Conflicts between Main Contractor and Domestic Sub-Contractors in the Building Projects in Tanzania; Experiences and Causes

Suzana P. Magazi[1] and Geraldine J. Kikwasi[2]
[1]Msc. Student, Department of Building Economics, School of Architecture, Construction Economics and Management, ARDHI University (ARU), TANZANIA
[2]Senior Lecturer, Department of Building Economics, School of Architecture, Construction Economics and Management, ARDHI University (ARU), TANZANIA

[1]Corresponding Author: stn189@gmail.com

ABSTRACT

Conflicts are unavoidable in the projects; there is no project that is free from conflicts. At the same time, sub-contracting has been, and continues to be a very important aspect in building construction industry, as standard procedure in construction. Thus, the study aims at analyzing the conflicts between main contractor and domestic sub-contractors in building construction projects in Tanzania. Qualitative and quantitative approaches were employed in this research. Data was collected using questionnaires. A total of 38 questionnaires were distributed to building construction and domestic sub-contractors found in Dar-es-Salaam, and 32 were returned fairly filled for analysis accounting to 84.2%. On the experience in terms of the connection between main and sub-contractor; findings revealed 81.3% their relationship to be good. 43.8% said yes to have ever been in a project that did not go well because of problems between main and sub-contractor, while 53.1% said "no". Moreover, on whether the project contract prepared are to each party specifications and satisfaction; 84.4% of the respondents said sometimes. In terms of the availability of a penalty clause in the project contract, if one of the parties fails to comply; 56.3% of the respondents said sometimes. 40.6% of the respondents said the payment is normally done immediately after completion. Furthermore, 75.0% said the contract is prepared by the main contractor. Besides, findings revealed PPRA as the most used form of sub-contract by 56.3% respondents. Additionally, 65.5% of the respondents have had a share of conflicts, either as a main contractor against a sub-contractor, or as a sub-contractor against a main contractor. Also, some respondents revealed, failing to follow instruction, delaying in materials delivery to site, poor quality of work, as well as main contractor's squeezing them firmly on the quoted prices, leaving them fighting to make ends meet, alongside experiencing huge loses; as the main areas sparking the conflicts. Finally,69.6% reported the extent of occurrences of conflicts in Tanzanian building construction industry to be frequently. Moreover, Findings revealed delays in payment, poor communication, lack of trust, consultants delay in approving work and sample material, and shortage of construction materials in the market as well as unexpected price escalations are the factors with the highest frequency in causing conflicts. The study concludes that for the project to run smoothly and with less conflicts, proper attention must be paid to all recommendations such as good communication, cooperation and timely payment; early notice and proper records keeping; sub-contractor should have enough fund for project; certify work on time and timely payment; and risk management plan.

Keywords— Conflicts, Contractors, Relationships, Sub-contractors, Tanzania

I. INTRODUCTION

Conflicts are inevitable in any project, and they are one of the leading reasons of project failure in the construction industry (San, 2013). Because building construction projects typically include several parties with varying abilities, aims, and expectations, issues and disputes are unavoidable during project implementation. The winning main contractor usually divides the project into many sub-contracts; this is because the main contractor lacks certain skills and competence, therefore the performance of subcontractors determines whether the project succeeds or fails. Okunlola (2015) asserts that the construction sector is a highly competitive, high-risk industry. Many issues, such as a lack of collaboration, trust, or good communication, can lead to antagonistic interactions between contractual parties. Furthermore, the integrated contract's shift of responsibility from the customer to the main contractor has increased the main contractor's reliance on subcontractors (*ibid*).

Kadir *et al.*, (2005) contended that coordinated issues between main contractors and sub-contractors are a key stumbling block to project completion. Late payments to subcontractors, for example, might result in poor performance, which can lead to rework and more delays. Contractors and their sub-contractors must understand how their activities influence one another in order to operate efficiently. This is because, the parties involved in a construction project are interconnected, and the failure of any of them might have a significant impact on the project's quality and execution. Moreover, Mirawati *et al.*, (2015) assert that increased cooperation, which may be done through partnerships, may enhance construction

performance. Furthermore, experts agree that main contractor and sub-contractor interactions may have a direct impact on construction performance.

Basically, a client's primary goal in a building construction project is to create a successful project that is well-planned, designed, and built in accordance with plans and specifications, and completed on time and within budget. Nevertheless, Akintoye & Main (2007), Jaffar *et al.* (2011) and Ness (2007) in San (2013) enlighten that clients, consultants (architects, engineers, and quantity surveyors), suppliers, and the main contractor and sub-contractors all have a role in the success of this protracted process in constructing a project. To ensure the project's success, the whole project team must work well together; otherwise, the interdisciplinary approach may result in disagreements among the building's members (Jaffar *et al*., 2011; Ness, 2007 in San, 2013). Collectively, they must be able to prevent the most common causes of disputes, as well as suppress and eliminate the severity of their consequences.

Furthermore, Rauzana (2016) insists that conflicts in the implementation of a building construction project most often arise when one of the project participants, such as a sub-contractor, who may be hired by the customer and the primary contractors depending on the nature of the project, fails to meet the project objectives. Normally, a sub-contractor is hired to complete unique tasks that the customer or the main contractor are unable to complete. These projects cover ICT, Electrical, and Plumbing, among others. Sub-contractors, in general, profit from this strategy in terms of increased efficiency and on-time project completion, as they play a critical part in the successful completion of building construction projects, and their importance increasing every year (Kale & Arditi, 2001; Ujene *et al.*, 2011; Tawalare & Reddy, 2018). The connection between the main contractor and the sub-contractor is critical since they are the ones who will implement and bring the building projects to life. According to White & Marasini (2014), Rajput & Agarwal (2015) and Zubair *at el*. (2016) sub-contracting performs 80% to 90% of the work on building construction projects, and the percentage has been and continues to rise, owing to projects becoming more complex and challenging, owing to technological advancements, hence making the relationship between the two important.

Basically, project underperformance is caused by the main contractor's inclination to focus on dyadic connections with customers while overlooking the role of sub-contractors (Akintoye & Main, 2007; Saad *et al.* 2002). Therefore, this study intends to investigate main contractor and sub-contractor conflicts in building construction industry due to their impact on project performance by looking on their experiences and how frequent do they occur. It endeavors to close the knowledge gap left by the studies by Kikwasi (2019) on Analysis of Conflicts in Construction Projects; Mtitu (2018) on Analysis of Intra-Group Conflicts in the Contractors Team in Tanzania; Mlay (2017) on Examining Causes and Management Strategies of Critical Conflicts Between Public Clients and Contractors In Building Project in Tanzania; Kikwasi (2012) on Causes and Effects of Delays and Disruptions in Construction Project in Tanzania; and Ntiyakunze (2011) on Conflicts in Building Projects in Tanzania; Analysis of Causes and Management Approaches.

Apart from conflicts having negative effect on building projects; it is also well known that causes of conflicts differs within areas, country to country or even region to region. So, it has come as important to study the conflicts between main contractor and subcontractors in building projects Tanzania. This due to the fact that construction project brings together individuals, during execution of the project conflicts may arise, so focused studies are needed to explore this area. Building construction projects have become complex, and no one can master all the works they entail, as they require the input of many specialist firms; hence causing parts of a building project to be sub-contracted in order to allow for specialization. The problem however, has been, and continues to be, the antagonistic relationship between the main contractor and sub-contractors, which in most circumstances results in unresolvable disagreements that last for months or years, causing delays, disagreements, and, in some situations, job abandonment. Although the principal contractor is legally responsible for the project's construction, the work is completed by subcontractors, specialists, and suppliers.

This occurs as part of a goal to reduce their overhead and operating costs, increase proficiency, and achieve a more systematically monetary conveyance of tasks. The success of building construction projects is heavily reliant on the efforts of several participants, each of whom has varied responsibilities in terms of achieving the project's objectives. Since the study of conflicts management covers wide area, it is essential to comprehend from the beginning that the study was limited to examining conflicts issues that occur between main and domestic sub-contractors in construction projects. The study explored the existence of conflicts particularly in construction phase, and the data was collected from registered quantity surveyors, civil, structural and service engineers, project managers and others working for the Class I main contractors and domestic sub-contractors (i.e. electrical, mechanical, plumbing, roofing, windows, doors, landscaping or external works, etc.) in Dar-es-Salaam, Tanzania.

