International Journal of
Entrepreneurship and Project Management
(IJEPM)

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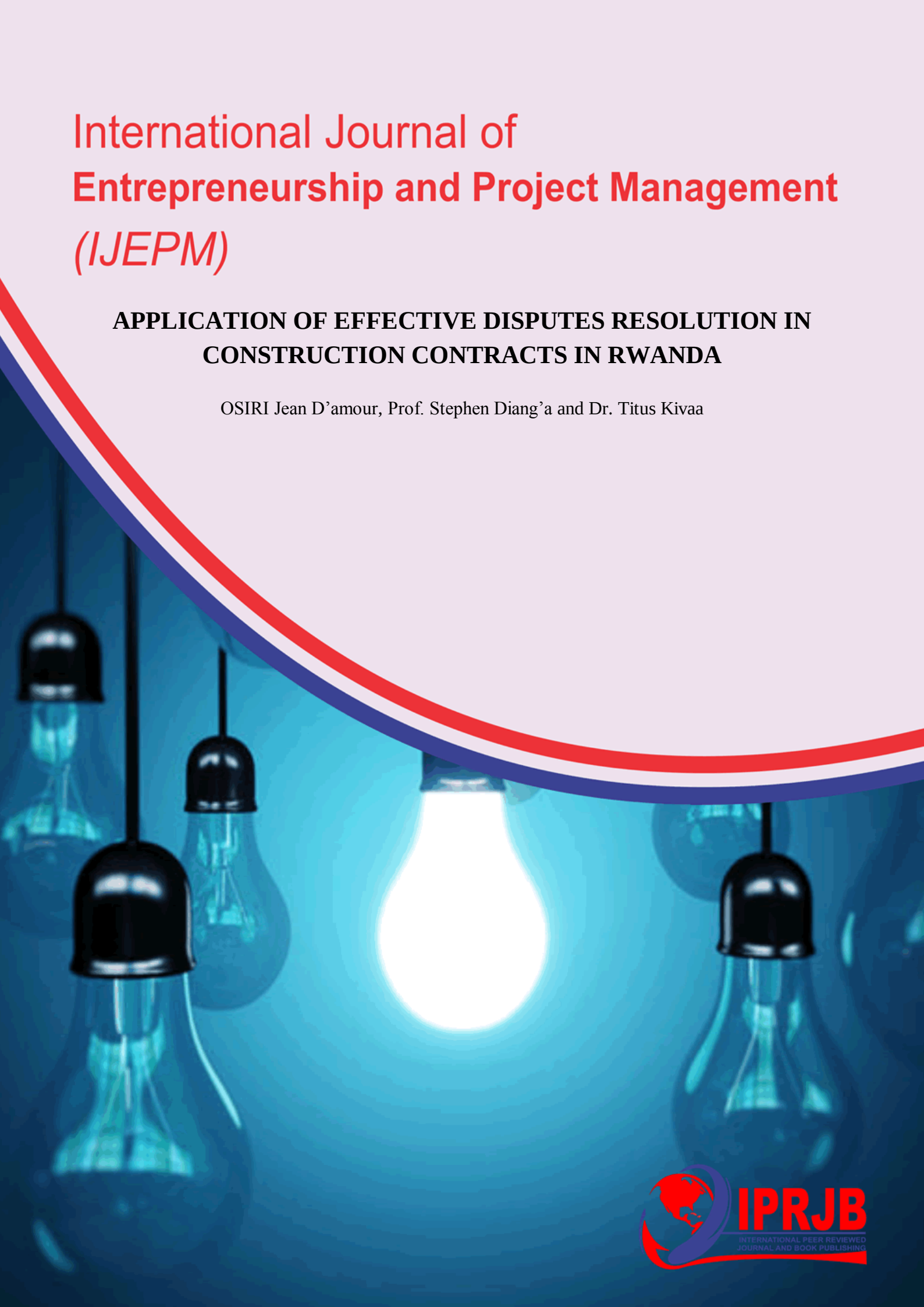

