

The Implementation of Risk Management Strategies in Joint Venture Building Projects in Dar-Es-Salaam, Tanzania

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Abstract

The study aimed at assessing the implementation of risk management strategies in joint venture building projects in Dar-Es-Salaam, Tanzania; By examining activities involved during the implementation of risk management strategies in joint venture building projects; investigating the challenges faced during the implementation of risk management strategies in joint venture especially in building projects; and finally suggesting collective measures that can be used to attain successful implementation of risk management strategies in joint venture building projects in Tanzania. The study considered a descriptive design where class I-IV contractors involved in joint venture building projects were selected to form part of the potential respondents. Questionnaires and one to one interviews were used in collecting data, whereby a total of 40 questionnaires were distributed of which 25 were returned; alongside interviewing 8 respondents. The study revealed that; clear documentation, joint venture termination, training programs, carrying out clear meetings, change of terms and conditions of Joint Venture (JV), and direct judgment using experience can be used in implementing; risk retention, reduction, avoidance, insurance and sharing as risk management strategies. Furthermore, poor communication, conflicts among members, and poor cooperation were revealed as major challenges during the implementation of risk management strategies. The study suggests that; effective communication among members, increasing team cooperation, and training programs can assist in attaining successful implementation of risk management strategies. The study recommends that; the building contractors should maintain effective communication, improve compatibility amongst themselves, alongside ensuring that their Joint Venture Agreement is clearly prepared, as it helps in settling differences amongst themselves.

Keywords - Risk; Management; Strategy; Joint Venture; Building; Projects; Dar-Es-Salaam; Tanzania.

I. INTRODUCTION

The Tanzania building construction industry is an exciting sector, and one of the most robust, and

growing sectors in the Tanzanian economy. However, for quite some time; foreign building contractors have dominated the construction business in Tanzania especially in undertaking large and complex building projects; which as per Madoweka, (2004) the situation has resulted to lack of exposure, lack of adequate resources, erosion of capital, and eventual loss of confidence, thus stifling the growth of the local building contractors, and attributing to local building contractors' inability to execute large and complex building projects. Hence; it has resulted to the emerging of Joint Venture (JV) formations, with the purpose to improve the efficiency, improve competitive positions, technology, and to learn international pace of working (Kamili,2005).

Over the last 30 years the term "Joint Venture" has come into increasing use. Nikolaus, (2013) reports that; apart from numerous books published on the subject, a great number of articles have been written on various aspects of Joint Venture. Authors like Mathu, (2014) & Garner,(2004) defines Joint Ventures as a collaboration between two or more companies through an agreement so as to pool their capital, resources and jointly manage their business for the purpose of sharing costs and profits. Moreover, Tomlison,(1970) in his study on international Joint Ventures in India defined Joint Venture as a commitment, for a short duration of time by pooling funds, facilities and services by two or more legally separate interests, to an enterprise for their mutual benefit.

The concept of Joint Venture emerged as a popular way of cooperation between companies in an environment in which fast access to up to-date technology was more critical than ever before (Yoshino & Rangan,1995). With the increasing magnitudes, complexities and risks associated with major construction projects, organizations with diverse strengths and weaknesses came together to form Joint Ventures so as to execute complex projects (Kumaraswamy et al.,2000). This truth however, does not mean that joint ventures are perfect ways of cooperation, they do resolve some risks while they create some (Buchel,1998). This is because joint venture partners come from different companies with different objectives, while aiming at sharing some same objectives. This is a threat to the projects that are

undertaken by joint venture partners. Sridhar,(1992) points out that; the risk of failure of Joint Ventures are high, and the financial consequences are expensive. Hence proper risk management helps in reducing the failure of Joint Ventures.

Risk management, is the systematic process concerned with identifying, analyzing, mitigating or responding to potential risks. It also includes maximizing the probability and impact of positive events and minimizing the probability and consequences of events averse to projects objectives. Because of the complex nature of construction business activity processes, environment, and organization, the participants are actively exposed to a high degree of risk (Hamimah,2008).

In the Tanzanian construction industry, the concept of risk management has been in use, however most of the participants in this industry are still reluctant when it comes to risk management concepts without realizing the benefits of the process, which as per Nerija & Audrius,(2012), they include; identifying, analyzing, mitigating or responding to potential risks and risk control. Mitigating or responding to risks is the way of developing strategic options and determining actions to threats to objectives. This is the third step in the risk management process which indicates what actions to be taken towards the identified risks. The identification of risks is very important since it plays an important role for successfully completion of the project and increase profitability and efficiency of construction project.

Authors like Kwok, et al.,(2000); Minja,(2011); &Mahicha, (2013)identified the risks associated with joint venture partners as; disagreement in accounting profit and loss, financial bankruptcy, improper selection of partner, technological transfer disputes, culture differences, distrust, disagreement in allocation of work, termination of joint venture agreement and partners lack of management. Mahicha,(2013), indicated that the identified risks affect the project's cost, time and quality; hence a need to study on how the available risk management strategies are implemented in joint venture partnerships in building projects in Dar-Es-Salaam, Tanzania so as to manage their risks.

A. Problem Statement

Despite the fact that, partners in the building construction industry set up joint venture to reduce or share risks, they also bring some risks related to partner risks (Li,1999). A number of studies by Kwok, et al.,(2000); Minja,(2011); &Mahicha,(2013); identified these risks as disagreement in allocation of work, termination of joint venture agreement, financial bankruptcy, improper selection of partner, technological transfer disputes, culture differences, distrust.Kwok, et al.,(2000)details further by identifying a number of strategies which have been used in managing risks such as risk reduction, risk

transfer or sharing, risks acceptance and risk avoidance, but still risks are there.This unfortunate scenarios, poses a threat to the success and overall performance of any joint venture building projects, hence a need to assess the implementation of risk management strategies among joint venture partners in the building projects in Dar-Es-Salaam, Tanzania. It is believed that; if the risk management strategies are well understood and properly implemented, it will enhance the potential success of joint venture partners towards the project.

Therefore, this study attempts on assessing the implementation of risk management strategies among joint venture partners in the building projects in Dar-Es-Salaam, Tanzania; by specifically examining activities involved, investigating challenges faced and suggesting measures for attaining successful implementation of risk management strategies in joint venture building projects in Dar-Es-Salaam, Tanzania.This study is essential in giving policy makers in Tanzania, researchers, academician, architects, quantity surveyors, engineers, real estate developers, etc. as well as workers and stakeholder on the implementation of risk management strategies in joint ventures in building construction projects, along side understanding on how to manage the risks that are associated with partners.

II. LITERATURE REVIEW

Over the past two decades there has been an unprecedented change in the nature of global business environment (Zhou,2004). Yoshino & Rangan,(1995) asserts that; Joint Ventures (JV) emerged as a popular strategy for cooperation when fast access to up-to-dated technology and emerging markets was more critical than ever before. However, it does not mean that JVs are perfect ways of cooperation, they do resolve some risks while they create some.

A. Definitions of Key Words

1. Joint Venture (JV)

There are many definitions of joint venture, each of which describes some features of joint venture. Milton & Ryan,(2011) defined Joint Venture(JV); as the joining together of two or more business partners from separate jurisdiction to exchange resources, share risks and divide rewards from a joint enterprise.Besides, Adnan &Morledge,(2003) defines Joint Venture as a procedure used to respond to specific business phenomena such as access to new markets, specific government policy, business capacity, and technology transfer. Furthermore, Norwood & Mansfield,(1999) asserts that; Joint Venture as the commercial agreements between two or more companies in order to allow greater ease of work and cooperation towards achieving a common aim, through the manipulation of the appropriate resources.A Joint Venture can also be defined as a cooperative business activity formed by two or more

separate organizations that creates an independent business entity and allocates ownership, operational responsibilities, and financial risks and rewards to each member, while preserving their separate identity or autonomy (Lynch,1989).The definitions are classified into two groups: one group defines joint ventures as a separate entity created two or more partners for the purpose of pooling their resources and share profits and losses; the other group defines joint ventures as any cooperation between two or more companies.

2. International Joint Venture (IJV)

Ozorhon et al.,(2007), defines IJV as a joint venture involving two or more organizations contributing their equity and resources and at least one partner having headquarter outside the country where joint venture operates. Moreover, Luo,(2001) and many other scholars stated that; an International Joint Venture(IJV) was increasingly opted as a method for companies to expand their opportunities in both developed and developing countries' markets. In developing countries, foreign investment is seen as a market development simulation, new technology and managerial skills development, which are needed for economic growth.