II. THE CONFLICTS BETWEEN MAIN CONTRACTOR AND SUB-CONTRACTOR IN BUILDING PROJECTS

The advantages of subcontracting as well as the importance of the main contractor-subcontractor relationship cannot be overemphasis. However, little attention is paid to their problems, resulting in a generally sour relationship between main contractors and subcontractors. The sour relationship has a detrimental impact on projects, resulting in issues such as disagreements, cost and time overruns, and poor job quality. A wide range of circumstances that lead to a tumultuous relationship were depicted, together with their effects, in order to get to the bottom of the solutions to the conflicts

A. Sub-Contracting

To keep costs down and increase efficiency on building projects, main contractors rely heavily on the specialized expertise of sub-contractors. Basically, sub-contractors provide specialized services to complete jobs that main contractors are unable to do (Markowitz 2007). These responsibilities are delegated to lower-level contractors known as sub-contractors, who provides one-of-a-kind services on a variety of construction projects. Arditi & Chotibhongs (2005) asserts that most main contractors sub-contract expansive bits or the majority of the particular work on their undertakings as a result of their powerlessness to perform pro errands (e.g., plumbing, electrical, air conditioning, lift installations and telecommunication works). The way toward sub-contracting is a productive and conservative methods for getting to essential resources.

Moreover, the expansion in sub-contracting may be attributed to the increased complexity of building projects, a scarcity of skilled specialists, the need to develop benefits, and the need to reduce risk. Due to sporadic and capricious outstanding tasks at hand, combined with the necessity of particular abilities i.e. specialized skills, main contractor are depending all the more intensely on sub-contracting as a way to control their risks. It is contended that main contractors expand their benefits by limiting their execution costs through sub-contracting. In spite of these potential advantages, the nature of subcontracting work breaks down when uncouth or unpracticed sub-contractors are locked in (Smith & Hinze 2010).

In the local construction industry, sub-contracting practices are broadly utilized in residential, commercial, and civil engineering projects. Despite the fact that sub-contractors frequently complete a significant portion of a construction project, sub-contracting difficulties are only sometimes noticed and addressed. There has been very little exploratory work done, and there is very little dispersed data available on the subject. The goal of this study is to analyze the current sub-contracting practices in the construction industry of Tanzania, identify major issue areas that contribute to disputes, and explore overall satisfaction with the kind and quality of administration provided by subcontractors in Tanzania. Preferably, this data will improve the quality of construction provided by sub-contractors and assist stakeholders in accurately assessing current and future projects, with the goal of improving sub-contracting procedures in the development industry.

Principally, a sub-contractor is a person or company hired by a primary contractor to fulfill all or part of the main contractor's obligations under the contract. Contractors commonly recruit sub-contractors when they require expertise in a certain area of the project (Okunlola 2015). According to Abdullahi (2014), sub-contracting allows the contractor to limit their risk exposure while also allowing for the growth of the available labor, giving them more opportunities to bid on future projects. Sub-contracting has a few advantages over disguise, such as increased creation productivity and authoritative flexibility. Relegating work to a sub-contractor, decreases outstanding burden and confines the chance of the main contractors in being expose to risk, (Fah 2006). Additionally, Eriksson & Westerberg (2011) affirms that sub-contractor task coordination may also aid in timely project completion, enhanced quality, inventiveness, and enhanced project execution in terms of environmental, health, and safety problems.

Furthermore, sub-contractors play an important role in a construction project since they compensate for the lack of manpower and specialized ability, reduce costs, and assist mitigate project hazards (Abdullahi 2014). Basically, sub-contracting is beneficial not just to the main contractor, but also to the economy of a country (Arditi & Chotibhongs 2005). The benefits that can be expected from sub-contracting from a prudent economic perspective, according to Dlungwana & Rwelamila (2005), include: main contractor advancement, global competitiveness, practical business development, excellent environmental management, and financial development of developing countries. Sub-contracting has long been regarded in Japan as an important source of expertise and intensity for industries such as textiles, general equipment, electric hardware, and autos (Mihara 2015 in Mudzvokorwa 2016).

The construction industry has increased its reliance on sub-contracting due to the benefits of sub-contracting and the increasing volume and unpredictability of projects (White & Marasini 2014). Up to 70% of building and 30% of civil construction projects in South Africa are sub-contracted out, according to the country's construction sector (CIDB 2013). Because of the increased reliance on subcontracting in the construction industry, the

operational contact between the primary contractor and the subcontractor has become a critical aspect of project delivery (Akintan & Morledge 2013). According to Huang *et al*. (2007) an interface may be defined as a measurement between two assemblages that can have a shared influence on one another. Clients, designers, contractors, sub-contractors, and material suppliers are just a few of the people involved in a construction project. They go on to say that failing to deal with the interface between these meetings may lead to cost overruns, project delays, lawsuits, and poor project quality.

Unexpectedly, from planning through handover, a successful connection will keep the project moving forward (Gadde & Dubois 2010). Both the main contractor and the sub-contractor have reasons to value a good relationship. Great relationships with sub-contractors reduce the risk of low-quality work for the main contractor, just as cost and time intrude. Though for subcontractors the advantages are particular status when offering for work just as support and guidance amid the construction procedure. Be that as it may, the expansion in intricacy, the over-supply of specialist firms, and the declining construction yield has developed an antagonistic climate, which has negatively affected main contractor and sub-contractor connections, (Matthews *et al*., 2000). Besides, according to Bankvall *et al*., (2010), relationship considerations between the main and sub-contractors have gained almost little attention. Given the importance of the connection to the initiatives.

B. Categories of Sub-Contractors

The domestic sub-contractors and the nominated subcontractors are the two categories of sub-contractors. A domestic sub-contractor is a sub-contractor who works with the main contractor to provide or repair supplies or goods, as well as to do work that is part of the basic contract. Essentially, this is a sub-contractor that the principal contractor uses or names. A nominated sub-contractor, on the other hand, is a sub-contractor who is listed in the agreement or a sub-contractor who the customer instructs the main contractor to use. The domestic sub-contractor is the most well-known type of sub-contractor in Tanzania. Domestic sub-contractors are typically experts for instance on electrical, lift, cooling, aluminum and glazing works, roofing, foundation and ICT establishment.

C. Selection of Sub-Contractors

Sub-contractors, assume a crucial job in executing critical segments of construction work on a project. In this manner, a standout amongst the most significant components to guaranteeing project achievement is having the right sub-contractor. This is because choosing the right sub-contractor for the assignment has an influence on the parties' relationship as well as the nature and quality of the work. As a result, it's critical that the best sub-contractors for key sub-works are picked throughout the bidding process. Tayeh (2009) emphasized this by stating that selecting the most appropriate sub-contractors for the relevant task is extremely important for the overall project's execution. During the bidding process, selecting the right sub-contractors is critical for a precise and realistic offer proposition. Regardless, the importance of sub-contractor selection is mostly overlooked in the construction industry, and little research has been conducted to assist primary contractors in their selection of sub-contractors (El-Mashaleh 2009).

A large portion of subcontractor selection techniques is based on a variety of abstract factors, such as prior performance, monetary quality, on-time completion, safety record, and prompt payment to employees and suppliers (El-Mashaleh 2009). According to Haksever *et al*. (2001), the primary contractor uses business perspective as the superseding features in selecting a subcontractor, such as previous project performance, prior disagreements, current remaining work at hand, and cost of offer. According to Luu & Sher (2006), the lowest proposed cost is often the most important deciding factor for primary contractors when selecting subcontractors. Nonetheless, Arslan *et al*. (2008) argue that depending on the offer, the expense of selecting a subcontractor might result in bad quality work, deferrals, and cost invasions, all of which can result in substantial losses for construction companies in the long run. As a result, domestic subcontractors are frequently hired based on friendship and the lowest total quotation for the primary contractor to maximize his advantages/benefits.

