observe that the working conditions for informal construction workers fail to meet the minimum standards and guidelines set forth by the ILO and World Health Organization (WHO) for the Occupational Health and Safety (OHS) and social protection, thus depicting the seriousness required for health and safety measures.

- **Labor Mobility**

Labor (all productive human resources) mobility refers to the occupational or geographical movement of workers thus can influence the management functions. Likewise, considering the importance of security of tenure for both the worker and the enterprise or group, the study dug into the mobility of workforce. Contextually, 45 Of 50 (90 per cent) of the interviewees confirmed high extent of workforce movement, particularly by individual informal construction workers rather than the entire group. It was clarified that inconsistency in demand notably due to climatic seasons, inadequate and fluctuating income, formidable competition mainly from the lower classes of formal construction enterprises, enhance the adoption of subsidiary

occupations, shifting from particular location to the other, and even between informal and formal sectors.

30 out of 50 (60 per cent) respondents concurred that they have subsidiary occupations different from informal construction. Pertinently, the shifting of workforce deters the sustainable growth of the group or enterprise, and discourages willing management to develop or train the informal construction workers. The findings coincide with Jason (2007) who confirmed that some informal construction workers in Dar es Salaam had other subsidiary economic activities, for instance, farming (55 per cent), running business (31 per cent), and having a second job (14 per cent), thus affirming either geographical, horizontal or vertical workforce movement.

- **Financing Mechanisms**

Either informal or formal, the construction of buildings is peculiarly expensive and requires lumpy sum of money to implement thus can impact managerial activities. For formal contractors, the accessibility to either temporary (short term) or permanent (long term) loans is possible. However, the informal contractors or groups are vastly detached from the loaning institutions. In this regard, 45 of 50 (90 per cent) of respondents confirmed that the informal construction works are often funded by the prospective owners or clients. In some instances, the formal contractors can sub-contract their tasks to the informal contractors thus they become responsible for funding the tasks.

However, the respondents pinpointed that the inflated capital costs, restrictive borrowing terms, rampant bureaucracies, escalation of prices for building materials,

are known to obstruct the individual owners or clients resulting to incremental property development which can take about five to ten years to complete. This impacts management approaches in terms of schedule and budget. The lack of access to funds for informal construction groups, contractors or enterprises, is also pinpointed by the NBS (2013) and Heintz (2012).

- **Market Penetration**

Market penetration (market share) implies the successful selling of a product or service in a specific market hence imperative with regard to management goals. In tandem, the research determined that most informal construction workers find it difficult to sell themselves or to competitively obtain jobs. 39 out of 50 (78 per cent) interviewees asserted unreliability of market to sell labor, as among the core bottlenecks facing the informal construction workers. It was discovered that the majority of informal construction workers tend to work individually and not as a group, and being a group member does not necessarily mean working together. This study uncovered that the informal construction groups or enterprises lack proper techniques to advertise and position themselves in the market. They do not have permanent or official premises and often will converge at "vijiwe" (pick-up points) waiting for clients, who mostly are individuals constructing their residential houses incrementally.

Furthermore, three quarters of the interviewees (38 out of 50) added that, in absence of work, they are often compelled to move around the on-going construction sites searching for tasks where they can be hired on daily basis. 14 out of 50 respondents (28 per cent) confirmed to be working or having worked with the formal contractors

or subcontractors, and affirmed that it was difficult to obtain jobs because of stiff competition, qualification and cases of corruption in formally contracted works. It further emerged that the operations of informal construction workers are highly localized as most of them seldom work beyond their localities, and the industry is so competitive that often the groups or workers find themselves agreeing to low payments for sustenance.

In line with the findings, Jill and Jason (2010) distinguish access to market as among the core bottlenecks encountering the informal construction workers. Thus, in tandem with TAICO's key objectives, the authors articulate the need of the government to apportion some of public construction work to the informal construction groups, as well as greater adoption of labor based construction technologies.