IPRJB
INTERNATIONAL PEER REVIEWED JOURNAL AND BOOK PUBLISHING

International Journal of Entrepreneurship and Project Management

ISSN 2518-2838(Online) 2520-9108

Vol.4, Issue 2, pp 1 - 13, 2019

www.iprjb.org

APPLICATION OF EFFECTIVE DISPUTES RESOLUTION IN CONSTRUCTION CONTRACTS IN RWANDA

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Abstract

Purpose: As a vibrant and booming industry, the Rwanda construction industry has numerous contractual disputes that arise between different parties as projects advance with time. It is because of this that a third party will often be agreed upon by the employer and the contractor to resolve any issues or disputes that may arise. Rwanda Construction projects are becoming increasingly complex and as a result more complex contract documents are made, this in turn results in more challenging claims and disputes. Many forms of construction contracts are used in Rwanda such as FIDIC forms of contracts, World Bank, Rwanda Public Procurement Authority (RPPA) and other private forms of contracts. The aim of this study is to examine contract dispute resolution process and develop an effective approach for Rwanda.

Methodology: The approach of this study is both qualitative and quantitative as the research wants to focus on the application of effective disputes resolution in construction contracts in Rwanda especially in Kigali city.

Findings: At the first stage of construction contract preparation, every Construction project is expected to be performing as it is prepared within given time limit, estimated budget, detailed and with compliance to the client requirements. However undesirable project performance results have been reported from one project to another in various forms such as low productivity, delays, cost overrun, and poor quality as a result of variation.

Unique Contribution to Theory, Practice and Policy: Compliance with external political strategy and organization strategies was the main criteria in needs identification. There were change orders in a majority of the projects arising from change in needs during construction works. The contract development process was inefficient in many projects and led to inaccurate estimates that later negatively affected project performance.

***Keywords*:** *Application, effective Dispute resolution, construction contract.*

1.0 INTRODUCTION

The construction industry is regarded as one of the most conflict and dispute ridden industries, which has resulted in it being one of the most claim orientated sectors. Traditionally, parties would enter into litigation, often a costly and long winded means of resolving a dispute. Over the years, various methods of alternative dispute resolution (ADR) have been introduced into the construction industry as a means to avoid lengthy and expensive litigation. The possible ADR processes available to construction disputes are: mediation; adjudication; arbitration; expert determination and court proceedings (Derrick, 2016). The construction industry is one of the major industries contributing significantly to the socio-economic development growth (Muturi, 2014). The construction industry is plagued by project expenditure exceeding the budget, delays in completing the projects on time and lack of acceptance by the stakeholders or end users at project completion.

Rwanda Construction projects are becoming increasingly complex as a result more complex contract documents are made. This in turn results in more challenging claims and disputes. Many forms of construction contracts are used in Rwanda such as FIDIC forms of contracts, World Bank, Rwanda Public Procurement Authority (RPPA) and other private forms of contracts. With all these forms of contracts, there rises a problem of misinterpretation, omitting or adding some clauses in a contract that may benefit a particular party which in turn leads to the other party raising a claim (MINICOFIN, 2014).

During the execution of a project, several issues arise that cannot be resolved among project participants. Such issues typically involve the contractor requesting for either time extension or reimbursement of an additional cost, or sometimes both. Such requests by the contractor are referred to as claim. If the owner accedes to the claim of contractor and grants him extension of time or reimbursement of additional cost, or both, the issue is sorted out (Derrick, 2016). Since contractual disputes are inescapable in large projects in Rwanda, it's been advised to seek Alternative dispute resolution (ADR) over litigation due to cost, time savings, flexibility and privacy. This involves third parties who act as mediators or conciliators that could help both parties to come to a mutual agreement without further escalating the problem.

When not resolved in a timely manner, arbitration disputes can consume considerable resources in terms of finances, personnel, and time and opportunity costs. This involves attorneys, experts and witnesses expenses. There are other visible and less visible costs that may be involved; such as company resources assigned to the dispute, lost business opportunities and damage to business relationships((RDB, 2014).