Various models for subcontractor selection have been devised by a number of studies to aid the main contractor's fundamental leadership process in selecting a subcontractor. The Sub-contractor Performance Evaluation Model, developed by Ko *et al*. (2007), is a decision-making model (SPEM). As essential aspects for subcontractor decision, the model examines construction strategy, term/duration, control capability, services after job completion, coordinated effort with different subcontractors, corporate manner, and material wastage. The Accelerated Subcontracting and Procurement (ASAP) methodology was suggested by Tserng & Lin (2002). The methodology encourages the primary contractor to select subcontractors by determining an appropriate risk-benefit trade-off for various subcontractor combinations. ASAP is predicated on the assumption that all potential subcontractors are deemed qualified for the job. According to Arslan *et al*. (2008), several of the offered techniques and approaches by analysts are perplexing and difficult to implement in practice. They also presented an online subcontractor assessment framework, which is a simple and easy-to-understand framework model (WEBSES). For considering subcontractors, the evaluation method is

completed using a weighted normal score based on 25 evaluation factors that are anticipated to be of indistinguishable relevance.

D. Relationship between Main Contractor & Domestic Sub-Contractor

The main links in a building project are between parties involved in the production network. In the construction industry, the inventory network consists of a number of firms that form an activity chain. The contribution to the next movement is the result of another movement. As a result, flawless connections between participants in the inventory network are critical to project success (Beach *et al*., 2005). Furthermore, the relationship between the main contractor and the sub-contractor on the inventory network typically contributes to the success or failure of any large-scale building project (Jin *et al*., 2013).

Meng (2012) discovered that by enhancing a few aspects of this connection, project poor execution may be effectively reduced. However, if the interface isn't properly addressed, the chances of the project failing to function successfully increase (Meng 2012). If the legally binding and individual characteristics of the relationship between the main contractor and their sub-contractors are in doubt, the likelihood of arguments arising is significant. The construction industry pays little attention to the essential main contractor vs. sub-contractor relationship, despite its importance and influence on projects. Struggle/conflicts and doubts are usually shown as stressing the relationships between the main contractor and sub-contractors. Because the linkages are mostly value-based, the main contractor is able to effectively assign over-the-top risks to the sub-contractor (Miller *et al*., 2002). For the most part, the relationships between the main and the sub-contractors may be regarded as pure market linkages. As a result of the heavy reliance on competitive tendering to get sub-contracted work, the two parties are in a negative frame of mind. The main contractor is more concerned with cost savings than with sub-contractors' abilities and joint involvement.

The relationship also contains a great deal of vulnerability, some of which stems from the concept of the construction process and others from the vulnerability of a possible partner's presentation throughout the construction process (Jin *et al.* 2013). As a result, it is critical to ensure that sub-contractors hired to complete construction projects would likely execute admirably rather than focusing just on cost (Ng & Tang 2008). The main contractor should intend to appropriately connect with sub-contractors based on how they are most suited to executing the task bundles from the beginning of the procedure, rather than picking a selected tender based on a low-cost submission. If a sub-contractor is hired based on a cheap tender, the likelihood of sub-contractor non-conformance when vulnerabilities are considered is greatly increased, which can have a significant impact on the overall presentation of the project.

E. Standard Forms of Sub-Contracts

The relationship between the main and the sub-contractors is generally built on a sub-contract that is managed by the main contractor in line with the main contract. This agreement allows the main contractor to control the sub-contractor's overall performance to a certain level in order to reduce the risk and uncertainty associated with sub-contractor performance. According to Uher (1991), main contractors can supervise their sub-contractors by allocating certain risks to them and activating certain sub-contract provisions to compel them to execute. This is how the construction business has been developed, with the main contractor in his or her traditional position of control. In this state of affairs, power is exercised through the use of standard and non-standard sub-contract conditions prepared by contractors, and standard subcontracts prepared by construction boards, such as NCC and PPRA, which allow the main contractor to dictate how the sub-contractors will raise the works for their agreed price sum (Uher 1991). Essentially, when adopting non-standard sub-contract circumstances, major contractors allocate responsibilities and rights under the contract for construction to individuals who are not parties to the contract, while maintaining the conventional contractual obligation as far as the main contract is concerned (Uher 1991).

This indirectly explains why such requirements are included in the formation of a sub-contract agreement. The main contractor should ensure that it fulfills the main contract's requirements by ensuring that sub-contract agreements are comprehensive and distinctive in order to cover the main contract's duties. The fact that non-standard sub-contract conditions are a typical occurrence in the industry underlines the difficulty that sub-contractors may encounter in obtaining fair and reasonable contract terms under which to work. Negotiating reasonable conditions for sub-contractors is a difficult task, and enforcing them is even more difficult. However, as major contracting companies have recognized the need for, and importance of, accurate and lifelike sub-contract terms, this situation, which has evolved over a number of years, has transformed.

Xiao & Proverbs (2003) also acknowledged the importance of main contractors forming partnerships with their sub-contractors, since this has a direct and significant impact on typical contractor performance. Creating relationships enables a business to forecast, or get acquainted with, the likely performance of a partner or contract party. Partnerships can provide for knowledge with current agreements and the procedures used by a firm to handle an agreement or contract. Because of the competitive character of the smooth approach from the

view of both main contractors and sub-contractors, partnerships may be unsatisfactory in a business development application owing to the ever-changing conditions of the development market. However, creating partnerships can reduce the likelihood of conflict or disagreements by establishing a power imbalance between main and sub-contractors through the use of weighted contracts.

From the earliest stages of the development conceptualization and planning process, performance constraints and specifications exist in the commercial building business. A main contractor sets out the criteria for building an industrial partnership with their organization from the start of the procedure when luring sub-contractors. The conflict that exists in this situation is the choice between contract compliance or smooth conditions vs cost or more mostly fee reduction. This is where the main contractor's correctness and professionalism may significantly contribute in the best and most favorable development of a connection with a viable sub-contractor. The ability of main and sub-contractors to make money is very much related to the success or failure of forming honest and equitable contracts and executing them in the most wonderful and productive manner once the relationship between the two parties is formally formed under a contract settlement (Uher 1991). However, many major contracting groups' approach is excessively focused on the safety of their own

choose sub-contractors who have a positive attitude, are dedicated, and respond quickly to their needs, all of which can be more easily accomplished if sub-contractors are fully aware of and partially in control of their rights and responsibilities governed by the sub-contract agreement in region via the main contractor.

F. Factors of Causing Conflicts in Building Construction Contracts

Conflicts are common and inevitable due to the existing in different perceptions among the participants of the building projects, in the construction industry (San 2013 & Rauzana 2016). Mainly, Gould (1999) in Zubair *et al*. (2016) points out that conflicts can arise from the economic scenario and interests. Because the majority of development tasks are completed by sub-contractors, it is evident that timely completion of sub-contracts is critical to a profitable manufacturing process (Uher 1991). More investment should be made by main contractors in administration systems that aim to protect the sub-contractors' interests, which, in turn, provides effective outputs for their own operations and mission performance.

When it comes to sub-contracting and the agreements that go with it, the concept of disparity between parties is usually where troubles and disagreements arise. Main contractors are exposed to a great amount of risk and should use every skill at their disposal to lawfully limit this risk; sub-contract requirements are the most common technique to do so. The current economic climate, as well as the need for consistent productivity for sub-contracting enterprises, give motivation for sub-contractors to engage into a contract that is significantly weighted in their favor. The commercial construction environment, as outlined, necessitates a desire for coordination and collaboration between main and subcontractors, ensuring that each party's circumstances are fair, equitable, and legally protected. Sub-contractors must aim to thoroughly and logically comprehend the conditions under which they will be working in order to envision a work environment that is fair, equitable, and easy to manage. According to Dulaimi & Hong (2002), main contractors will be more willing to outside or from within. Internal conflicts arise as a result of disputes among project participants, and external conflicts arise as a result of political and meteorological threats, among other factors. In the same way, confrontations can be constructive or dysfunctional. Functional conflicts help the project move forward, but dysfunctional conflicts stymie it. Despite being a global problem, and depending on political, economic, and cultural factors, conflicts vary from one nation to the next. As shown in Table 2.1, a large number of studies have been undertaken to determine the general variables that cause conflict between primary contractors and subcontractors in building construction projects.