- **Coordinating Workers**

Directing and coordinating include all activities like instructing, guiding and motivating designed to encourage subordinates (workers) to work effectively and efficiently. In this context, the research aimed at evaluating how the managers or leaders of the informal construction projects were actuating the various tasks. 18 out of 20 (90 per cent) of managers and leaders interviewed, exclusive of workers, said that the major channels of communication applied were face to face (orally) or the use of mobile phones. There is no absolute chain of command as often leaders and managers are part of the team, however, through coordination with the client, they are required to oversee the appropriate allocation of tasks, obtain and distribute

the needed materials, tools, equipment and funds, as well as ensuring the work is as per pre-determined specifications and desirable workmanship.

Likewise, issues and any matters arising are often communicated or discussed at work sites during brief meetings before the commencement or after the closure of the daily work, as most informal construction groups lack official premises. Moreover, there are no pre-determined communication, supervision, and leadership structures for directing the informal construction works. It should be noted that in most cases, the individual who obtains the work becomes the "gang leader" or "foreman" and the management of informal construction workers often change as per the nature of the job and the customer involved.

- **Triple Constraints Control**

Either formal or informal construction works, operating within the pre-determined cost, time, and quality is indispensable in winning the client's satisfaction. This research found that as opposed to the formal construction management, the control of budget, time and quality in informal construction works is often based on the experience and commitment of workers, as well as the capacity of the client in providing the required resources timely. Hence, most informal construction operations, budget and time are over-run, and products tend not to meet the desirable quality.

For instance, all the 20 informal construction managers and/or leaders interviewed during this study, concurred that, since most of their clients are owners of incrementally built residential houses, funding is a core obstacle which compromises even the essence of working within pre-estimated costs and schedule. For example, a

house ought to have been constructed within a time-span of 9-12 months can over-run for 5-10 years, and with market dynamics and changing circumstances, the budgets are often not met.

#### **4.4.2. Research Question 2:**

- What is the nature of interaction among the informal construction workers within and among their groups?

Interaction management is a process aimed at improving leadership competency in productivity, handling of employee's conflict, performance improvement, delegation, and overcoming resistance. Hence, alluding to significance of interaction management, this research explored the nature of interactivity and conflict resolution mechanisms for informal construction workers and/or groups.

- **Nature of Relationships**

The significance of workers and groups coherence and relationship cannot be overstated as it determines the mobilization of required resources inclusive of capital, labor, materials, management, and entrepreneurship for successful performance of groups or enterprises. The study discovered that the organization of informal construction groups is not formal but tend to be more project-based rather than functional or matrix based. That is, the "gang leader" or informal construction manager, in connection with the client, often makes decision over resources to be utilized in the construction project, controls the budget, resources as well as task assignments, and often when the construction project is completed, the group may be disbanded.



The majority of respondents, 44 out of 50 (88 per cent), indicated that the foundational formation of most informal construction groups was for provision of social security and not purposively for the development of work or workforce. Furthermore, other benefits entail, the collective bargaining power, easing of work availability and completion, sharing different government burdens, exchanging experience, and provisioning of credits to members. Also noticeable was that majority of interviewees, 39 out of 50 (78 per cent) agreed to have unwritten regulations, while the remaining respondents, 11 out of 50 (22 per cent) had written documents guiding their daily operations. Hence, the research concluded that most informal construction workers and/or groups relationships are based on mutual consensus and trustworthiness.

Besides, delving into association and interaction among the informal construction workers, Mutullah and Wachira (2003) and Goldman (2003) accentuate the indifference among informal construction workers to establish effective groups and/or associations, hence, the researchers reiterate the need to expose the informal construction workers to the benefits of belonging to associations which have the potential to engage in advocacy and influence of policy, lobby and represent informal construction workers interests in matters like insurance, wages, training, and terms and conditions of work.