B. Practises of Risk Management Strategies in Joint Venture Building Projects in Various Countries

1. Construction Joint Venture in Malaysia

The "Look East Policy" introduced in the early 1980's that carried through until the late 1990's, further encouraged foreign contractors to participate in the industry, with those from the United Kingdom(UK), Japan and South Korea most active (Adnan,2004). Since rebounding from the economic recession in 1997, the number of foreign contractors in Malaysia has been increasing with most of the contractors from Korea, Japan, Singapore, Germany, United Kingdom(UK) and other European countries. With stricter regulations, joint-ventures offer the main alternative route into the Malaysian construction market. The government is now looking at more local-foreign joint ventures to participate in the regional and global market.

Since the early 1990's, construction joint ventures in Malaysia evolved rapidly in order for both multinational construction firms and local government to achieve objectives as per (Mahmud & Yu,2009), in which writing by Adnan & Morledge,(2004); Mahmud & Yu,(2009); & Adnan,(2008), reported the established joint ventures between local building contractors and foreign building contractors, whereby Malaysia is one of the leading countries in Southeast Asia involved in joint ventures. Moreover, Adnan,(2004); Adnan,(2008); Mahmud & Yu,(2009), enlightens that; over the years, Joint Venture has managed to attract a great deal of well-known multinational companies from around the world, for projects in both the private and

public sectors focusing on infrastructure, civil engineering works, airports and hospitals,in which many large-scale building construction projects in Malaysia have used the joint venture collaboration method for delivery including the Petronas Twin Towers, the Kuala Lumpur International Airport(KLIA), the Likas Specialist Hospital and Klang Valley Mass Rapid Transit.

The Malaysian government both encouraged and supported local building contractors to participate in regional and global markets based on their expertise and experience of building construction, infrastructure works, civil engineering works, mixed developments and airport works (Mahmud & Yu,2009; Adnan,2008). Adnan & Morledge,(2004); Adnan,(2008), details that; Malaysian building construction sectors has participated in a variety of construction projects in India, China, Singapore, Australia, South Africa and the United States of America.

2. Construction Joint Venture in Singapore

Singapore being an island state is slightly different from other larger countries. As a result of the limited land size, infrastructure and utilities are compact, it required specialized technology a kind that is not possessed by local contractors. Kwok, et al.,(2000) gives an example of the proposed Deep Tunnel Sewage System with a potential cost of eight billion dollars, which was so complicated that it used Joint Venture (JV) teams for its construction. The project was intended to collect the whole of Singapore's sewage by means of deep tunnels, and convey them to the two ends of the island for treatment and final discharge into the sea.

3. Construction Joint Venture in Tanzania

Joint venture in Tanzania came into existence in some few projects before 1980's. An Israel construction company which was known as SolelBoneh entered into joint venture partnership with a local company based in Moshi M/S J.S Kambaita and Sons Ltd for the construction of the Kilimanjaro Christian Medical Centre in 1968 (Minja,2011), where SolelBoneh was to supply all plant and equipment including bringing engineers and technician from Israel to supervise the project whilst the local company supplied the offices for the project and paid for the local labour in the 1970's (ibid). Moreover, the National Service Construction Company (SUMA JKT) entered into joint venture with Cuban Government Construction Brigade for the construction of three secondary schools owned by government in Ruvu, Kilosa and Ifakara.

The construction of the schools was mainly pre-fabricated structures. Under the joint venture arrangement, the foreign company supplied plant and equipment, skilled labour and paid for the materials required for the project while the local company supplied the offices for the project and free local

labour (national service soldiers under training who are not yet employed). There was no formal registration of the joint venture consortium, (JKT Headquarters, 1986). Italframe Ltd was formed in Tanzania in 1965 as a foreign company but later on entered into joint ventures for executing various projects in and outside Tanzania. Italframe had initially specialized on the construction of Pre-Cast concrete portal frames mostly used in the industrial sector for the purpose of building factories, ware houses and the like. One of the major projects undertaken by Italframe under joint venture agreement was the construction of the Cashew Nut Processing Factory in Mtwara.

D. Types of Joint Venture

Joint Ventures which are used in the construction industry can be classified according to different focuses. These include the following:-

1. The Integrated Type and Non-Integrated Type

According to different forms of understanding works, construction joint ventures fall broadly into two categories: Integrated and Non-Integrated (separate type). In the case of integrated joint ventures, the parties reach an agreement for a specific project, by combining their resources and sharing the profits and losses of their undertaking, so they have a risk sharing strategy. This kind of joint venture is classified for legal purposes as a partnership. While in non-integrated joint ventures the overall responsibility for the contract usually has to be negotiated by the board. Separate sections are the subcontracted, with each of the partner taking over the responsibility for running their own technical and administrative elements of work.

2. The Project Based Type and Traditional Type

According to the objective of joint venture, construction joint ventures can be classified into two categories: Project based type and Traditional type. Project based type represent a particular interesting group of joint ventures, which are different from the traditional type. The differences between these two range from the planning horizon, management styles and limited life span of joint venture. In the case of project based joint ventures, their activities are oriented towards well-defined objectives and they are terminated upon completion of the given project. In the construction industry, many JVs are project-based JV. Traditional JV are also used to maintain the cooperation between the partners for long-term.

Table #2.01;Comparison of project based and traditional Joint Venture(JV)

SN.	Contents	Project-Base Type	Traditional Type
01.	Life Span	Finite	Infinite
02.	Partnership	Short term orientation	Long term orientation

03.	Management Style	Task Oriented	Business Oriented
04.	Nature	Dissolving after project completion	Ongoing
05.	Primary Objective	Completion of the project on time	Business Objective
06.	Potential Benefits	Possible win-lose situation	Win-win situation
07.	Control	Hierarchy	Team Work

Source: Hung, et al.,(2002).

3. Motives and Goals Behind Joint Ventures

Motives are the reasons or drivers to form a joint venture and they should be clearly distinguished from the goals of the joint venture, (Brockmann & Girmscheid,2009). Contractor & Lorange,(1988); Mead,(1994); Badger & Mulligan,(1995);Büchel, et al.,(1998), details that a number of motives given in joint venture literature which includes common motives such as; economies of scale, risk reduction, reducing competition and broadening the financial base, and separate motives, such as; access to markets, access to local resources, key account management, local content, technology transfer, know how transfer and training, and profits in hard currency. Some of the separate motives are beneficial to the local partner(s) in an International Joint Venture(IJV) while others are of value to the foreign partner(s).

E. Reasons for the Failure of Joint Ventures

Harrigan,(1986) uncovers some reasons for the failure of joint ventures, which includes;

- Partners could not get along,
- The joint venture market disappeared,
- Managers from disparate partners within the venture could not work together,
- Managers within the ventures could not work with the owners' managers,
- The technology, which one partner thought was good, did not prove to be as good as expected,
- The owners' contributed information or resources could not get to personnel down the line to deliver what had been promised,
- Partners simply reneged on their promises to deliver on their part of the agreement, and
- Other reasons that destroys the partners' cooperative spirits.

Han et al.,(2005) reveals more reasons for failure of joint venture, which includes;

- Inadequate business plan development,
- During initial stages of the venture, there was a lack of commitment from top management,
- Inadequate development of strategies for the international market,
- Inadequate recognition of demands in a cross-cultural environment, and
- Failures in weighing foreign requirements with respect to their political, social, legal and government procedures.

According to Ozorhon et al.,(2007), the failure rate of international joint ventures is higher than with domestic joint ventures.

F. Risk Management with Joint Ventures

1. Risk Definition

The concept of risk is multi-dimensional, with a number of definition.PMBOK Guide,(2008) defines risks as uncertain events which result into a positive or negative effect on at least project objective.According to Crandall & Al-Bahar,(1990) risk is defined as the chance of occurrence of events adversely or favorably affecting project objectives as a consequence of uncertainty. Other authors' definitions of risk have been compiled and presented in Table #2.02

Table #2.02: Definitions of Risk

SN.	Risk Definition	Author
01.	Risk is a stage where there is lack of information but by looking at past experience, it is easier to predict the future.	Winch,(2002)
02.	Risk is the exposure to consequences of uncertainties.	Cooper et al.,(2005)
03.	Risk is a possibility of loss or injury	Darnall & Preston,(2010)
04.	Risk is a statement of what may arise from the lack of knowledge and constitute a threat to the project	Cleden,(2009)
05.	Risk occurs where there is some knowledge about the event.	Smith, et al.,(2006)
06.	Risk is a situation that can be valued either positively or negatively and possess a threat to some objectives.	Webb,(2003)

Source: Gajewska & Ropel,(2011).

All risk definitions compiled in Table #2.02 describe risk as a situation where lack of some aspect can cause a threat to the building project's objectives.