Table 2.1 Summary of the factors causing conflicts between main contractors and sub-contractors, as retrieved from various literature review

SN.	Factors Causing Conflicts Between Main Contractors and Sub-contractors	Sources
01.	Lack, poor or low workmanship and quality of works	Tayeh (2009), Ntiyakunze (2011), Jaffar, *et al.* (2011), White & Marasini (2014), Zubair *et al*. (2016), Tan *et al*. (2017), Lagiman, (2017),
02.	Construction defects	Mitkus & Mitkus, (2014),
03.	Bid shopping	Miller & Degn (2003), CIDB (2013), Mudzvokorwa (2016), Fagbenle *et al.* (2018),
04.	Contractual problems	Jaffar *et al.* (2011), Ntiyakunze (2011), Mitkus &

		Mitkus (2014), Hailu (2018),
05.	Delay of the or no advance payment	Phiri, (2016); Tan, *et al*., (2017),
06.	Absence of sub-contractors from the site	Tayeh (2009), Mudzvokorwa (2016), Zubair *et al*. (2016),
07.	Sub-contractor's poor cash flow, loss of profit or damage	Talukhaba & Mapatha (2007), Younis *et al.* (2008), Jaffar *et al.* (2011), Jarkas & Haupt (2014), Olatunji *at el.* (2016),
08.	Poor conditions of contract	Yanis (2003),
09.	Contractor awarding the contract at lowest price	Tayeh (2009),
10.	Lack of trust	Tayeh (2009), Miller *et al*. (2001), Humphreys *et al*. (2003), Hartman & Caerteling (2010), Phiri (2016), Mudzvokorwa (2016), Mudzvokorwa (2017) Lagiman (2017), Tawalare & Reddy (2018),
11.	Poor communication	Kumaraswamy (1997), Briscoe *et al*. (2005), Sambasivan & Soon (2007), Huang *et al*. (2008), Tayeh (2009), Ntiyakunze (2011), Hola & Sawicki (2014), Jarkas & Haupt (2014), Mitkus & Mitkus (2014), Eriksson (2015), Rauzana (2016), Mudzvokorwa (2016), Zubair *et al*. (2016), Lagiman (2017), Mudzvokorwa (2017), Tan *et al*. (2017), Fagbenle *et al.* (2018), Hailu (2018), Tawalare & Reddy (2018),
12.	Delays in payment	Younis *et al.* (2008), Tayeh (2009), Jaffar *et al.* (2011), Ntiyakunze (2011), CIBD (2013), Jarkas & Haupt (2014), Okunlola (2015), Zubair *et al*. (2016), Mudzvokorwa (2016), Olatunji *at el.* (2016), Tan *et al*. (2017), Lagiman (2017), Hailu (2018),
13.	Disagreement over the agreed contractual terms and conditions	Talukhaba & Mapatha (2007), Tayeh, (2009)
14.	Poor project management	Kumaraswamy (1997), CIDB (2013), Mirawati, Othman & Risyawati (2015), Rauzana (2016), Sklar (2017),
15.	Work delays	Jaffar *et al.* (2011), Ntiyakunze (2011), Kikwasi (2012), Zubair *et al*. (2016),
16.	Contract misinterpretation	Sklar (2017),
17.	Change order or extra works by the clients	Kumaraswamy (1997), Al-Momani (2000), Younis *et al.* (2008), Tayeh (2009), Mitkus & Mitkus, (2014), Jarkas & Haupt (2014), Zubair *et al*. (2016), Rauzana (2016)
18.	Involvement of sub-contractors in several projects at the same time	Tayeh (2009),
19.	Weather condition	Al-Momani (2000), Younis *et al.* (2008), Huang *et al*. (2008), Tayeh (2009), Mudzvokorwa (2016),
20.	Shortage of technical staff and skilled labour	Younis *et al.* (2008), Tayeh (2009), CIDB (2013), Jarkas & Haupt (2014), Rauzana (2016), Hailu (2018),
21.	Giving quotation for long without giving them project	
22.	Geological problems on the site	Younis *et al.* (2008), Tayeh (2009), Ntiyakunze (2011),
23.	Lack of enough sub-contractor's experience in the similar project	Zubair *et al*. (2016), Rauzana (2016),
24.	Change of the scope of work by the client	Kumaraswamy (1997), Enshassi & Medoukh (2007), Younis *et al.* (2008), Mitkus & Mitkus (2014), Rauzana (2016),
25.	Not providing sub-contractor essential services like water, electricity	Kumaraswamy (1997),
26.	Lack of cooperation or team work	Tayeh, (2009); Ntiyakunze, (2011); Hailu, (2018);

27.	Consultants delay in approving work and sample material	Kumaraswamy, (1997); Younis, *et al.*, (2008); Mitkus & Mitkus, (2014); Jarkas & Haupt, (2014);
28.	Differing site condition	Al-Momani, (2000); Younis, *et al.*, (2008); Ntiyakunze, (2011); Mitkus & Mitkus, (2014);
29.	Late material delivery	Younis *et al.* (2008), Tayeh (2009), Jarkas & Haupt (2014), Rauzana (2016), Olatunji *at el.* (2016),
30.	Different contractor and sub-contractor goals and commitment	Yanis (2003),
31.	Short construction execution period	Tayeh (2009),
32.	Change of governmental regulation and laws	Younis *et al.* (2008), Mortaheb *et al*. (2010), Mitkus & Mitkus (2014), Mudzvokorwa (2016),
33.	Awarding the work to the sub-contractor with lowest price	Tayeh (2009),
34.	Assigning work to new sub-contractor without informing the original subcontractor, i.e. Multilayer Sub-contracting,	Tayeh (2009), Ng & Price (2010), Yoke-Lian *et al.* (2012), Abdullahi (2014), Zubair *et al*. (2016), Hailu (2018),
35.	Shortage of construction materials in the market, and unexpected price escalations	Younis *et al.* (2008), Tayeh (2009), Mudzvokorwa (2016), Tan *et al*. (2017),

Basically, Enshassi & Medoukh (2007) enlighten that in most cases, the shortages of competent labor, maximizing profit, lowering overhead expenses, and easing work pressure on primary contractors were identified to be the key motivations for hiring subcontractors. In addition, general contractors will find it easier to monitor and regulate quality control, safety management, and labor management issues on building projects.

III. MATERIALS AND METHODS

The connection between main and domestic sub-contractors is becoming increasingly vital to the project's success; hence, the impulsion of this descriptive design study on the experiences, and cause the conflicts between main contractor and domestic sub-contractors in building construction projects, and how they can be dealt with. The study used non-probability purposive sampling techniques in selecting the respondents which included a selection of 38 out of 125 Class I registered by Contractors Registration Board in 2020 building contractors and domestic sub-contractors (*Table 3.1*) found in Dar-es-Salaam (DSM), Tanzania, targeting their registered quantity surveyors, and civil engineers. Moreover, the primary data for this study, was collected using questionnaires, while the secondary data came from the numerous literature. independent and dependent variables.