- **Conflict Resolution Mechanisms**

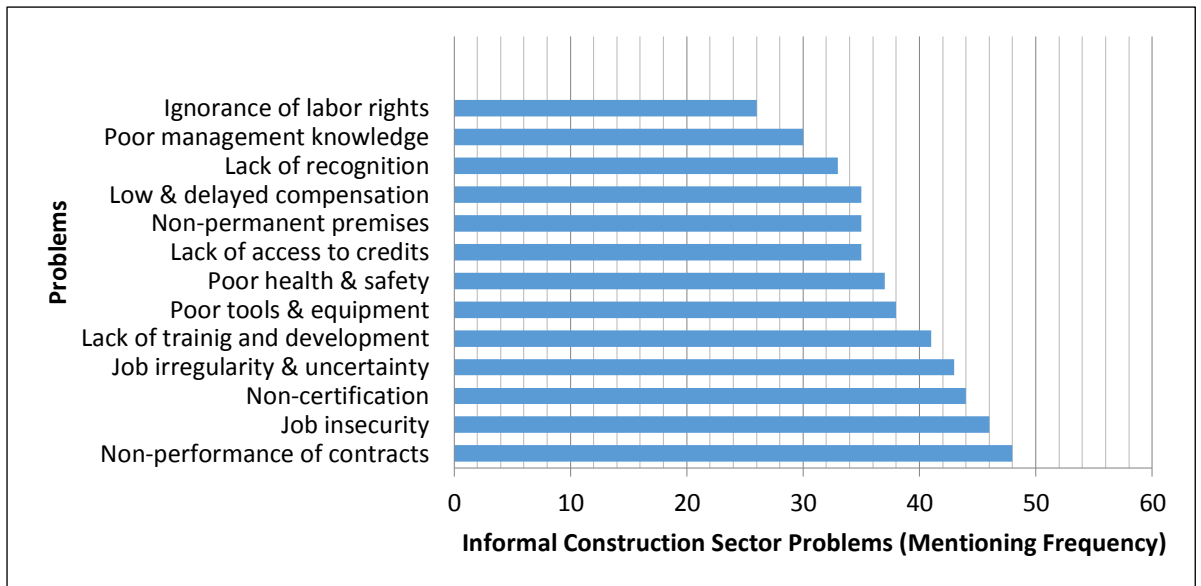
Wehrmann (2008) posited that conflicts are inter-twined with human interactivity hence individuals, groups, communities and/or institutions must learn to manage them, and develop innovative techniques to resolve them based on particular scenario

and the context of the dispute. Alluding to the often encountered conflicts during the construction works, this research delved into the issue. In tandem, 44 out of 50 (88 per cent) of interviewees investigated mentioned amicable (non-judiciary) conflict resolution mechanism as the prioritized method of solving many arising disputes. However, it was also mentioned by the respondents that in some instances whereby mutual consensus out of judiciary cannot be reached, for instance in cases of misappropriation of group's funds, the matter can be forwarded to the Courts of Law for determination and dispensation of justice.

#### **4.4.3. Research Question 3:**

- What are the perceptions of informal construction workers and managers on bottlenecks and possible solutions for management approaches?
- **Encountered Informal Construction Bottlenecks**

In line with the main objective of this research to examine management approaches applied on informal construction workers so as to determine shortcomings and appropriate remedies, this study explored the perceptions of interviewees on core obstacles obstructing effective management of informal construction workers. The discovered problems were analyzed and ranked in accordance with the frequency of which they were mentioned by respondents. Figure 4.6 below depicts the ranking of each problem mentioned:



**Figure 4.6:** Informal Construction Workers Bottlenecks Ranking. **Source:** Author (2017)

As indicated in figure 4.6, all challenges mentioned were ranked above 50 per cent (25frequency mark) signifying that holistic approach should be applied in improving the informal construction effectiveness. In this context, non-performance of contracts was ranked 1<sup>st</sup> followed by job insecurity (2<sup>nd</sup>); non-certification (3<sup>rd</sup>); irregularity and uncertainty of jobs (4<sup>th</sup>); lack of training and development (5<sup>th</sup>); poor working tools and equipment (6<sup>th</sup>); poor health and safety measures (7<sup>th</sup>); while the lack of access to credits, non-permanent premises and low and delayed compensation, were all ranked 8<sup>th</sup>. Nevertheless, lack of recognition, poor management knowledge, and ignorance of labor rights followed respectively.