2. Sources of Risk in Joint Venture Partnerships

Kwok, et al.,(2000), asserts that; as much as JVs are seen as a perfect way of sharing risks, there are partner risks which should be visualized during the identification process.These risks includes:-

- **Disagreement in accounting profit and loss;**- which happens where the joint venture partners do not clearly state in the joint venture agreement, how profits and losses are calculated and shared.
- **Potential financial distress:-** financial distress was seen as a risk which impacted the partners in three ways: low morale to the JV staff, clash of interests by the distressed company, and inability to inject additional cash, if required.
- **Improper selection of partner:-**as joint venture come from different companies with different objectives while they aim at sharing some same objectives hence causing risks.
- **Technological transfer disputes:-**because it is

obvious that companies with specialized technology are not willing to transfer technology to others, for fear of competition for market share,however, Bing et al.,(1999)& Bing & Tiong,(1999) states that; technology transfer is the least critical factor, as this is usually carried out in limited areas, such as training the local staff during the design, and construction phases. Usually the main target for companies is to complete the project with profit, and on time and budget, rather than to successfully transfer technology.

- **Culture differences;-** appears to be relatively common especially when a company, forms a JV partnership with another company from a relatively under-developed country, and where there are big gaps in their social, cultural and religious values between the staff from these two companies.
- **Distrust;-**is a critical risk especially when the partners within the joint venture set up do not trust each other.
- **Disagreement in allocation of work;-**JV projects, normally are complex, hence requiring different portions of work, and thus the partners that form JVs to tackle the project, may find that they have to carry out unfamiliar jobs. There is need therefore to push work that is not familiar to the companies to their partners, where the dominate party has the authority to decide on work allocation. They may be biased towards other partner in terms of job allocation and not provide an equitable cost/profit system hence leading to disagreements.
- **Termination of Joint Venture;-** is a common reasons for terminating a joint venture such as: expiry of the duration of the venture; failure to obtain the agreed income or performance or any other condition; bankruptcy procedures against any of the partners; any loss of financial credibility of the partner such as a declaration of debt; failure to comply with the contractual terms of the joint venture, a change; in control of the partner company; a force majeure such as war or earthquakes; and the failure of management to act because of voting power on the range of selected items (Wolf,2000). Other sources of risks include Partners lack of management competence, and resourcefulness which results in the incompetence of the project management team (Shen et al.,2001).

G. Risk Management in Construction

Risk management is now days a very critical factor for successful project management because projects tend to be more complex and competition is increasingly tough. To enhance the assessment of the project, potential risks should be identified and analyzed as early as possible so as to set strategies to manage them. Managing risks in the building projects has been recognized as the very important process in order to achieve project objectives in terms of time, cost, quality, safety, environmental sustainability and expectations of the company (Zou, et

al.,2007).Cooper, et al.,(2005), asserts that; risk management in construction is a process involving the systematic application of management policies, process and procedures to the tasks of establishing the context, identifying, analyzing, assessing, treating, monitoring and communicating risks. The benefits of the risks management process include identifying and analyzing risks, improving construction project management processes, and highlighting effective use of resources. Moreover, risk management helps project participants, (the client, contractors, consultants, and suppliers) to meet their commitments and minimize negative impacts on construction project performance in relation to cost, time and quality (Nerija& Banaitis,2012). The definition of risk management of various authors is shown in Table #2.03.

Table #2.03: Definition of Risk Management

SN.	Risk Management Definition	Author
01.	Risk Management is a systematic application of policies, procedures, methods and practices to tasks which identify, analyzes, evaluate, treat and monitor risks.	BSI,(2000)
02.	Risk Management is a discipline for living with the possibility that future events may cause adverse effects.	Flanagan & Norman,(2000)
03.	Risk Management is a process which contains key steps like; risk identification, risk assessment, risk mitigation, and risk monitoring.	Wysocki,(2009)
04.	The process of risk management includes three phases of risk identification, risk qualification and risk control.	Minto & Ashley,(1998)
05.	The risk management process as all the process involves; identifying, assessing, and judging risks; assigning ownership; taking actions to mitigate or anticipate, monitoring and reviewing progress.	HM Treasury, (2004)
06.	The risk management process use five phases; initiate, identify, assess, plan responses,and use a management process to implement responses.	PRAM Guide,(2004)

Source: Mohamed,(2014).

H.Approaches of Risk Management Among Joint Venture Partners

Smith et al.,(2006), clarifies that; there are two approaches to risk management, i.e. informal and formal approaches, in which each approach influences the procedures and processes used to

manage the risks.The informal approach views risks in a very subjective manner. The most widely used technique of this approach is the provision of contingency funds, which are mainly divided into two groups: lump sums and percentage contingencies. A further technique used for managing risks with an informal approach is to interview experts and take their views into account when reviewing possible risks.The formal approach to the management of risk consists of a set of procedures which are laid down by partners for use in the risk management process, these procedures are structured in a way that will be easy to follow and can be used by any member within the organization, (Loosemore, et al.,2006: Smith et al.,2006).

I. The Risk Management Process

In general, the risk management process discussed under this section consists of risk identification and the classification that records each risk and qualifies it. Risk analysis estimates a risk factor’s likelihood of occurrence and the potential impact on a project in terms of cost overrun, cash flow, time overrun and quality of the project. Risk response then identifies the team which will be responsible for risk planning. Finally, risk mitigation strategies are used to execute a risk control. Flanagan & Norman,(2000),& Tweeds,(1996) proposed a framework for risk management, which is as shown in figure #2.01.

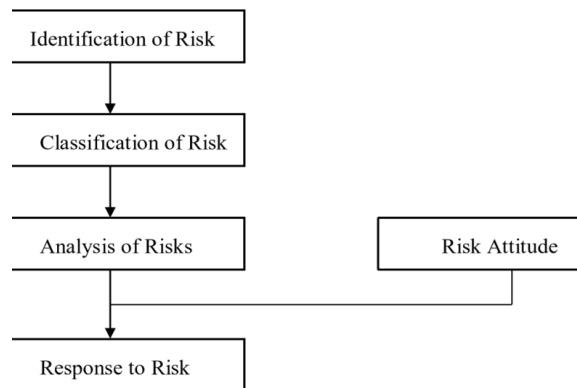


Fig #2.01: Risk Management Framework, Source; Author,(2018).

However, according to Flanagan & Norman,(2000), risk attitude can be divided into three types of partners or organizations: risk loving, risk averse and risk neutral. Most of the decisions are usually made after analyzing the risks in details.

Table #2.04: The stages of the risk management framework

SN.	Stages	Author
01.	Risk Identification	Identifying the source and the types of the risk.
02.	Risk Classification	Consider the types of risk and their effect on the organization
03.	Risk Analysis	Evaluate the consequences associated with the types of risk, or combination of risks,

		by using analytical techniques. Then assess the impact of risk by using risk management strategies.
04.	Risk Attitude	Any decision about risk will be affected by the attitude of the organization making the decisions.
05.	Risk Response	Consider how the risks should be managed by either transferring it to another party or retaining it.

Source:Flanagan & Norman,(2000).

1. Risk Identification

Risk identification is addressed as a critical stage where all the significant types and sources of risks and uncertainties associated with objectives, and the key parameters relating to these objectives, RAMP,(2005). Nevertheless, PRAM,(2004) mentions that; the deliverables provided by the identification phase include a risk list, log or register, indicating at least on assumed response. Additionally, Smith et al.,(2006)& (Mwashimaha,2010)asserts that; there many techniques that can be used to identify risks, such a as the use of discussion and brain storming sessions with specialists, experienced advisers, project manager. Another technique is to interview personnel from different disciplines within a certain organization or company, who have been experienced in the similar field. An adjunct to this method is to get information from previous similar projects, by getting a risk register which includes documents, spreadsheets, and a database which could help in defining a previous project with its associated risks.

However, the point to be made here is that; risk identification process plays a very important role in the management of risks. In fact, it is believed that the benefits of Risk Management originate from the accuracy of identification rather than the analysis stage (Uher,1993). For joint venture partnerships in Tanzania, the risk identification stage includes sources of risk such as improper partner selection, disagreement in allocation of work, termination of joint venture agreement, financial bankruptcy, technological transfer disputes, culture differences, distrust.

2. Risk Classification

Tah & Carr,(2000) classified risks into external and internal in accordance with the nature of the risks. However, when they combined fuzzy logic and a work breakdown structure, they grouped risks into six categories: local, global, economic, physical, political, and technological change. Meanwhile, Wang et al, (2004) approached the subject differently and stated that; risk classification depends mainly upon whether a project is local or international. They also said that internal risks are applicable to all projects, local and international. Furthermore,

international projects tend to be subject to external risks such as unawareness of social conditions; economic and political scenarios; unknown and new procedural formalities; regulatory frameworks; and governing authorities.

The PMBOK Guide,(2008) classified risks into the following groups: technical, external, organizational, environmental, and project management. Some categories of risk, which affect construction projects, are similar to those for projects such as investments in common stocks or government bonds; others are specific to construction. The risks associated with joint venture projects have been classified into three groups which are external risks, internal risks and project risks. The internal risks are also known as partner risks which are improper partner selection, disagreement in allocation of work, termination of joint venture agreement, financial bankruptcy, technological transfer disputes, culture differences, distrust.