Table 3.1 Sample Size

SN.	Name of the Contractor	Class of Registration	Contractors in DSM	Proposed Sample (n)
01.	Main Building Contractors	Class I	95	23
02.	Specialist Sub-contractors	Class I	30	15
		TOTAL	**125**	**38**

Table 3.2 Respondents response rate from the questionnaires

SN.	Contractors	Questionnaire Distributed		Questionnaire Returned		Response Rate
		No.	%	No.	%	%
01.	Building Contractors-Class I	23	60.5	19	59.4	82.6
02.	Building Sub-contractors	15	39.5	13	40.6	86.6
	TOTAL	38	100.0	32	100.0	84.2

Thirty-five causes of conflicts extracted from literature were listed in the questionnaires for respondents to rate using active variables (5 = Strongly Agree (SA), 4 = Agree (A), 3 = Moderate (M), 2 = Strongly Disagree (SD), 1 = Disagree (D)). Attribute variables in the questionnaires were gender distribution, age distribution, highest level of education, professional qualifications and experience in building construction industry. A total of 38 questionnaires were distributed to building construction and domestic sub-contractors found in Dar-es-Salaam, and 32 were

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returned fairly filled for analysis accounting to 84.2% (*Table 3.2*). Data was cleaned, sorted and analyzed using IBM SPSS Statistics 20, and then transferred to MS-Excel in order to determine the frequency index for the occurrence of the factors of conflicts between main contractor and domestic sub-contractor in the building construction projects in Tanzania. Moreover, reliability test of Cronbach's Alpha was also calculated using SPSS with expectation that it is not less than the standard value which is 0.7. Reliability Test of Cronbach's Alpha, was 0.894 on the frequency of occurrence of the causing factors conflicts between Sub-Contractors and Main contractor in building projects, reflecting the internal consistency of variables in each component.

In order to acquire a more exact computation that mapped out a pattern or link between measured or comparable variables, the data collected were scrutinized and displayed using Microsoft Word and Excel (Tables). Also, in order to determine the frequency index, the study used a quantitative analysis method by based on syntax mathematical operation. The frequency index was used to analyze the findings obtained from this study,

Frequency Index **(F.I.) =**

$$(\mathrm{F.I})(\%) = \sum_{i=1}^{4}(aif * nif)/(4 * N)\ \mathrm{X}\ 100$$

Where:	***aif***	=	the number of respondent who choose a certain frequency degree
	nif	=	the degree of frequency (1,2,3,4 or 5)
	N	=	the total number of respondent

The resulted frequency of index values from the calculation were tabulated and compared using the comparison tables as indicated in Table 4.1 and Table 4.2 below,

Table 3.3: Frequency Index (F.I.) values comparison table

SN.	Frequency Index (F.I.) (%)	Ranking	Colour
01.	75.0 ≤ F.I. ≤100.0	High Frequency Index	
02.	50.0 ≤ F.I. ≤ 74.0	Medium/Moderate Frequency Index	
03.	1.0 ≤ F.I. ≤ 49.0	Low Frequency Index	

For Table 3.3 the frequency of index was calculated using the data analysed extracted from a Likert Scale of 5, with Strongly Agree (SA) = 5, Agree (A) = 4, Moderate (M)=3, Strongly Disagree(SD)=2, Disagree (D) = 1, as active variables. With and via the data collected and analyzed using the Likert Scale of 5; the Standard Deviation was also calculated for ranking purpose on the causes with the same value of frequency of index. In this study, TNR = Total Number of Respondents.

IV. RESULTS

A. Respondents' Characteristics

Table 4.1 provides general information of the respondents. Majority of the respondents were male 56.3% while the remaining 43.7% were female. Besides, the vast majority of respondents were below 30 years 53.1% followed by 34.4% between 30-39 years. In terms of respondent's highest level of education, 78.1% were graduate with a bachelor degree and 18.8% had master's degree indicating that all respondents were knowledgeable enough to give reliable and valid responses. On professional qualifications, a large number of respondents were quantity surveyors 34.4% followed by structural engineers 25.0%. Regarding experience, 50% had experience below 5 years followed by 37.5% had experience between 5 and 10 years.

Table 4.1: The respondent's characteristics

Variable	Frequency	Percent (%)	Valid Percent (%)	Cumulative Percent (%)
Gender Distribution				
Female	14	43.7	43.7	43.7
Male	18	56.3	56.3	100.0
Age Distribution				
Below 30 years	17	53.1	53.1	53.1
30 – 39 years	11	34.4	34.4	87.5
40 – 49 years	3	9.4	9.4	96.9
50 – 59 years	1	3.1	3.1	100.0
Highest Level of Education				
Graduate Diploma	1	3.1	3.1	3.1
Bachelor Degree	25	78.1	78.1	81.3

Master Degree	6	18.8	18.8	100.0
Professional Qualifications				
Quantity Surveyors	11	34.4	34.4	34.4
Structural Engineers	8	25.0	25.0	59.4
Service Engineers	7	21.9	21.9	81.3
Project Managers	3	9.4	9.4	90.7
Other	3	9.4	9.4	100.0
Experience in Building Construction Industry				
Below 5 years	16	50.0	50.0	50.0
5 – 10 years	12	37.5	37.5	87.5
10 – 16 years	1	3.1	3.1	90.6
15 – 20 years	2	6.3	6.3	96.9
Above 20 years	1	3.1	3.1	100.0
Registered by Professional Registration Board				
Yes	24	75.0	75.0	75.0
No	8	25.0	25.0	100.0

B. Understanding the Conflicts between Domestic Sub-Contractor and Main Contractor

The main and sub-contractor connection or relationship, must be maintained throughout the procurement and construction phase as well as during the lifespan of the project, in order to equip the project team with effective communication. With reference to Table 4.2, when asked on their experience regarding the connection between main and sub-contractor, 81.3% of the respondents revealed the relationship to be good; while 12.5% said they were not sure. With regards to, if they have ever been in a project that did not go well because of problems between main contractor and sub-contractor; 43.8% of the respondents said "yes"; while 53.1% said "no". Moreover, on whether the project contract prepared are to each party specifications and satisfaction; 84.4% of the respondents said sometimes; while 6.3% said always. In terms of the availability of a penalty clause in the project contract, if one of the parties fails to comply; 56.3% of the respondents said sometimes; while 25.0% said always.

In knowing the duration taken by the main contractor, in paying the sub-contractor after the subcontracted work is completed; 40.6% of the respondents said the payment is normally done immediately after completion; 43.8% said the payment is done after final handover; while 15.6% said the payment is done depending on agreement as well as the client's cash flow. Example, it can be in the beginning, or immediately after signing the work as an advance payment, or after receiving the payment from interim certificates paid by the client, or after completion of work. Furthermore, in a need to know which part is in charge of preparing the sub-contract between the main contractors and the sub-contractors; 75.0% said the contract is prepared by the main contractor; 12.5% by the client and 12.5% said it is prepared by the leading consultant. Besides, findings revealed PPRA as the most used form of sub-contract by 56.3% respondents; while the NCC subcontract form was revealed by 37.5%.

Additionally, 65.5% of the respondents have had a share of conflicts, either as a main contractor against a sub-contractor, or as a sub-contractor against a main contractor; while 28.1% said they have never experienced the situation. Finally, the 65.5% respondents who said they have never experienced conflicts between main contractor and sub-contractor; 69.6% reported the extent of occurrences of conflicts in Tanzanian building construction industry to be frequently; while 21.7% said the occurrence was moderate.

Table 4.2: Respondent's relationship experiences

Variable	Frequency	Percent (%)	Valid Percent(%)	Cumulative Percent (%)
Experience on the Relationship Between Main Contractor and Sub-Contractor				
Good	26	81.3	81.3	81.3
Not Sure	4	12.5	12.5	93.8
Poor	2	6.3	6.3	100.0

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The Number of Projects Participated by the Respondent's, and Did Not Go Well Due to Conflicts Between Main and Sub-Contractor				
Yes	14	43.8	43.8	43.8
No	17	53.1	53.1	96.9
Not Sure	1	3.1	3.1	100.0
Awareness on if the Contract Prepared are to Each Party's Specifications and Satisfaction				
Always	2	6.3	6.3	6.3
Sometimes	27	84.4	84.4	90.6
No	2	6.3	6.3	96.9
Don't know	1	3.1	3.1	100.0
The Penalty Conditions in the Contract, in Case One of the Parties Does not Comply				
Always	8	25.0	25.0	25.0
Sometimes	18	56.3	56.3	81.3
No	6	18.8	18.8	100.0
Time Spent by the Main Contractor on Paying the Sub-Contractor.				
Immediately after completion	13	40.6	40.6	40.6
Final handover	14	43.8	43.8	84.4
Others	5	15.6	15.6	100.0
Team Member Preparing the Sub-Contract				
Main Contractor	24	75.0	75.0	75.0
Client	4	12.5	12.5	87.5
Consultant	4	12.5	12.5	100.0
The Form of Sub-Contact, Used Within the Tanzanian Building Construction Projects				
NCC	12	37.5	37.5	37.5
PPRA	18	56.3	56.3	93.8
FIDIC	2	6.3	6.3	100.0
The Occurrence of any Conflict Between the Main Contractor and Sub-Contractors				
Yes	21	65.6	65.6	65.6
Not Sure	2	6.3	6.3	71.9
No	9	28.1	28.1	100.0
The Extent of Occurrences of Conflicts, Between the Main Contractor and Domestic Sub-Contractors				
Frequently	16	69.6	69.6	69.6
Moderate	5	21.7	21.7	91.3
Rarely	2	8.7	8.7	100.0