This research presents that in order to optimize the management functions on informal construction workers inclusive of; planning, organizing, staffing, coordinating, and controlling, coupled with workforce development, growth

management, personnel management, team building, and organizing of people and projects; the mentioned obstacles must be holistically approached and tackled.

Similarly, Jill and Arthur (2010) concurs with this research that for realization of effective improvability of the informal construction sector, a myriad of obstacles must be tackled which include, among others, the absence of reliable markets and impactful contracts, lack of legal certification and recognition, and purposive support from the government, its interventionist bodies and private partners. Additionally, Mlinga (2001) argues for the need to introduce a new national construction policy aimed at facilitating the collaboration between the informal and formal construction sectors for their successful performance inclusive of effective management. Nevertheless, Mlinga (2001) posits that there is a subtle interface between informal and formal construction groups, hence in case identified obstacles are resolved, improvement on effectiveness of managing the informal construction workers can be realized.

Likewise, 18 out of 20 (90%) of the informal construction sector managers/leaders/foremen, exclusive of workers, interviewed mentioned the specific management problems being faced to include, among others, schedule over-runs, lack of defined objectives, cost over-runs, non-skilled or semi-skilled work-force, seasonality of jobs, loose organizational structure, poor communication and feedback mechanisms, non-commitment of workers, labor mobility, lack of managerial tools, absence of fixed premises, occurrence of conflicts, harassment by legal enforcers, and stiff competition.

- **Remedies for Informal Construction Workers Management Bottlenecks**

Further, this study explored the perceptions of interviewees to accentuate the fit-for-purpose remedies towards the improvability of the informal construction industry. Number of frequency at which a solution was mentioned by interviewees forms the basis for ranking. The bars in figure 4.7 shows the ranking of each item mentioned:

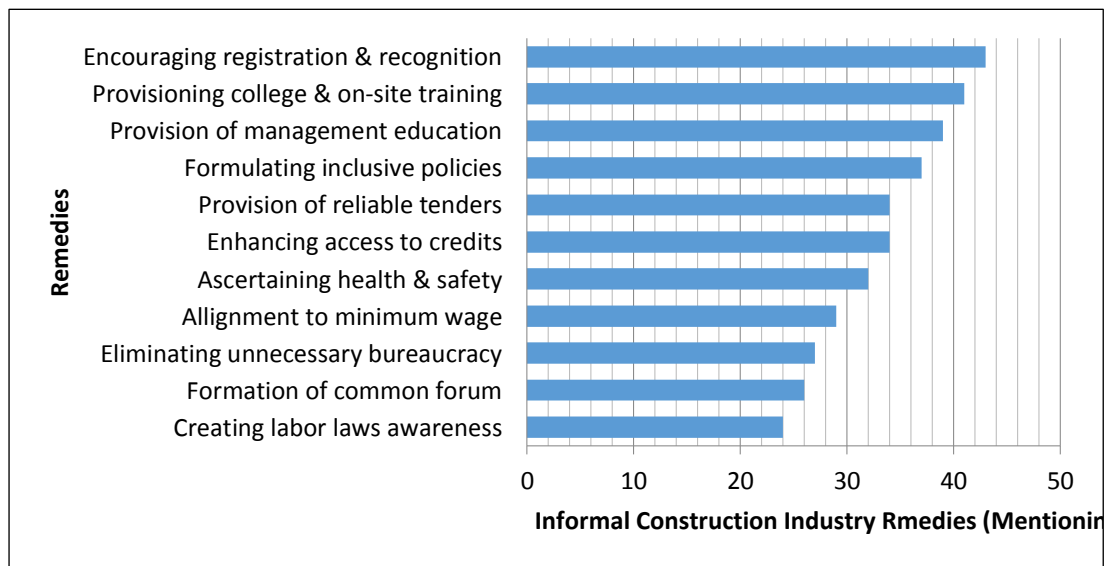


Figure 4.7: **Remedies for Informal Construction Workers Bottlenecks.**

**Source:** Author's Construct (2017).

As showcased in Figure 4.7, all remedies ranked above 50% with exception of creation of labor laws awareness. This implies that respondents are eager to see the solutions implemented holistically to improve the informal construction sector. However, the ranking of laws protecting labor rights below the mean score, signifies low understanding or ignorance of the interviewees concerning the significance of the regulations. The need to encourage registration and legal recognition of the informal construction sector was ranked 1<sup>st</sup> followed by; provision of college and on-site training (2<sup>nd</sup>), provision of management education (3<sup>rd</sup>), formulation of inclusive policies and regulations (4<sup>th</sup>), while provisioning of reliable tenders and enhancement

of accessibility to credit facilities were both ranked 5<sup>th</sup>. Other significant remedies suggested included; ascertainment of health and safety of workers, alignment of payments to national minimum wage, elimination of unnecessary formalities, establishment of common forum for informal construction workers to share their issues, and promotion of awareness of labor rights and related laws.

Reasoning similarly, Mlinga and Lema (2000) recommended that the government and bodies like the CRB and NCC should create conducive environment that encourages the informal contractors to register and acquire legal recognition. Similarly, Jill Wells in "*Informality in the Construction Sector in Developing Countries, 2004*" views construction-based informality in four categories encompassing; informal enterprises, informal labor, informal construction system/process, and informal building/settlement.

In addition, Wells (2004) further posits the inter-relationship among these four categories and evidently asserts the absence of hard and fast delineating boundaries between formal and informal, rather a gradation. Importantly, Jill Wells, therefore, attributes the informal construction woes to fit-for-purpose regulatory vacuum, and legal pluralism culminating to conflicting interpretation and enforceability.

Likewise, Mlinga (2001) observes that though commendable efforts have been initiated to develop the formal construction activities, the informal construction side has been largely ignored despite its significance and dominance in the construction industry, thus precipitating poor working conditions for the workers. This researcher is also of the view that the adoption and application of "*carrot and stick*" implementation approach offering a combination of "rewards" and "punishment",

rather than entirely restrictive laws, can assist in inducing "*best practices*" not only in the management approaches of informal construction workers, but also the informal construction industry at large.

Mlinga and Lema in their article titled "*Informal Contractors in Tanzania-their Characteristics and Reasons for Informality*", identify the stringency of registration or licensing requisites as a key obstacle against formalization of informal construction practices. For instance, the authors question the basis under which Tshs. 2.5 million, exclusive of license fee, CRB fee and income tax deposit, is used as a criterion to start working as a Class VII contractor. Hence, the researchers are of the view that the requirements are difficult to meet by many informal construction workers or contractors. In fact, they evidence their stance by the fact that many constructions worth Tshs. five million are empirically executed by informal workers, and one does not require a ceiling of Tshs. fifty million for a construction work of less than five million in value. Nevertheless, the authors see no proof that if these ceilings or hurdles are reduced or eliminated, the construction industry would be hurt.

All studies mentioned, consider informal construction practice as part of the construction industry in developing countries. Hence, any significant development measures for construction sector should also target at improvability of the informal construction practices. The researchers further propose that the government and other related stakeholders collaborate towards the formulation of programs which will motivate the growth of the informal construction practices including management techniques, with ultimate transition to formalized and legal recognition.

#### **4.5. Chapter Summary**

This chapter has vividly articulated the data analysis, interpretation and discussion pertinent to the main objective of this study to delve into the management approaches of the informal construction workers, hence accentuating the shortcomings and possible remedies. In line with the managerial functions of planning, organizing, staffing, directing, and leading, matters covered by this chapter includes; introductory, study area description, research response rate characteristics, and research findings incorporating different issues aligned to the research questions as well as the theoretical and conceptual frameworks adopted.



## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Introduction

According to Wells (2004) and Mlinga (2001), there is no "hard" and "fast" boundary delineating between the informal and formal construction divides, rather a gradation. However, irrespective of subtle interface between them, while substantive efforts are being exerted in improving formal construction sector, the informal construction industry is persistently ignored despite its dominance in the country. Hence, this chapter encompasses conclusions and recommendations of this study regarding the concern of the research to examine management approaches applied on the informal construction workers in Kinondoni Municipality in Dar es Salaam, to determine the shortcomings and fit-for-purpose remedies. Qualitative approach of research was adopted whereby interviews and physical observations were employed to gather primary data, and documentary reviews (content analysis) were used to collect secondary data for the study.

#### 5.1.2 Conclusion

The research discovered many bottlenecks hindering the effectiveness of management approaches of informal construction workers as were ranked in terms of frequency of mentioning by interviewees. In that regard, non-performance of contracts was ranked 1<sup>st</sup> followed by job insecurity (2<sup>nd</sup>); non-certification (3<sup>rd</sup>); irregularity and uncertainty of jobs (4<sup>th</sup>); lack of training and development (5<sup>th</sup>); poor working tools and equipment (6<sup>th</sup>); poor health and safety measures (7<sup>th</sup>); while lack

of access to credits, non-permanent premises and low and delayed compensation, were all ranked 8<sup>th</sup>.

Nevertheless, lack of recognition, poor management knowledge, and ignorance of labor rights followed respectively. A part from accentuating the key challenges obstructing the management of informal construction workers, it is significant that all challenges mentioned were ranked above 50% (25<sup>th</sup> frequency mark) implying that all bottlenecks are significant and need to be tackled holistically rather than in isolation. The research also pinpointed a number of key solutions to the bottlenecks encumbering the management approaches of informal construction workers. The solutions were ranked in accordance to the frequency of mentioning by the interviewees during the study. In that line, the need to encourage registration and legal recognition of the informal construction sector was ranked 1<sup>st</sup> followed by the provisioning of college and on-site training (2<sup>nd</sup>), provision of management education (3<sup>rd</sup>), formulation of inclusive policies and regulations (4<sup>th</sup>), while provision of reliable tenders and enhancement of accessibility to credit facilities were both ranked 5<sup>th</sup>.

Other significant remedies suggested include; ascertainment of health and safety of workers, alignment of payments to national minimum wage, elimination of unnecessary formalities, establishment of common forum for informal construction workers to discuss their issues, and promotion of awareness of labor rights and related laws. Given that all remedies were ranked above 50% (25<sup>th</sup> mentioning frequency mark) with exception of creation of labor laws awareness, implies that the informal construction workers are optimistic to witness the solutions implemented

holistically to improve the informal construction industry. However, the ranking of creation of awareness on laws protecting labor rights below the mean score, signifies low understanding or ignorance of the interviewees pertaining to labor rights regulations.

### **5.2.3 Research Limitations**

This study majorly adopted qualitative research approach through conduction of interviews, hence findings might be susceptible to subjectivity and bias rather than being objective. Furthermore, time limitation and nature of study convinced researcher to localize the research within Kinondoni Municipality and use small, non-random-picked study sample, thus compromising representativeness, diversity, and the intent of generalization country wide. Nevertheless, the nature of research sites characterized by on-going construction works and respondents at work, might have compromised the accuracy and fullness of responses gathered.

### **5.3. Recommendations**

In adherence to the main objective of this research, the following measures are recommended for effective management of the informal construction workers for transformative improvement.

- **Acquisition of Permanent Premises**

Research reveals that 70% of informal construction workers lacks permanent premises to conduct their office based management activities, use as converging points, and facilitate access by clients and recognition by public. Hence, the informal construction workers have to collaborate with other stakeholders to acquire permanent premises. The researcher is of the view that having recognized address

and legally owned office will be a step forward to formalization and effective managerial functions.