3. Risk Analysis

Risk analysis process is an integral part of the Risk Management process. It is the process of examining each identified risk so as to estimate the likelihood and predict the impact (PMBOK Guide,2005). The main aim of risk analysis is to investigate properly the identified risks, which could be faced during operational processes. Furthermore, Smith et al.,(2006) defines risk analysis as a systematic approach, which follows the identification of risks so as to quantify their impact. Meanwhile PRAM Guide,(2004) defines risk analysis as the assessment of risks, which affect the project in order to gain understanding of the impact upon project objectives so as to prioritize risk responses.

The advantages of risk analysis according to The RAMP Guide,(2005) are allowing for profitable opportunities, which in some cases can be too risky to be utilized and to minimize risks when the right actions have been taken. In addition, risk analysis techniques recognize the uncertainty, which surrounds the best predictions by generating probability distribution basing upon expert judgment.A number of successful risk analysis techniques suitable for different projects and purposes have been identified. These techniques have been categorized into two groups, and can be qualitative or quantitative, (Flanagan & Norman,2000). In practice, qualitative analysis is applied first, if it fails to provide sufficient details, quantitative analysis is applied to obtain numerical evidence.

4. Risk Response Management Process

Having identified the risk that are associated with joint venture projects, and evaluated probabilistically its potential financial impact, it is time to take action. The contractors will formulate suitable risk treatment strategies. Flanagan & Norman,(2000), enlightens that; these strategies are

generally based on the nature and potential consequences of the risk. The objective of these strategies is twofold:

- a) To remove as much as possible, the potential impact; and
- b) Increase control of risk. This dual notion of reducing the potential impact and increasing risk control is very important.

Generally, there are two basic approaches to managing a risk. According to Smith et al.,(2006), the first, is through measures aimed at avoiding or reducing the probability and/or potential severity of losses occurring, in which such an approach is called risk control; and the second is through making provisions to finance the losses that do occur, whereby such an approach is called risk finance. With this in mind, the risk response management process is composed of two steps. These steps are; development of alternative risk management strategies, recommendations and assignment of alternative strategies to risks (*ibid*). In the development of alternative strategies within the framework of risk management, there are five alternative strategies, i.e.

- a) Risk avoidance,
- b) Loss reduction & risk prevention,
- c) Risk retention,
- d) Risk transfer (non-insurance), and
- e) Insurance.

a. Risk Avoidance

Avoidance is a useful and a fairly common strategy to managing risks. By avoiding a risk exposure, the contractors know that they will not experience the potential losses that the risk exposure may generate,(Jamal, et al.,1990). On the other hand, however, the contractors may lose the potential gains (opportunity) that may have been derived from assuming that exposure. To illustrate, a contractor may avoid the political and financial risks associated with a project in a particular unstable country by not bidding on projects in that particular country.

b. Risk Reduction and Risk Prevention

are programs directed towards decreasing the contractor's exposure to potential risk by two ways:

- a) Reducing the probability of a risk; and
- b) Reducing the financial severity of risk if it does occur.

For example, the installation of antitheft device on construction equipment may reduce the chances of theft and hence reducing distrust among partners. Cultural differences can be reduced by carrying out training programs. Loss prevention programs are considered important for two reasons. First, there is

the effect on insurance premiums. It is found that by adopting a loss-prevention program, the insurance premiums are reduced significantly. Second, the success of a risk-retention program is a direct function of the contractor's ability to prevent potential risks and reduce their severity.

c. Risk Retention

which can either be planned or unplanned as per Flanagan & Norman,(2000),is becoming an increasingly important aspect of risk management when dealing with risks. Risk retention is the internal assumption, partially or completely, of the financial impact of risk by the firm. In adopting the risk retention strategy, however, it is important to distinguish between two different types of retention. Flanagan & Norman,(2000),details that; planned risk retention is a conscious and deliberate assumption of recognized or identified risks by the contractor. Under such a plan, risks can be retained in any number of ways, depending upon the philosophy, the particular needs, and the financial capabilities of the contractor. On the other hand, unplanned risk retention exists when a contractor does not recognize or identify the existence of a risk and unwittingly or unconsciously assumes the loss that could occur (*ibid*). For some firms, the task of risk identification has been so poorly performed that far too much risk is being passively retained. A related form of unplanned retention occurs when the contractor has properly recognized the risk exposure but has underestimated the magnitude of the potential losses.

d. Risk Transfer

In general, as per Flanagan & Norman,(2000), risk transfers are possible, through negotiations, whenever the two contractors enter into a joint venture contractual arrangement. This is also known as non-insurance transfers which differ from insurance in that the transferees;

- a) Are not insurers, and
- b) Due to inadequate historical data or their inability to adequately evaluate risk exposure, transferees usually do not accept enough exposure units for their losses.

Most non-insurance risk transfers are accomplished through provisions in contracts such as hold-harmless agreements and indemnity clauses or contractual adjustments. For example, sharing of profits and losses that arise from the project. The essential characteristic of the contractual transfer is that the potential consequences of the risk, if the risk does occur, are shared with or totally carried by the contractor.

5. Insurance

Commercial insurance is probably the most important and frequently used method of handling risk that is employed by contractors. In fact, as mentioned earlier, many building contractors think of risk management as insurance management. The majority of contractors rely upon insurance for the more serious loss exposures through the purchase of an insurance policy with certain deductibles. Regardless of the form of deductibles, the obvious effect is a reduction in the premiums for a given amount of insurance protection. Loss-adjustment expenses are also reduced for the insurer. These two reasons explain why deductibles are usually used, especially when the frequency of small losses is fairly high. The difference between the response option of insurance and transfer is that insurance only shifts the financial potential consequences of the risk, whereas transfer also involves shifting responsibility for the risk.

its damages.

1. Records and Reports

Jamal, et al.,(1990) reports that; keeping appropriate records is essential for the risk-management function, because the records form the basis for reports emanating from the risk-management function. They provide the statistical data needed in the process of deciding on an appropriate course of action in regard to risk treatment. The building contractor should maintain records from the job site that might be unique to the risks envisioned in the project. Such records include risk frequency, risk severity and consequences, and other related informant.

2. Training Programs

Exposure to risk can be reduced by sharing it with other parties. Flanagan & Norman,(2000), accounts that; the reduction of risk falls into four basic categories: education and training to alert staff of

Table #2.05: Summary of risk management strategies and possible activities,

SN.	Risk Factors	Risk Management Strategy	Possible Activity
01.	Financial and Economic Risks ▪ Financial bankruptcy ▪ Inflation ▪ Change of foreign currency	▪ Risk transfer/sharing ▪ Risk avoidance ▪ Risk retention	▪ Documentation ▪ Joint venture termination
02.	Political and Environment Risks ▪ Political instability ▪ Change in laws and regulations	▪ Insurance ▪ Risk transfer ▪ Risk avoidance	▪ Joint venture termination
03.	Partner Risks ▪ Cultural differences ▪ Distrust ▪ Accounting for profit and loss	▪ Risk Transfer ▪ Risk acceptance	▪ Training programs ▪ Contractual Review
04.	Project Risks ▪ Cost overruns	▪ Risk transfer ▪ Risk avoidance	▪ Clear documentation
05.	Design Risks ▪ Design problems ▪ Errors and omissions ▪ Insufficient detailing	▪ Risk transfer ▪ Risk avoidance	▪ Carrying out clear meetings ▪ Clear documentation
06.	Management Risks ▪ Improper partner selection ▪ In appropriate risk allocation ▪ Disagreement in allocation of work	▪ Risk transfer ▪ Risk reduction	▪ Carrying out clear meetings ▪ Clear documentation ▪ Improving communication

Source: Adopted from Jamal, et al., (1990) and modified.

J. Possible Activities in Implementing Risk Management

However, writers like Abu-Rizk,(2003) suggested some activities that may be involved when responding to risks; actions can include

- Reduce uncertainty by obtaining more information, this leads to re-evaluation of the likelihood and impact,
- Eliminate or avoid the risk factor through means such as a partial or complete redesign, a different strategy or method etc.,
- Transfer the risk element by contracting out affect work,
- Insure against the occurrence of the factor, and
- Abortion of the project if the risk is intolerable and no other means can be undertaken to mitigate

potential risks; physical protection to reduce the likelihood of loss; systems, which ensure consistency; and physical protection to protect people and property. Furthermore, Smith & Bohn,(1999) adds that; risk can be reduced by obtaining additional information, performing additional tests/simulations, allocating additional resources, improving communication, and managing organizational interfaces.

3. Insurance

Thompson & Perry,(1992), insists that; the financial risk is transferred by using an insurance company.

4. Change of Contract Agreement

Writings by Flanagan & Norman,(2000),

accounts that; exposure to risks can be reduced or accepted by revising and reviewing some of the contract clauses, in the contract agreement.