C. Factors of Conflicts between Domestic Sub-Contractors and Main Contractor

Table 4.3 presents frequency of occurrence of the factors causing conflicts between domestic sub-contractor and main contractor in building construction projects. Delay in payments, was the most frequent occurring factor of conflicts between domestic sub-contractor and main contractor in building construction projects, with the highest frequency index of 95.63%. Other included, poor communication; lack of trust; consultants delay in approving work and sample materials; shortage of materials in the market and unexpected price escalations; poor project management; contractual problems; lack of cooperation or team work; work delays; late material delivery; lack, poor or low workmanship and quality of works; sub-contractor poor cash flow or loss of profit or

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damage; and change of governmental regulation and laws, with the frequency index greater than 80.00%.

Moreover, additional factors, comprises of; awarding the work to sub-contractor with the lowest price; giving quotation for long without giving them project; not providing sub-contractor essential services like water, electricity; assigning work to new sub-contractor without informing the original sub-contractor; change of the scope of work by client; short construction execution period; poor conditions of contract; different contractor and sub-contractor goals and commitment; involvement of sub-contractors in several projects at the same time; construction defects; geological problems on the site; change order/extra work by the clients, with frequency index greater than 75.00%.

Table 4.3: Factors of conflicts

SN.	Factors of Conflicts Between Domestic Sub-Contractor and Main Contractor in Building Construction Projects in Dar-es-Salaam, Tanzania.	TNR	Mean Score (M.S.)	Frequency Index (F.I.) (%)	Std. Deviation	RANK
			Reliability Test: Cronbach's Alpha = 0.894			
01.	Delays in payment	32	4.78	95.63	0.420	1
02.	Assigning work to new sub-contractor without informing the original subcontractor, i.e. Multilayer Sub-contracting	32	3.94	78.75	0.914	17
03.	Not providing sub-contractor essential services like water, electricity	32	3.94	78.75	1.014	16
04.	Lack of trust	32	4.19	83.75	0.780	3
05.	Consultants delay in approving work and sample material	32	4.13	82.50	0.793	4
06.	Lack, poor or low workmanship and quality of works	32	4.06	81.25	0.914	11
07.	Lack of cooperation or team work	32	4.09	81.88	0.963	8
08.	Poor conditions of contract	32	3.84	76.88	0.808	20
09.	Giving quotation for long without giving them project	32	3.97	79.38	1.092	15
10.	Contractual problems	32	4.09	81.88	0.928	7
11.	Weather conditions	32	3.47	69.38	1.164	33
12.	Poor project management	32	4.09	81.88	0.777	6
13.	Late material delivery and supply	32	4.06	81.25	0.716	10
14.	Shortage of technical staffs and skilled labour	32	3.72	74.38	0.924	26
15.	Change of governmental regulation and laws	32	4.00	80.00	0.842	13
16.	Poor communication	32	4.47	89.38	0.567	2
17.	Sub-contractor poor cash flow or loss of profit or damage	32	4.03	80.63	0.822	12
18.	Bid shopping	32	3.56	71.25	0.716	31
19.	Work delays and disruptions	32	4.06	81.25	0.669	9
20.	Change of the scope of work by client	32	3.88	77.50	0.793	18
21.	Construction defects	32	3.81	76.25	0.821	23
22.	Absence of sub-contractors from the site	32	3.59	71.88	0.798	28
23.	Involvement of sub-contractors in several projects at the same time	32	3.81	76.25	0.896	22
24.	Lack of enough sub-contractors' experience in the similar projects	32	3.38	67.50	0.793	35
25.	Contract misinterpretation	32	3.59	71.88	0.911	30
26.	Change order/extra work by the clients	32	3.78	75.63	0.832	25
27.	Differing site conditions	32	3.59	71.88	0.756	29
28.	Awarding the work to subcontractor with the lowest price	32	3.97	79.38	0.861	14
29.	Delay of the or no advance payment	32	3.66	73.13	0.827	27
30.	Contractor awarding the contract at the lowest price	32	3.47	69.38	0.761	34
31.	Geological problems on the site	32	3.78	75.63	0.751	24
32.	Shortage of construction materials in the market, and unexpected price escalations	32	4.12	82.50	0.794	5
33.	Short construction execution period	32	3.84	76.88	0.723	19
34.	Disagreement over the agreed contractual terms and conditions	32	3.53	70.63	0.915	32
35.	Different contractor and subcontractor goals & commitment	32	3.84	76.88	0.847	21
	Valid N (listwise)	32				

Additionally, from an open-ended questions in the questionnaire, when asked "*what contributes to the problems between main contractor and sub-contractor*", 73% of the respondents, listed the following as the factors causing conflicts between main and domestic sub-contractor in building construction projects in Dar-es-Salaam, Tanzania; poor communication between parties; poor record keeping; poor cooperation from the contractor; lack of trust; financial management towards sub-contractor; inadequate capacity of either of the parties in doing/executing the project; poor preparation of subcontract documents; poor contract administration between the parties; unprofessionalism of contract handling the project; e.g. late work approval or certification; poor master work programme; on time completion of works, which can't be performed simultaneously; delay in payment; which may also be caused by contractors staying quiet once they are paid; delay in completion time of the project; delay in handing over documents; lack of capital; and poor quality of the works executed. Also, some respondents revealed, failing to follow instruction, delaying in materials delivery to site, poor quality of work, as well as main contractor's squeezing them firmly on the quoted prices, leaving them fighting to make ends meet, alongside experiencing huge loses; as the main areas sparking the conflicts.

V. DISCUSSION

The presence of good relationship enhance cooperation and team works among the project members in achieving their common goal of executing project works, as a team, which is in line with findings by Mirawati, Othman & Risyawati (2015); Ntiyakunze (2011); Mudzvokorwa (2017) and Hailu (2018). This can be achieved if the main selection criteria such as the quality of the job done, amount paid for, trust and openness in addressing any problem, are not skipped. Basically, the successful working relationship in the previous projects affects much the selection in the future projects. Thus, the selection criteria and proper project management strategies, that leads into a good relationship, must always be handled appropriately in any building project.

Moreover, the good relationship among the main contractor and sub-contractors, mitigates the unnecessary work delays, disruptions, disputes and even the abandonment of the building projects. According to Semple *et al*., (1994), Kikwasi (2012), Jarkas & Haupt (2014); Vaardini & Subramanian (2015), Haseeb *et al*., (2011) in Mudzvokorwa (2016), Rauzana (2016), Wu, Zhao & Zuo (2017) and Aryal & Dahal (2018); the works delays, disputes and disruption can be caused by a number of reasons such as difficult in transportation, frequent changes in orders, scope of work against the contract document and drawings design like architectural, structural engineering (e.g. change of footing design due to site topographical or geotechnical condition) and service design drawings, late interim certificate certification and payment, contractual disagreement, price or cost inflation of the building materials, late material delivery and supply, poor procurement program of material, incompleteness of drawing and specification, reimbursement of an additional cost, delay in resolving disputes, delay in giving instructions (e.g. failure to respond on time and slow decision making), delay in obtaining consent, permits and approval, slow revision of drawing in case of change in design, client's financial difficulties, rectification of rates, time extension cost claimed by either sub-contractors or main contractor, etc.