- **Encouraging Registration and Licensing**

Registration and licensing is cited as core instigator of informality. Hence, the government and authorized bodies like the CRB and BRELA should provide an enabling environment for registration and licensing of the informal workers and/or groups. This study is of the view that the costs and requisites of compliance to registration tend to outweigh their benefits thus discouraging the process. Likewise the political will and partnership between the public and private sectors can accelerate the recognition of the informal construction industry. The initiatives forwarded by the government through, among others, Small and medium Enterprises (SMEs) Policy, MKURABITA, Construction Industry Policy (2000), adoption of Professor Hernando De Soto Model, towards formalization of informal activities, have back-tracked due to absence of political will and healthy public-private partnership.

- **Provision of College and On-Site Training**

On-the-job skill incubation/apprenticeship or formal training are corner-stone techniques for building competent workforce. The findings indicate that the informal construction groups are dominated by optimistic and committed workers but with none or low skills. Hence, purposeful measures must be introduced under the umbrella of public-private partnership (PPP) and relevant institutions to realize college-based or on-site-based training. This will tremendously capacitate informal

construction workers for equitable competition in the construction market, while paving the way for transformative growth to formalization.

- **Provision of Management Education**

The significance of management knowledge for sound planning, organizing, staffing, coordinating, controlling, and leading, cannot be overstated. However, the research reveals that most informal construction groups or enterprises are supervised by unqualified individuals with decisions mostly based on experience, intuition and influence. This subjects them to, among others, poor decisions, risks, conflicts, under-performance, accidents, and break-ups. Hence, in order to realize efficient management all stakeholders should collaborate to provide management education through various platforms like seminars, workshops, and higher training.

- **Formulation of Inclusive Policies and Regulations**

Despite the promulgation of the Construction Industry Policy (2000), many studies like Wells (2004) and Mlinga (2001) are still indifferent to construction regulatory framework approach to informal construction workers and groups. In tandem, this research recommends for formulation of a new construction policy together with laws, regulations and by-laws that will facilitate the collaboration of both the formal and informal construction sectors instead of marginalizing the latter despite its dominance. While doing this, top to bottom approach should be avoided and since construction sector is inter-disciplinary, all stakeholders should be engaged to the fullest. Further, it is to the view of this study that the adoption of mixed or "*carrots and sticks*" enforceability may provide better results.

- **Apportionment of Reliable Tenders**

Against the backdrop of typical bottlenecks encountering informal construction groups and workers, the experience through sub-contracting or outsourcing by the formal contractors proves that the informal construction workers or groups can implement enormous projects from both the government and private sectors. However, they are often obstructed by rigid, complex and bureaucratic procurement procedures. Hence, this research proposes for deliberative initiatives by both the public and private sector to purposively allocate some jobs to the informal construction groups or enterprises.

- **Enhancement of Access to Credit Facilities**

The construction works are peculiarly expensive and requires lumpy funding. However, as opposed to the formal contractors, the informal construction industry is much detached from either short (temporary) or long (permanent) term financing institutions and intermediaries, hence dragging the industry. This study recommends that together with acceleration of registration, licensing and recognition, purposive financing channels have to be introduced to outreach the informal construction groups and enterprises for optimum operability.

- **Ascertainment of Health and Safety Measures**

Working without protective gear stimulating, inter alia, respiratory diseases like tuberculosis and bronchitis, and subjecting workers to serious or fatal accidents, is typical in informal construction sites. This research recommends for not only provision of protective devices and precautionary measures, but also fit-for-purpose education and awareness must be provided to workers and managers through

workshops and seminars, as well as mass/social media. In addition, the workers should be encouraged and supported to join social security and insurance servicing institutions for benefits at retirement or compensation for injuries and sickness.

- **Alignment of Compensation Rates to National Minimum Wages**

There are no scheduled professional fees guiding the informal construction sector. Further, alluding to unreliability of jobs and narrow localized and competitive market, the informal construction workers are compelled to agree to meager payments in comparison to the task performed. Hence, in order to guarantee fair pay in reflection of the basket of basic expenditures, this study advises that the compensation rates, either timely or task-based, should be aligned to the national minimum wages.