5. Joint Venture Termination

Exposure to risks can be reduced by terminating a Joint Venture (JV). Both Wolf,(2000) & Shen et al.,(2001), gives the common reasons for terminating a Joint Venture(JV), which includes; expiry of the duration of the venture; failure to obtain the agreed income or performance or any other condition; bankruptcy procedures against any of the partners; any loss of financial credibility of the partner such as a declaration of debt; failure to comply with the contractual terms of the joint venture; a change in control of the partner company; a force majeure such as war or earthquakes; the failure of management to act because of voting power on the range of selected items; and partners lack of management competence and being resourcefulness which results in the incompetence of the project management team.

6. Direct Judgment Using Expertise

Exposure to risks can be reduced or accepted by directly judging from how the risks in the previous projects were mitigated.

K. Challenges to Risk Management

There are three challenges to risk management as detailed in a study by (Mwinshehe,2009), which includes:-

1. Lack of Professionalism and Experience

Basically, professionalism and experience is extremely important in from the identification process to response stage. However, Mwinshehe,(2009), insists that; lack of enough professional risk managers leads to unsuccessful risk management process.

2. Lack of Familiarity with Risk Management Strategies

Most of the contractors do not use the risk analysis techniques because of the calculations involved in using techniques hence making the risk management process unsuccessful.

3. Lack of Cooperation

Risk management depends on a single party which is contractors, these are responsible for coordinating the project as well as implementing the risk management techniques, therefore lack of cooperation between the parties could hinder the implementation process.

III. METHODOLOGY

A. Research Design

The study objective aimed at assessing the implementation of risk management strategies among joint venture partners in the building projects in Dar-Es-Salaam, Tanzania. Through a quantitative and qualitative approach, primary data were collected through questionnaire survey(having close and opened questions) and interview; while secondary data

relied on literature review. The methodology and research design used in this study was descriptive field survey in line with Kothari,(2004) and Kombo & Tromp,(2006) writings, in which apart from literature review; instruments like questionnaire and interview were used by approaching a sample of various building contractors; covering a group of selected building contractors from Class I to IV. Using the descriptive research design definition by Saunders, et al,(2007), the researcher is able to get in-depth information on the implementation of risk management strategies and challenges associated with the implementation.

This sample was designed using writings by Kothar,(2004) via adopting both probability and non-probability sampling, in which purposive sampling technique was used as it can be used for both quantitative and qualitative studies. Moreover, stratified sampling technique was employed in selecting the building contracting firms entitled by CRB to undertake joint venture building projects in Tanzania. The building contractors located in Dar-Es-Salaam were put in the stratum from which, each stratum contractors were selected randomly.

The study questionnaire was divided into two main sections whereby; Section A related to general information about the respondents' experience in the building construction industry alongside their historical involvement in joint venture building projects. Section B covered all the three study objectives by examining the strategies and activities used during the implementation of risk management; investigating the challenges faced during the implementation of risk management strategies; and suggesting measures that can be used in order to attain successful implementation of risk management strategies. Additionally, the seven (7) interviews conducted with building contractor's representatives (4 quantity surveyors and 3 civil engineers) out of eight (8) that were targeted; were guided by three (3) semi structure questions, in which one (1) question aimed at obtaining information regarding the activities involved during the implementation of risk management strategies in JV building projects; while question two (2) aimed at capturing the challenges faced during the implementation of risk management strategies; and the third (3) question aimed at obtaining information on the measures.

B. Population and Sample of the Study

The study population which is the target group to be studied, as per (Krishnaswami & Ramganathan,2006), consists of building contractors (quantity surveyors, engineers, and other), under Class I to Class IV building construction companies, that have ever undertaken or handled a joint venture building project within Dar-Es-Salaam, Tanzania. In Tanzania contractors are categorized into seven classes. Criterion set to obtain the sample from building contractors was: building contractors to

be from Class I to IV. An accessible total population of 91 Class I to Class IV building contractors that have ever handled a joint venture projects as per CRB,(2018) were selected as seen in Table #3.02. Singh,(2006) enlightens that; 10% to 20% of the accessible population can be used; and in this case 43.95% equals to 40 selected sample size out of 91 was used.

Table #3.01: The list of the registered joint venture (JV) building projects by 2017.

SN.	Year	Joint Venture (JV) Projects
01.	2014	21
02.	2015	44
03.	2016	39
04.	2017	22
	TOTAL	126

Source: CRB, (2018).

Table #3.02: The study population (Registered Joint Venture Building Projects under Class I-IV by 2017). Class I-IV building contractor partners under joint venture set up, were preferred due to their capacity to carry out large and complex building projects which in most cases involve more risks than lower scale projects.

SN.	Class of Building Contractors	Number
01.	Class I	18
02.	Class II	16
03.	Class III	27
04.	Class IV	30
	TOTAL	91

Source: CRB,(2018) & modified by Author.

Confidence Interval = 90%
 Margin Error = 10%
 Population size= 91
 Z= 1.64

Formula of Sample in each strata

$$\text{Distribution of 50\%} \times \frac{(1 - \text{Distribution of 50\%})}{(\text{Margin Error} \div \text{Confidence Level})^2}$$

$$0.5 \times \frac{(1 - 0.5)}{(0.1 \div 1.64)^2} = 67.24$$

$$\text{True Sample Size}(n) = \frac{67.24 \times 91}{67.24 + 91 - 1} = 39$$

True Sample Size (n) = 39

Using the study population of building contractor partners under joint venture as seen in Table #3.02

$$\text{Class I} = 39 \times \frac{18}{91} = 8 \text{ Building Contractors}$$

$$\text{Class II} = 39 \times \frac{16}{91} = 7 \text{ Building Contractors}$$

$$\text{Class III} = 39 \times \frac{27}{91} = 12 \text{ Building Contractors}$$

$$\text{Class IV} = 39 \times \frac{30}{91} = 13 \text{ Building Contractors}$$

Table #3.03: The study sample size of the selected building contractors as target population, which consists of Class I to Class IV.

	Class of Building Contractors	Number
01.	Class I	08
02.	Class II	07
03.	Class III	12
04.	Class IV	13
	TOTAL	40

Source: CRB,(2018) & modified by Author.

IV. RESULTS, ANALYSIS AND DISCUSSION

The collected data from a number of building contractors obtained using multiple techniques was analysed using both quantitative and qualitative tools, i.e. Statistical Package for Social Sciences (SPSS) and Microsoft excel; and presented using percentile, charts and tables where necessary to draw conclusion.

A. Questionnaire and Interview Response

A total of forty (40) questionnaires were distributed to the targeted sample, in which 25 completely filled questionnaires were returned as seen in Table #4.01, equivalent to 63% of respondents, above Mugenda,(2003), writings which claims that; a rate of 50% or higher is satisfactory for data analysis. The reason for the non-response was due to some of the respondents, being caught up with their own official matters, and non-existence of some joint venture building projects.

Furthermore, to make the study more liable in terms of getting more information related to the implementation of risk management strategies; the researcher targeted to interview eight (8) respondents, whereby only seven (7) were successfully interviewed as seen in Table #4.02. This method was used in cases where application of questionnaire was difficult, specifically to professionals who in most cases, were found to be very busy and incapable to have enough time to answer questionnaire.

Table #4.01: Response rate to questionnaires distributed indicating, the size summary for the number of the questionnaires distributed to every different class of building contractors, and the number of questionnaires returned.

SN.	Response	Class				TOTAL
		Class I	Class II	Class III	Class IV	
01.	Returned	7	6	6	6	25
		87.5%	85.7%	50%	46.1%	
02.	Not Returned	1	1	6	7	15
		12.5%	14.3%	50%	53.9%	
	TOTAL	8	7	12	13	40

Source: Author, (2018).

Table #4.02: Response rate of the interview survey.

SN.	Response	Class				TOTAL
		Class I	Class II	Class III	Class IV	
01.	Targeted	3	2	2	1	08
02.	Interviewed	3	2	2	0	07

Source: Author, (2018).

Table #4.03: Area of respondent's expertise involved in project management especially in implementing risk management strategies

SN.	Profession	Class				TOTAL
		Class I	Class II	Class III	Class IV	
01.	Architects	0	0	0	0	0
02.	Quantity Surveyors	3	0	4	4	11
03.	Structural and Civil Engineers	3	6	1	2	12
04.	Others	1	0	1	0	2
	TOTAL	7	6	6	6	25

Source: Author, (2018).

Table #4.04: The experience of the respondents involved in joint venture(JV) building projects, in order to get reliable information.

SN.	Experience	Years					TOTAL
		1-5 Years	6-10 Years	11-15 Years	16-20 Years	<20 Years	
01.	Architects	0	0	0	0	0	0
02.	Quantity Surveyors	0	8	1	1	1	11
03.	Structural and Civil Engineers	1	4	4	1	2	12
04.	Others	0	1	0	0	1	2
	TOTAL	1	13	5	2	4	25

Source: Author, (2018).