This may have a huge effect in the relationship in terms of loss trust and professional reputation; breakdown and deterioration of relationships and cooperation between project participants; diminution of respect between parties; loss of profit; additional expense in managerial and administration; possibility of litigation cases; loss of company reputation; loss of profit and perhaps business viability; loss of; extended and / or more complex award process; as well as rework and relocation costs for labours, equipment and materials as detailed by Mickie *et al*., (1995) in Aryal & Dahal (2018).

It is the best practice in any project, to prepare the project contract to each party's specifications and satisfaction. The specification can include the prevention of Multilayer Sub-contracting which involves assigning work to new sub-contractor without informing the original sub-contractor. Basically, multilayer subcontracting or idle sub-contracting, is the further sub-contracting downstream by sub-contractors, with or without the information or assent of the primary contractor or customer, (Yoke-Lian *et al*., 2012). Fundamentally, multilayer sub-contracting is one of the significant reasons for poor development quality and building site security, (Yoke-Lian *et al*., 2012). Multilayer sub-contracting likewise influences the interface between main contractor and sub-contractor as the principle contractor will lose direct power over undertaking works, (Abdullahi 2014). Hailu (2018), underlines that; sub-contracting without getting the approval of the main contractor is a common reason for contractual disputes on the sub-contracted works.

Basically, unclear specification can also lead to time and cost overruns which in-turns decrease on customer's faith and trust (i.e. distrust), (Vaardini & Subramanian 2015). Thus, enough time in drafting a clear and concise contract right from inception, as well as adherence to the condition of the contract as detailed by Mudzvokorwa (2016) and Fagbenle *et al.*, (2018). This must be in-line with main and sub-contractors visiting the site together before quotation**.** Phiri (2016) avows that; participation of sub-contractors in the determination of

work before bidding, is must in order to mitigate unnecessary conflicts between main contractor and sub-contractor. Likewise, the preparation of project contract to each party's specs, assists and tie the subcontractor in doing their work with appreciation to terms and pre-requisites that are given in the contract document, (Rajput & Agarwal, 2015).

Furthermore, inclusion of a penalty clause is important in any building project contract. The amount of penalty is to be agreed between main contractor and the subcontractor, (Andrey 2010; Tesha 2017). Andrey (2010) reports that; the financial penalties are made to force the sub-contractors mobilize and get to work if they are behind the schedule, but of course the amount of these penalties should be reasonable, because sub-contractors can lose their financial strength and stop working at all. Andrey (2010) also exemplify the penalties that can be considered in the project contract, which includes;

- Work start delay – 0.2% total work cost per day,
- Intermediate timing delay – 0.2% of total work cost per day,
- Work completion delay – 0.2% of total work cost per day,
- If work completion delay is more than 15 days – 5% of total work cost per day,
- Untimely clearing of building site from sub-contractor's equipment – TZS xxxx per day, and
- Defect correction delay – TZS xxxx per day.

Apart from these penalties, the sub-contractor has to pay all losses caused by these delays as well as loss of profit. All these penalties are applied as retentions from the last work payment to the sub-contractor. In the construction industry, delay penalties are usually applied at the end of the normal contractual period. Those penalties, daily in general, are of two types: linear monotonous delay penalties and gradual delay penalties. Usually penalties are fixed without considering the real size of the project, both by its initial overall cost and by its length (Andrey 2010). According Textes (2006), Mbani (2007) & Droit (2007) in Andrey (2010), the penalties are a fine charged to the contractor for delays in carrying out the work. In most countries the penalties for delay in construction projects are planned by regulations. They are calculated from a fraction of the original contract price per calendar day of delay.

On the duration taken by the main contractor, in paying the sub-contractor after the subcontracted work is completed; the NCC agreement and schedule of conditions of building sub-contract (with Quantities) of 2014, for sub-contractors, stipulates that; immediately after receipt by the Main-Contractor of any interim certificate payments from the client, the main-Contractor shall notify the Sub-Contractor with a copy to the Architect, and within fourteen (14) days shall effect payments to the Sub-Contractor (if not directly paid by the Employer as aforesaid). Moreover, it stipulates the subcontractor to continue with works for fourteen (14) days, after the main contractors has failed to effect the any payment due. It recommends upon failing, the subcontractor can suspend the further execution of the Sub-Contracted works until such payment has been made and such period of suspension as aforesaid shall be deemed to be an extension of time.

Basically, depending on the nature of the contract, in most cases the modality is based on "*pay when paid*" and "*pay if paid*" as asserted by Tesha (2017), Killough (2021). Giving example, Killough (2021) further reports that; the USA federal law states that, progress payments must be made to prime contractors within fourteen (14) days of submission of a proper invoice. If the payment is the final one for a project, the payment must be made within thirty (30) days of invoice submission. From there, the prime contractor has seven (7) days to pay a subcontractor. Writings by Mudzvokorwa (2017) and Fagbenle *et al.*, (2018) asserts that; timely progress payment to sub-contractor, is one among the best strategy which may be employed in avoiding the unnecessary conflicts between main contractors and sub-contractors. In most cases, late payment is normally due to the lack of adequate supporting documentation, different specifications from original plan and on site, as well as payment rules clauses that allow the main contractor to delay the sub-contractor's payment (Bassam 2007 in Lagiman 2017). These are among the tricks that the main contractor always use to hold back the subcontractor's payment.

In preparation of the sub-contractor's contract, both parties i.e. the main contractor and the sub-contractor must be engaged. The engagement, avoids sub-contractors poor understanding and agreement of the contract and its management, hence leading to a better project control, coordination and management; fully understanding the project scope; efficient site coordination and contract management; proper project initiation and planning etc. as per Phiri (2016); Mirawati, Othman & Risyawati (2015); Sklar (2017). It also assists in preventing contractual problems, by enhancing adherence to the contractual terms and conditions; inclusion of important clauses in the conditions of the contract regarding requirements and responsibilities from both parties; and fully understanding and proper interpretation of the contract information **as per** the studies by Ntiyakunze (2011); Jarkas & Haupt (2014); and Hailu (2018).

Major factors of conflicts revealed by the study as seen in Table 4.3., included; delay in payments, as the most frequent occurring factor in causing conflicts between domestic sub-contractor and main contractor in building construction projects, with the highest frequency

index of 95.63%.Other included, poor communication; lack of trust; consultants delay in approving work and sample materials; shortage of materials in the market and unexpected price escalations; poor project management; contractual problems; lack of cooperation or team work; work delays; late material delivery; lack, poor or low workmanship and quality of works; sub-contractor poor cash flow or loss of profit or damage; and change of governmental regulation and laws, with the frequency index greater than 80.00%.

Moreover, additional factors, comprises of; awarding the work to sub-contractor with the lowest price; giving quotation for long without giving them project; not providing sub-contractor essential services like water, electricity; assigning work to new sub-contractor without informing the original sub-contractor; change of the scope of work by client; short construction execution period; poor conditions of contract; different contractor and sub-contractor goals and commitment; involvement of sub-contractors in several projects at the same time; construction defects; geological problems on the site; change order/extra work by the clients, with frequency index greater than 75.00%.

- **Delays in Payment; -** was ranked first with the frequency index of 95.63%, and the standard deviation of 0.420, as seen in Table 4.3. Ntiyakunze (2011) & Lagiman (2017) asserts that in most cases delay in payment or late payment is normally caused by the lack of funds; poor financial projection on the client's side; excessive claims made by the main contractor, beyond client's financial projection; unnecessary bureaucracy in the payment process, on the client's side; delays originating from evaluation process of the main contractor's claim, by the consultants; inadequate contract provisions for enforcement of timely payments; and lack of adequate supporting documentation; as well as different specifications from original project floor plans. The study, also revealed that; there times main contractors become selfish to pay sub-contractors, despite having received payments from the client. Furthermore, CIBD (2013) & Okunlola (2015) enlightens that; delay in payment installments to sub-contractors, happen when the main contractor, faces financial issues that affect seriously specifically, the small sub-contractors. This situation leads into the main contractor being seen as a poor paymaster, hence muddling the relationship considerably further.