- **Formation of Informal Construction Workers Forums**

This research is of the view that common platforms like informal construction trade unions ought to be formed in order to, among others, allow the workers to exchange thoughts, bargain for their rights, support one another, set common objectives, and push for their agenda. Such forums can also be used in creation of awareness pertaining to labor rights and related statutes.

#### **5.4. Recommendations for Further Research**

In relation to the main objective of this research to investigate various management approaches applied on informal construction workers with the aim of determining shortcomings and appropriate remedies for transformative improvement, this study recommends the following suggestions for future research:

- Evaluating the nature and sources of technology and skills applied by the informal construction workers for transformative improvement.
- Exploring the possibility of using informal contractors in major construction projects and how deliverables compare between the informal and formal contractors.
- Examining the nature and extent of informal relationships existing among the clients, designers, contractors, and respective impact on implementation of construction projects.
- Developing training program for transformation of informal to formal construction sector in the context of Tanzania and other developing countries.



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**APPENDICES**

**Appendix I: INTERVIEW GUIDE FOR INFORMAL CONSTRUCTION MANAGERS**

**ARDHI UNIVERSITY**

**INTERVIEW GUIDE FOR INFORMAL CONSTRUCTION MANAGERS/LEADERS**

Name of interviewee.....

Name of group/project/enterprise.....

Position of interviewee.....

1. Where is your premises or office location situated? (Accessibility, meeting & permanence)
2. How did you become the worker's manager/leader/foremen? (Qualification & selection)
3. How do you recruit the informal construction workers? (Qualification, fairness & gender)
4. What is your basis for remuneration of workers? (Terms & variation of payment)
5. How do you develop the on-job skills of your group's informal construction workers?
6. How do you ensure health and safety measures for the informal construction workers?
7. Can you describe nature of labor mobility among the informal construction workers?
8. How do you acquire the informal construction works? (Accessibility & type of clients)

9. How do you ensure the allocation of jobs among the workers? (Division of labor)
10. How do you *direct* the work allocated to informal construction workers in your group? (Hierarchical dissemination of information/orders)
11. How do you *control* the informal construction work within scope, budget, schedule, quality, and stakeholder's satisfaction? (Attempt to obtain responses for each project constraint)
12. How do you solve rising conflicts among workers or with the group's management? (Dispute resolution mechanisms)
13. How do you relate with the other informal construction groups in Dar es Salaam? (Collaboration platforms to address common issues)
14. What do you think are the major problems for the informal construction sector in Dar es Salaam?
15. What measures do you suggest as solutions for the informal construction sector problems?

**Appendix II: INTERVIEW GUIDE FOR INFORMAL CONSTRUCTION WORKERS**

**ARDHI UNIVERSITY**

**INTERVIEW GUIDE FOR INFORMAL CONSTRUCTION WORKERS**

Name of interviewee.....

Name of group/project/enterprise.....

Position of interviewee.....

Gender.....

1. Where do you live? (Accessibility & living standard).
2. How did you enter the informal construction practice? (Recruitment motives & drivers).
3. What is your level of education? (Qualification & competency).
4. How did you acquire your construction skills? (Formal training, apprenticeship or unskilled).
5. Are you ready to undergo formal training? (Optimism).
6. Is this your only job/occupation? (Occupation/labor mobility).
7. Who are your main customers? (Market for informal construction services).
8. What is your mode of payment? (Criteria for remuneration/rewards).
9. Are you satisfied with your income? (Seek for elaboration as per minimum wages).
10. How are your health and safety measures guaranteed? (Seek for elaboration).
11. How do you obtain your managers/leaders/foremen? (Organizational coherence)
12. How do you describe the communication effectiveness between leaders and workers? (Directing mechanisms).

13. How do you describe relationships among workers or with management within the group?
14. How do you ensure that projects are completed within scope, cost, time and quality? (Explore response per constraint).
15. What do you think are main problems for informal construction practice in Dar es Salaam?
16. Which measures can be applied as the remedy for the problems you have mentioned?