Table 4.04, revealed that; most of the respondents had more than five years working experience, hence creating a mixture of respondents with short, medium and long experience, and thus reliable information. Kerzner,(2003) affirms that; past experience in managing risks in joint venture building projects was

an important factor in risk management. For instance, one of the respondents mentioned how they reduced the distrust risk by letting each partner bring funds (money) to purchase resources for the project and after completing the project they decide on what to do with the resources.

Table #4.05: Company's experience in terms of joint venture(JV) building projects handled or executed since establishment.

SN.	Projects	Class				TOTAL
		Class I	Class II	Class III	Class IV	
01.	1 – 3 Projects	2	5	4	1	13
02.	4 – 6 Projects	3	8	1	1	12
	TOTAL	5	13	5	2	25

Source: Author, (2018).

B. Company's Experience

Table #4.05 revealed that; most building construction companies have not handled more than six (6) joint venture building projects since their establishment. However, this was helpful to the study because some respondents used previous project experience to answer some of the questions. Despite the fact that joint venture is perfect way of cooperation, writing by Ozorhon, et al., (2007) reports that; most of the contractors do not prefer the joint venture set up because of the risks and conflicts it brings.

C.Strategies and Activities Involved During the Implementation of Risk Management in Joint Venture (JV) Building Projects.

1. Strategies in the Implementation of Risk Management in JV Building Projects

On understanding of the risk management board, sets any strategies that are to be used in mitigation of risks as well as activities; the respondents gave results as seen in Table #4.06, which shows that; 23 (92%) out of 25 respondents have a joint venture risk management board that sets up risk management strategies to be used in mitigation of risks. This is usually recorded in the Joint Venture contract agreement/memorandum of understanding (MoU), that shows how JV activities should be carried, and how to settle disputes and risks. For instance, the memorandum provides a provision that shows how profit or loss should be calculated, how bankruptcy should be handled, and allocation of works between partners. This is important because in case of occurrence of such risks, there will be a contractual review session which will **reduce, share/transfer or avoid** such risks. Njaa,(2004) suggests that; it is extremely important for the JV team board to prepare this document, as the same will be referred to by the ventures, and help in settling differences which may arise.

Table #4.06: Response of the set of strategies and activities by the risk management board.

SN.	Statement	Number of Respondents	Percentage (%)
01.	Yes	23	92
04.	No	02	08
	TOTAL	25	100

Source: Author,(2018).

2. Communication Among (JV) Building Project Members

In order to implement the risk management strategies

Table #4.07: Communication during implementation of risk management strategies

SN.	Variables	Professionals				TOTAL	TNR
		Architect	Quantity Surveyor	Engineers	Others		
01.	Less than five times	0	1	1	0	2	25
	Total Percent	0%	4%	4%	0%	8%	
02.	More than five times	0	10	11	2	23	25
	Total Percent	0%	40%	44%	8%	92%	

Source: Author, (2018).

successfully, the joint venture management board needs to frequently communicate to each other, in order to achieve the specific objective of the project. This is confirmed by the results in Table #4.07 which revealed that; 23 respondents out of 25 (92%) do communicate more than five times, hence showing that, communication among members is very essential, when implementing risk management strategies. The respondents communicate mostly to achieve high level of satisfaction on the information shared among the members. Poor communication leads to poor implementation of risk management. Even writing by Wysocki, (2009) asserts that; communication is the prime factor that produces a team's effective management.

3. Activities in the Implementation of Risk Management in Joint Venture (JV) Building Projects.

Activity is an action done for a particular purpose, thus; on examining the activities involved during the implementation of risk management strategies, a retrieved matrix of activities from various literature for each risk factor or event, the respondents were given a Likert scale ratio with five criteria on each activity for each risk factor or event to judge the importance of each activity, in which;- Not Important Activity (NIA)= 1; Less Important Activity (LIA)= 2; Important Activity (IA)= 3; More Important Activity (More IA)= 4; and Most Important Activity (Most IA)= 5.

Findings in Table #4.08 revealed that; proper documentation is the most important activity that should be involved during the implementation of risk management strategies, as it scored above 50%. However, it can be noted that; some risk factors do not require proper documentation because the response rates were below 50%. Therefore, proper documentation as the most important activity, it implies that; the joint venture partners must ensure that, they properly document the JV agreement deed as well as keep clear records of how they manage faced risks, in case they reoccur in future there is a document to refer to. For instance, most of the risk factors or events can be **avoided** or **reduced** if the JV partners clearly document their agreement. A risk factor like difficulty in accounting for loss and profit can be reduced if the two partners clearly shows how profit and loss would be calculated in the MoU, in line with Njaa,(2006) writings which assert on how this provision can help the JV partners in settling such

a risk.

lack of management requires change of terms and

Table #4.08: Illustration of the response on how clear documentation, can be involved as an activity in the implementation of risk management strategies, for the given risk factors or events.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Financial Bankruptcy	0	0	0	0	0	0	5	20	20	80	25
02.	Cultural differences	0	0	0	0	4	16	11	44	10	40	25
03.	Improper partner selection	0	0	0	0	4	16	11	44	10	40	25
04.	Distrust	0	0	0	0	2	8	11	44	12	48	25
05.	Technological transfer dispute	0	0	0	0	2	8	2	8	21	84	25
06.	Disagreement in allocation of work	0	0	0	0	3	12	7	28	15	60	25
07.	Political instability	1	4	1	4	1	4	8	32	14	56	25
08.	Partner's lack of management	0	0	3	12	0	0	8	32	15	60	25
09.	Difficult in accounting for loss and profit	0	0	2	8	0	0	5	20	18	72	25
10.	Poor definition of work	0	0	0	0	0	0	2	8	23	92	25
11.	Joint Venture (JV) termination	0	0	0	0	0	0	10	40	15	60	25
12.	Disagreement over contact condition	0	0	0	0	2	8	11	44	12	48	25
13.	Inflation	10	40	8	32	2	8	2	8	3	12	25
14.	Inappropriate risk allocation	0	0	0	0	0	0	0	0	25	100	25
15.	Changes in laws and regulations	0	0	0	0	5	20	5	20	15	60	25

Source: Author, (2018).

Table #4.09: Illustrates the responses on how Joint Venture Termination can be involved as an activity in the implementation of risk management strategies for the given risk factors or events.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Financial Bankruptcy	0	0	0	0	1	4	9	36	15	60	25
02.	Cultural differences	5	20	4	16	0	0	10	40	6	24	25
03.	Improper partner selection	0	0	0	0	5	20	10	40	10	40	25
04.	Distrust	2	8	3	12	3	12	10	40	7	28	25
05.	Political instability	0	0	0	0	0	0	5	20	20	80	25

Source: Author, (2018).

Findings in Table #4.09 indicates that; JV termination is the most important activity that should be involved when there is financial bankruptcy (60%) and political instability (80%). This implies that; risks like improper partner selection, political instability and financial bankruptcy, can be **reduced** by terminating the joint venture partnership. This is confirmed by Wolf,(2000) writings that; risks like political instability, financial bankruptcy, failure to comply with the agreement can be eliminated by terminating the JV.

conditions of JV to be used as an activity during the implementation process. For instance, the mentioned risk factors can be **shared, reduced or accepted** by JV partners through reviewing some contract clauses, changing some terms and conditions that are stated in JV agreement, so as to work smoothly as per Flanagan & Norman,(2000), writings. Contractual review was also suggested by 6 out of 8 respondents during an interview, in which they gave an example that; when the partners are conflicting over accounting for profit and loss, the risk can be **reduced** by contractual

Table #4.10: illustrates the responses on how Changes of Terms and Conditions of Joint Venture (JV), can be involved as an activity in the implementation of risk management strategies, for the given risk factors or events.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Financial Bankruptcy	0	0	0	0	0	0	5	20	20	80	25
02.	Improper partner selection	0	0	3	12	0	0	9	36	13	52	25
03.	Distrust	1	4	2	8	13	52	1	4	8	32	25
04.	Disagreement in allocation of work	2	8	4	16	6	24	5	20	8	32	25
05.	Partners lack of management	0	0	0	0	5	20	5	20	15	60	25

Source: Author, (2018).

Findings in Table #4.10 revealed that; financial bankruptcy; improper partner selection and partner's

review sessions where they see how the provision that provides on how to share profit and loss is calculated

or shared. This activity is helpful as it reminds the parties involved on their responsibility in compliance with their percentage of involvement.