- **Poor Communication; -** was ranked second with the frequency index of 89.38%, and the standard deviation of 0.567, as seen in Table 4.3. The same problem was also reveled in a study by Sambasivan & Soon (2007), Mudzvokorwa (2017), Hola & Sawicki (2014), Rauzana (2016), Hailu (2018), Tawalare & Reddy (2018) who asserts that in most studies, the problem is propelled by failure to respond to issues timely as well as delay in providing proper information between parties or there is a lack of communication between main and sub-contractors. Moreover, according to Hola & Sawicki (2014), sub-contractors' dissatisfaction with main contractors can also be attributed to a lack of sensitivity to the requirement for timely and accurate information. Fearne & Flower (2006) cited the lack of built-in coordination and verbal interaction, as well as hostile and disconnected relationships between project participants, as a major cause of the perceived bad construction supply chain. For a project to be successful, proper communication between the main and the sub-contractor is essential. To ensure assignment success, a high-quality communication structure must exist at some point through the whole project.

Communication is defined as the process of conveying or modifying information by speech, writing, or any other media. There are several stakeholders engaged in a building project. In major projects, the main contractor may work with a large number of sub-contractors, each of whom is capable of completing the sub-contracted job; as a result, appropriate verbal communication with the main contractor is essential. Briscoe *et al.* (2005) explain that to ensure fantastic, trustworthy information flows in a project, excellent communication methods are required. There are a number of aspects that contribute to good communication between main and sub-contractors. The mode of communication, the time of verbal interaction, and the amount of material transmitted are the most important factors. The method of communication between the challenge's events is crucial, and it deserves special consideration.

Conversations between development events are often conducted vocally, face to face or over the phone, or in writing, by regular mail, memo, facsimile, or other methods. More face-to-face discussions on tasks, according to Eriksson (2015), can strengthen integration in building construction projects. Besides, due to insufficient time for planning, scheduling, practice, and execution of the assignment, poor communication is likely to put extra strain on sub-contractors. As a result, the job may not be of the highest quality, or even fall short of the main contractor's expectations, resulting in relationship issues (conflicts) between the main and the sub-contractor (Huang *et al.* 2008)

- **Lack of Trust; -** was ranked third with the frequency index of 83.75%, and the standard deviation of 0.780, seen in Table 4.3. The same issue was also revealed in the study by Younis *et al.* (2008), Mirawati, Othman & Risyawati (2015), Mudzvokorwa (2017), and Hailu (2018). The quantity of successful subcontractor works executed under a given main contractor promotes trustworthiness, making it a fundamental need for success in a main contractor and subcontractor partnership (Humphreys *et al.*

2003 in Mudzvokorwa 2016, and Tawalare & Reddy 2018). Because a clear connection between the primary contractor and the subcontractor increases the likelihood of a project's success (Mudzvokorwa 2016). Basically, as per Akanni & Osmadi (2015) in Phiri (2016), trustworthiness, is one of the values that should be considered in the selection of sub-contractors during the construction operation. Trust, is a vague and complex marvel and, has been examined and portrayed by analysts from various perspectives relying upon their order, and the issues they have been considering. The confidence that a person or thing is solid, outstanding, authentic, or viable may be described as trust. It is a person or thing's or thing's assured reliance on a person's or thing's character, capability, quality, or truth.

According to Humphreys *et al*. (2003) trust is a significant requirement for success in a basic main and sub-contractor relationship. Fairness is essential for establishing confidence between parties (Kodefors 2004 in Mudzvokorwa 2016). Hartman & Caerteling (2010) argued that cost and trust were both important factors to consider when selecting a sub-contractor, and that they were both important instruments in the end. Miller *et al*.,(2001) stated that the rise in the prevalence of unethical behaviors in development projects has resulted in increased questioning and conflict over money-related personal responsibility amongst different parties involved in the process. In this way, the proximity of a simple link between the main contractor and the sub-contractor might increase the chances of a project's success.

- **Delay in Approving Work and Sample Materials; -** was ranked fourth with the frequency index of 82.50%, and the standard deviation of 0.793, as seen in Table 4.3. The result is in-line with the report by Younis *et al.* (2008), Jarkas & Haupt (2014) which underlines delay in waiting for sample material approval, as well as delay in the consultant's response to requests for information (RFI) being among most common causes of disagreement between sub and main contractor in building construction projects.

- **Shortage of Materials in the Market and Unexpected Price Escalations; -** was ranked fifth with the frequency index of 82.50%, and the standard deviation of 0.794, as seen in Table 4.3. Same results were also revealed by Younis *et al.* (2008), Jarkas & Haupt (2014), Tayeh (2009), and Mudzvokorwa (2016), who enlightened that; shortage or unavailability of specified building construction materials, causes conflicts between main and sub-contractor, due to inflation which affects the price of materials and labour cost, that end up being higher, than the priced quotation. This circumstance is much fueled by the lack of enough funds to finance work, and including procuring the building materials. If the owner does not agree the sub-contractor's updated estimates costs, losses occur, and conflicts arise between the main and the sub-contractor. In a developing economy, concerns with cost changes frequently come as a result of inflation. Building materials and labor costs might rise above their estimates due to inflation, resulting in a loss for the main contractor or her sub-contractor rather than a profit.

According to Mudzvokorwa, (2016), if either the main or the sub-contractor ignores anything or makes a mistake in the original cost calculation for the price of materials and labor, the building project expenses will likely overspend, and the project will fail, resulting in interface issues. Finding also revealed that the eruption of COVID-19, which led to the lockdown in most developed countries, thus leading to the reduction or closure in production of the building materials in most quarries and factories, in developing and developed countries; was another reason for the shortage of materials and unexpected price escalation, thus causing conflicts

VI. CONCLUSION AND RECOMMENDATIONS

In analyzing the conflicts between main contractor and domestic sub-contractor in building construction projects in Dar-es-Salaam, Tanzania, the following conclusion is drawn: -

- The study revealed the experience between main contractor and domestic subcontractor to be good, despite most of the respondents to have ever been involved in a in a project that did not go well because of problems between main and sub-contractor caused by frequent occurrences of conflicts among them. With PPRE being the most used form of contract, it was found that most of the contracts are prepared by the main contractor, and to each party's specification and satisfaction. Furthermore, less than half of the respondents, revealed that interim payments to be normally done immediately after completion of the work. It also revealed the inclusion of penalty clause in the project contract, if one of the parties fails to comply.
- In determining the frequency index for factors of conflicts between main contractor and domestic sub-contractor in building construction projects, it was found that; delays in payment; poor communication; lack of trust; consultants delay in approving work and sample materials; as well as shortage of materials in the market and unexpected price escalations; were top most factors with high frequency index i.e. above 8.20%. this implies that; these are the factors that frequently occurs in building construction industry causing conflicts between main contractor and domestic sub-contractor.

A. Recommendation

The following measures are recommended basing on the explored strategies that can be employed in managing conflicts between main contractor and domestic

sub-contractor in building construction projects, these includes;

- Good communication, cooperation and timely payment; early notice and proper records keeping; sub-contractor having enough fund for project; certifying work on time and timely payment; risk management plan; seeking professional advice as early as possible before disputes escalade; quality work; communicating once main contractor has been paid; partnering; take time in drafting a clear and concise contract right from inception, as well as adherence to the condition of the contract; dealing with the disagreement as soon as possible; building long-term relationship, honesty and trust; main and sub-contractors visiting the site together before quotation; proper selection of sub-contractor basing on project nature; and everyone to understanding the contract and agreed on timetable/schedule, has the strategies.
- 80% of those who responded to the questionnaire's open-ended question recommended the following in order to improve the Tanzanian sub-contracting environment; proper planning from the project inception; ensuring the terms and conditions in the contracts are tight and well defined; establishing and enhancing proper communication between the parties, before and during the project; payment and all matters concerning financial management are cleared; contractors capacity in execution of the project is checked; both parties making sure they follow the project scheduling of works as prescribed; avoiding risky project environment, by ensuring good working environment; empowering subcontractors by giving them financial support, via using the signed contract as a collateral in securing a bank loan for the assigned works; long term relationship as well as encouraging joint venture/partnering; on time payment, by having a system that ensures subcontractors are paid timely; involvement of qualified staffs on running the project; and discouragement of domestic subcontracting.

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