However, if a Dispute Board is effective in avoiding disputes in a major project, its cost (typically averaging 0.15% and no more than 0.26% of total project cost) is likely to be good value for money "insurance". This can be demonstrated as follows. It has been suggested that in almost 10% of construction projects, between 8% and 10% of the total project cost is legal cost, and 50% of all legal cost is expended in connection with disputes. Using the methodology commonly used in pricing contract risks at the tender stage, the cost of the risk of disputes in a construction contract could therefore be calculated as 0.08 x 0.1 x 0.5 = 0.004 (0.4%). Thus, the cost of a DB at typically 0.15% is less than cost of the risk of disputes. Looked at another way, the expenditure of 0.15% of the project cost on a DB is worthwhile if it substantially reduces the possibility of a dispute which may involve legal expenditure of the order of 4-5% of the project cost (Chapman, 2006).

Objectives

The study was guided by the following objectives:

i. Identify the major causes of contractual disputes in construction projects in Rwanda.

ii. Analyze the effectiveness of the commonly used dispute resolution methods in Rwanda.

iii. Develop alternative dispute resolution processes.

2.0 LITERATURE REVIEW

Legislative and Regulatory Considerations for RPPA

RPPA, which is used by the Government of the Republic of Rwanda and other public organizations in Rwanda; as defined in the requirements of Law No 12/2007 of 27/03/2007 on Public Procurement as modified and completed by Law No 05/2013 of 13/02/2013 contains the Clause GCC 33 in RPPA on the subject of "Disputes Settlement" that deals with dispute resolutions.

Conceptual Model

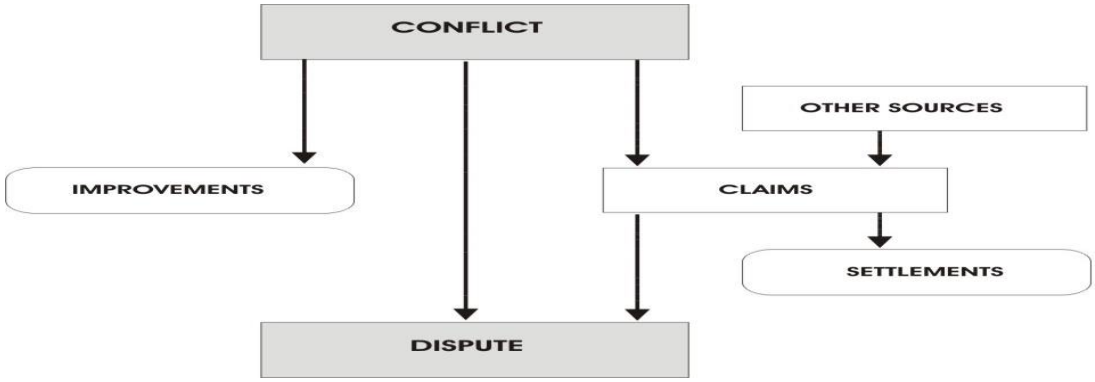


Figure 1: Conceptual Model

Causes of Disputes in construction contract

- ✓ Incorrect Ground Data: Such data includes information about ground conditions, depth of groundwater table, rainfall and temperature data, availability of power and water, etc.
- ✓ Use of Faulty and Ambiguous Provisions or Language in Contracts: The language of the contract should be clear and such that it is not open to different interpretations.
- ✓ Deviations: The contract should be so designed that there are as few extra items or deviations as possible.
- ✓ Unreasonable Attitudes: It should be born in mind that in order to complete the work professionally.
- ✓ Contractor Being of Poor Means: It is important that the contractor identified to do a job possesses the required human, financial and technical resources.

Contractual Problems in Construction Industry

Constructional project contracts are the agreements made by construction project owners (contract issuing parties) and construction enterprises (contractors) according to basic construction procedures in order to complete specific construction and installation projects and to define the rights and obligations of both parties. The parties assigned to a construction contract are not competitors among themselves, but

associates who have different functions to perform to achieve the common goal for accomplishing the prescribed end-product (Khekale,2013).