From Table #4.11, it can be noted that; Training

Table #4.11: illustrates the responses on how Training Programs can be involved as an activity in the implementation of risk management strategies for the given risk factors or events.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Cultural differences	0	0	0	0	0	0	0	0	25	100	25
02.	Technological transfer disputes	0	0	0	0	0	0	5	20	20	80	25
03.	Partners lack of management	0	0	0	0	0	0	5	20	20	80	25

Source: Author (2018)

Table #4.12: illustrates the responses on how Carrying Out Clear Meetings can be involved as an activity in the implementation of risk management strategies for the given risk factors or events.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Financial Bankruptcy	0	0	0	0	2	8	11	44	12	48	25
02.	Cultural differences	0	0	0	0	0	0	5	20	20	80	25
03.	Improper partner selection	1	4	3	12	2	8	9	36	9	36	25
04.	Distrust	1	4	2	8	13	52	1	4	8	32	25
05.	Technological transfer dispute	0	0	0	0	4	16	9	36	12	48	25
06.	Disagreement over contact condition	0	0	1	4	2	8	11	44	12	48	25
07.	Inappropriate risk allocation	0	0	0	0	0	0	15	60	10	40	25
08.	Partner's lack of management	0	0	2	8	3	13	10	40	10	40	25

Source: Author, (2018).

programs may be involved during the implementation of **risk reduction** and **risk sharing** strategies, and it is regarded as the most important activity that should be involved when there are cultural differences (100%), technological transfer dispute (80%), and partner's lack of management (80%). Therefore, this implies that cultural differences, safety issues to reduce accidents, and partner's lack of management can be **reduced or shared** by JV partners; through carrying out training programs and

Table #4.13: illustrates the responses on how Insurance activity can be involved in the implementation of risk management strategies for the given risk factors or event.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Financial Bankruptcy	0	0	0	0	5	20	6	24	14	56	25
02.	Cultural differences	18	72	7	18	0	0	0	0	0	0	25
03.	Improper partner selection	12	48	13	52	0	0	0	0	0	0	25
04.	Distrust	14	56	11	44	0	0	0	0	0	0	25
05.	Technological transfer dispute	13	52	12	48	0	0	0	0	0	0	25

Source: Author, (2018).

educating both the personnel and the labours on how to manage their resources as well as personnel, so as to accomplish the project on time and with no conflicts, as per Jahl, et al., (1991) writing. The same result was also shared by all 8 respondents during interview.

Table #4.12 revealed that; carrying out meetings is an important activity which can be involved during the implementation of risk management strategies, especially when there is distrust (52%), more

important when there is inappropriate risk allocation (60%), and even most important when there are cultural differences (80%). However, it can be noted that some risk factors do not require this activity, due to their rating being below 50%. This implies that, contractors under the joint venture partnership must carry out clear meetings when implementing risk management strategies, because they get to discuss in depth how a set of strategies should be implemented. For example, in line with Smith & Bohn, (1999),

cultural differences risk can be **shared** through negotiations, by partners by conducting as many clear meetings to train workers on how to work in harmony, or even alerting the workers on the potential impacts from such risks.

Table #4.14: illustrates the responses on how direct judgment using experience activity can be involved in the implementation of risk management strategies for the given risk factors or events.

SN.	Risk Factors	NIA=1		LIA=2		IA=3		More IA=4		Most IA=5		T N R
		f	%	f	%	f	%	f	%	f	%	
01.	Cultural differences	0	0	0	0	2	8	2	8	21	84	25
02.	Improper partner selection	0	0	0	0	3	12	8	32	14	56	25
03.	Distrust	0	0	0	0	0	0	2	8	23	92	25
04.	Technological transfer dispute	1	4	1	4	1	4	7	28	15	60	25
05.	Disagreement in allocation of work	2	8	4	16	6	24	5	20	8	32	25
06.	Partner's lack of management	0	0	3	12	2	8	9	36	11	44	25
07.	Disagreement over some contract conditions	0	0	1	4	1	4	11	44	12	48	25
08.	Changes in regulations and policies	0	0	0	0	2	8	10	40	13	52	25

Source: Author, (2018).

Findings in Table #4.13 shows that; insurance can be opted when one of the partners goes bankrupt and fails to perform; by transferring all financial risks. Hence when implementing **risk transfer** or **sharing** strategy, insurance (52%) is regarded as the most important activity that should be involved, due to its response rate being above 50%. This implies that financial bankruptcy can be **transferred** to the insurance firm as per Thompson & Perry, (1992), that will help when the building contractor, fails to perform.

From Table #4.14, it can be seen that; cultural differences, improper partner selection, distrust, technological transfer dispute, disagreement in allocation of work, and changes in regulations and policies, required Direct Judgment using Experience as the most important activity during the implementation process. Moreover, it can be noted that; some risk factors do not require this activity, however high they seem, due to their response rate being below 50%, which makes them less applicable during the implementation process. This implies that; risk factors like distrust, cultural differences can be easily **shared** or even **avoided** by using Direct Judgment Using Experience. For examples, distrust cases can be reduced by, each partner investing fund which is used to purchase machinery and equipment, and after completion they agree whether to sell or not.

From the above findings, on the strategies and activities involved during the implementation of risk

management, it can be noted that; the most used activities are proper documentation, training programs, and insurance.

D. Challenges Faced During the Implementation of Risk Management Strategies

On investigating the challenges faced during the implementation of risk management strategies in Joint Venture (JV) building projects; aiming at finding out the challenges that are encountered during the implementation process, the respondents were given a Likert scale ratio with five criteria to show the intensity of each challenge, in which; -Not Faced (NF)= 1; Less Faced (LF)=2; Faced(F)=3; More Faced(MF)= 4; Mostly Faced (MF)=5. Mean score comparison tables were used to rank the results by taking into account the mean scores as shown Table #4.15. Basically, the factors with high mean score values deliver high satisfaction of respondents.

Table #4.15: Mean score values (M) comparison table

SN.	Mean Score (M)	Ranking	Colour
01.	4.0 ≤ M ≤ 5.0	High (Satisfied)	
02.	3.0 ≤ M ≤ 4.0	Medium (Average)	
03.	1.0 ≤ M ≤ 3.0	Low (Unsatisfied)	

Source: Author,(2018).

Table #4.16, details the responses from each challenge faced during the implementation of risk management strategies in JV building projects, ranging from more faced, to less faced level, as they

Table #4.16: Challenges faced during the implementation of risk management strategies in Joint Venture (JV) building projects.

SN.	Variables	Response Ratio (%)					Mean Score	Rank	TNR
		1	2	3	4	5			
01.	Lack of enough finances	8	24	60	28	0	3.48	5	25
02.	Conflicts among members	0	20	24	52	4	3.40	6	25
03.	Poor team cooperation	0	8	32	24	36	3.88	1	25
04.	Unavailability of time	32	32	36	0	0	2.04	11	25
05.	Poor communication	0	0	36	52	12	3.76	2	25
06.	Interference of responsibility among members	0	12	28	52	8	3.56	4	25
07.	Disagreement on strategies used	4	16	36	44	0	3.20	9	25
08.	Lack of trust	8	16	20	56	0	3.24	8	25
09.	Language barrier	4	16	44	32	4	3.16	10	25
10.	Lack of expertise/professionalism	4	8	36	28	24	3.60	3	25
11.	Lack of familiarity with risk management strategy	0	20	40	28	12	3.32	7	25

Source: Author, (2018).

score 2.04 to 3.88, implying that; all the addressed variables are encountered during the implementation process of risk management strategies, though they may differ in the extent of their impact towards successful implementation of risk management strategies in joint venture building projects.

1. Poor team cooperation

Was ranked first with mean score value of 3.88; indicating the implementation unsuccessful, despite regardless having risk management strategies on place. The unsuccessfulness on the implementation of risk management strategies due to poor cooperation by JV project members, was also reported by 6 respondents out of 8 during interview, with the main cause being poor communication among members, as well as low payments.

2. Poor communication

was another challenge ranked second with mean score 3.76, indicating that, the implementation of risk management strategies may be unsuccessful if

there were any other challenges faced during the implementation of risk management strategy; where by all respondents mentioned instability to put into practice the documented risk strategy, as a challenge caused by poor documentation of some of the MoU. The document is regarded as a very important document which contains duties, obligations and rights of partners. Generally, the JV successful operations entirely depend on this deed. Hence, instability to put into practice some strategies is a result of entirely poor preparation of the JV agreement deed.

E. Measures to Attain Successful Implementation of Risk Management Strategies in JV Building Projects

On suggesting collective measures to be used to attain successful implementation of risk management strategies, the respondents were given a Likert scale ratio with five criteria on each measure to judge its importance in which; -Lowest = 1; Low = 2; Medium = 3; High = 4; and Highest = 5.

Table #4.17: The measures on attaining successful risk management strategies' implementation

SN.	Measures	Response Ratio (%)					Mean Score	Rank	TNR
		1	2	3	4	5			
01.	Finance	4	4	56	16	20	3.44	7	25
02.	Improved compatibility and harmony	0	0	20	24	56	4.36	2	25
03.	Increasing team cooperation	0	0	4	20	76	4.72	1	25
04.	Following up by the joint venture risk management board regarding the strategies set	0	0	24	44	32	4.08	4	25
05.	Effective communication among members	0	0	16	28	56	3.48	6	25
06.	Refer to previous similar projects	0	4	12	36	48	4.28	3	25
07.	Increasing incentives to members	0	0	44	24	32	3.88	5	25
08.	Training programmes	0	0	4	20	76	4.72	1	25

Source: Author, (2018).

members do not improve the way of communication, which is an essential tool between all members under the joint venture setup. The challenge was also shared by 6 out of 8 respondents during interview, with language barrier and poor communication skills, emerging as the main cause as per Mwinshehe, (2009).

3. Unavailability of time

ranked eleventh, and the last with mean score 2.04, proved to be the challenges which is less faced during the management risks implementation process, suggesting that most of the JV partners must have time to meet, and implement the risk management strategies.

4. Conflicts among members

apart from being ranked sixth with a mean score of 3.40, it also came up in an interview where by 6 out of 8 respondents earmarked it as one of the challenge, with its source being disagreement about the strategy, interference of responsibilities, and members not acting as part of the team. Furthermore, the respondents were asked to specify if

Findings on Table #4.17 revealed that; the challenges faced during the implementation of risks management strategies can be overcome by increasing team cooperation between parties in JV partnership and exchange of programs through training programs, both ranked first, with mean score value of 4.72, entailing that they are highly used.

1. Increasing Cooperation among JV Team Members

was ranked first with mean score value of 4.72, because joint management of risks, guarantees better management of risks, during the construction phase. However, it should be stipulated in the contract, to enforce joint risk management. The same result was also revealed during interview whereby 6 respondents out of 8 suggested the same measure.

2. Education and Training Programs

was also ranked first with mean score value of 4.72, due to the fact that; the unskilled labours should be more trained particularly on safety issues such as, the importance of using safety gears when working on-site, and how to use them. Also contractor's quantity surveyors should as well be more trained on

using the risk management tools for a better management of risks during the construction phase. This measure was also suggested by 6 respondents out of 8 during interview.

3. Improving compatibility and harmony among JV team members

was ranked second with mean score value 4.36, as it can be done through increasing incentives, and educating workers. The same result was also revealed during interview as all 8 respondents out of 8. However,

Finances:- was ranked seventh which is last with mean score value of 3.44, meaning that; it is less used in overcoming the challenges during the risk management implementation process.

Furthermore, through questionnaire, respondents give their opinion on other measures, that they have taken so at to attain successful implementation of risk management strategies, and the following were listed:-

- Proper documentation of JV contract agreement that clearly shows the strategies or contractual terms to be used so as to avoid unnecessary conflicts,
- Effective Communication, whereby via effective communication, JV members **reduces** the occurrence of some risk events. Example, financial risks are **shared** or **transferred**, through negotiations which has to be effectively communicated among team members. The same result was also revealed during interview, as 6 out of 8 respondents said that; effective communication is a very important activity when implementing risk management strategies. One of the respondents said as trivial as it may sound JV partnership is like marriage, and in marriage communication is important.
- Allocating more resources, apart from being listed in the questionnaire, it was also suggested by 4 out of 8 respondents during an interview, as an activity which can be involved when implementing **risk reduction** strategy.
- Involvement of specialists or professionals who are competent in managing risks so as to advise on the right strategies, was also mentioned, along side
- Conducting clear meetings between partners in JV building projects which came up as a collective measure to challenges, as partners may get the chance to discuss the challenges, and how they can solve them, as well as
- Producing of a proper risk management program, or alternative risk management strategies as a standby, in case of occurrence of unforeseen risks.
- Production of risk management program, apart from being listed, it was also mentioned in during interview, by 4 out of 8 respondents, with reference that; in case there is an occurrence of a risk event, they can **reduce** the risk by referring to risk

management program.

- Lastly, arbitration was also listed and revealed during interview with 2 out of 8 respondents arguing that; the mitigation of some risks, could lead to conflicts, thus an option for arbitration as one of the activity, can be opted so as to **reduce** the conflicts among members.

Table #4.18: The summary of the key findings discussed

SN.	Activities Involved During the Implementation of Risk Management Strategies	Applicability with Strategy
01.	Clear documentation	Risk Avoidance Risk Reduction Risk Transfer/ Share
02.	Joint venture termination	Risk Reduction
03.	Changes of terms and condition of JV	Risk Reduction Risk Share
04.	Training programs	Risk Reduction Risk Sharing
05.	Carrying out of clear meetings	Risk Sharing
06.	Insurance	Risk Transfer
07.	Direct judgment using experience	Risk Sharing Risk Avoidance
Challenges Faced During the Implementation of Risk Management Strategies		Extent of Intensity (Based on Mean Score)
01.	Unavailability of time	Faced
02.	Lack of enough finances	Faced
03.	Conflicts among members	More Faced
04.	Culture differences	Faced
05.	Poor team cooperation	Faced
06.	Poor communication	More Faced
07.	Interference of responsibilities among members	More Faced
08.	Disagreement about strategy	More Faced
09.	Lack of trust	More Faced
10.	Language barrier	Faced
11.	Lack of expertise or professionalism	Faced
12.	Lack of familiarity with risk management strategies	Mostly Faced
Measures to Attain Successful Implementation of Risk Management Strategies.		Extent of (Based on figure 3.5)
01.	Finances	Medium
02.	Improve compatibility and harmony	Highest
03.	Increase team cooperation	Highest
04.	Following up by JV risk management board regarding the strategies set	Highest
05.	Effective communication among members	Highest
06.	Refer to previous similar projects	Highest
07.	Increase incentives to members	Medium
08.	Training programs	Highest

Source; Author,(2018).

V. CONCLUSION AND RECOMMENDATIONS

A. Conclusion

The study is concluded by analyzing basing on their level of importance, the activities that may be done, so as to implement risk management strategies towards given risk factors; as follows

- **Clear Documentation:-**All the fifteen (15) risk factors/events which were tested if they required clear documentation during the implementation of risk management strategies, showed that; clear documentation is most important. Hence, during implementation of risk managements strategies, JV partners should ensure that they clearly document the strategies that will be used at the occurrence of a risk event.
- **Training Programs:-**In all the fifteen risk factors/events tested, training programs attained the most important rate on the four (4) risk factors i.e. cultural differences, technological transfer dispute, partners lack of management, hence concluding that; during the implementation of risk management strategies for the mentioned risk factors, JV contractors should involve training programs in order to mitigate the risk factors.
- **Joint Venture(JV) Termination:-**It is concluded that; JV termination is necessary when there is political instability in that particular country, as well as if one of the partners goes bankrupt, or they are blacklisted from doing same type of building projects.
- **Direct Judgment Using Expertise:-** From all the risk factors/events tested, it is concluded that; cultural differences, improper partner selection, distrust, technological transfer dispute, disagreement in allocation of work, and changes in regulations and policies, requires direct judgment from experienced personnel or experience from previous building projects when implementing risk management strategies.
- **Change of Terms and Conditions of Joint Venture(JV):-**from the study findings, it is concluded that; JV partners can change the terms and conditions of the Memorandum of Understanding (MoU), when one of the partners goes bankrupt, as well as when there is improper partner selection.

Moreover, it is concluded that; the challenges faced during the implementation of risk management strategies includes poor communication among members, and conflicts among members, although the most faced challenge was poor cooperation.

B. Recommendations

The study revealed several collective mitigation measures, that can be used in attaining successful implementation of risks management strategies in joint venture building projects in Tanzania, which

includes:-

- There should be clear documentation of the Joint Venture Agreement/Deed, that clearly shows the obligations of each partner, and all the agreement on how the joint venture activities will be carried. The partners should provide provisions on how to calculate the loss and profit, how bankruptcy of a partner is handled, which can help the partners to settle their differences,
- Training programs should be conducted regularly on cultural issues and resource management, especially when the Joint Venture(JV) partners are from different countries; so as to reduce cultural differences as well as partners lack of management of resources,
- Contractors under the Joint Venture(JV) setup should carry as many meetings as possible when mitigating risks, as as to bring about effective implementation of risk management strategies,
- Instead of continuing to operate in a non-effective way just because one of the partners is not performing their duties or complying with the Joint Venture(JV) agreement, joint venture termination can be recommended,
- Good and effective regularly communication between Joint Venture(JV) partners is necessary, to ensure effective implementation of risk management strategies,
- Improving compatibility and harmony among the workers working under the Joint Venture(JV), in order to reduce conflicts, and
- Referring to previous similar projects that were under the Joint Venture(JV) setup may help on reducing lack of trust among members.
- Some risk factors like; Accounting for loss and profit, and financial bankruptcy, can be reduced by explicitly identifying how profit and loss are calculated and shared, as well as how bankruptcy or insolvency of one partner is be handled.

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