A vast majority of contractual problems arise from misinterpretation of the construction contract are:

a) Changes in Contract work

b) Differing in unusual site conditions actually encountered

c) Suspension of Work

d) Variation in quantities

e) Damage due to natural disasters and force-majeure

f) Re-inspection and acceptance

g) Termination for the convenience of the client

h) Possession prior to completion

i) Escalation of price due to inflation

j) Acceleration of work progress

k) Ripple effect

l) Currency fluctuation effect

m) Ambiguity in specifications and drawings

Types of Construction Claims

There are a number of ways to classify construction claims. They may be classified by the related parties, rights claimed, legal basis, and characteristics of claims. By determining their relevant legal bases, construction claims can be divided into three categories:

i) Contractual Claim: Contractual claims are the claims that fall within the specific clauses of the contract. In well-accepted standard contracts, there are a lot of provisions which entitle both the contractors and the employers to claim for the appropriate compensation such as ground conditions, valuation, variations, late issue of information, and delay in inspecting finished work.

ii) Extra-contractual Claim: This type of claims has no specific grounds within contract but results from breach of contract that may be expressed or implied, i.e. the extra work incurred as a result of defective material supplied by the client.

iii) Ex-Gratia Claim: Ex-gratia claims are the claims that there is no ground existing in the contract or the law, but the contractor believes that he has the rights on the moral grounds, e.g. additional costs incurred as a result of rapidly increased prices.

iv)Extension of Time Claim Each construction contract clearly stipulates the date (or period) for the contractor to complete work. The purpose of specifying a date of completion is to facilitate claims for damages by the Employer for any delays created by the contractor in performing their work. The date for completing the project will be specified, either in the tender documents, or otherwise agreed to by the contractor, before the contract is awarded.

Claims Management

✓ **Claim Identification:** The contractor studies the instructions in the form of drawings as well as oral or written instructions provided by the owner/engineer. If it contains extra works, the same is read against the provisions of the contract.
✓ **Claim Notification:** After it is established by the contractor that it is an extra work, the contractor is required to inform the engineer within the time frame stipulated and clarify his intention to claim extra rates for the same. This is very important because failure on contractor's part regarding this shall entail its rejection by the engineer.
✓ **Claim Substantiation:** The contractor has to fully establish the claim including his entitlement under the contract, giving reference to the relevant clauses. The claim is supported by necessary backup calculations.
✓ **Analysis of time and cost impacts of the change:** The objective of this sub-process is to determine the impact of the change occurred.
✓ **Pricing of the change:** The purpose of this sub-process is to give the other party in the contract a substantive description and detail of the extra costs incurred or to be incurred due to a contract change.
✓ **Negotiation of the claim:** This sub-process concerns the process of presenting the claim to the employer, and mutual finding the solution of such claim.
✓ **Decision of Engineer/Owner:** The Owner/Engineer is supposed to convey his decision on the claim to the contractor within a time frame specified in the contract.
✓ **Further Action by Contractor:** The contractor has to refer the claim for adjudication if provided, within a specific time frame after receiving the decision from the engineer, if the same is being disallowed.

Mechanisms of Dispute Resolution

✓ **Prevention**

i. **Allocating fair contract risk**: It is common local practice for architects/engineers to prepare construction contract documents simply by adding to or deleting from a set of previously employed contract documents, and while this cut-and-paste method may save time in preparing the construction contract, it often leads to problems, since documents are not read and prepared as a whole for the specific project. Such practices increase the unforeseen risks for the contractor. It comes as no surprise that parties to a contract often include contract language designed to shift risk to the other party so that the bases for claims and disputes are eliminated.
ii. **Drafting Dispute Resolution Clauses:** In addition to identifying responsibilities and allocating risks, a contract should contain language for addressing disputes and claims at the relevant stage in a project. This includes clauses containing explicit provisions and instructions for parties to resolve disputes as they arise, during the course of the project.
iii. **Team Building:** Team building is another dispute-resolution technique that can be instituted at the beginning of a construction project to help allow for better cooperation and coordination among the parties.

3.0 RESEARCH METHODOLOGY

A survey research approach was used on 312 members out of which 312 members responded. This was a response rate of 100%. Descriptive statistics were used to do the analysis and the discussions of the results were carried out with examination of contract dispute resolution process and develop an effective approach for Rwanda.

Interpretation of the mean: mean as descriptive statistical for measuring central tendency of distributions was evaluated based on the following intervals and equivalences: 1.00-1.75: Very low mean, Scale of interpretation**.**

Table 1: Respondents

Response	**Frequency**	**Percent**
Returned	312	100%
Unreturned	0	0%
Total	312	100%

Mean	Interpretation
1≤ μ ≤ 1.8	Very low mean
1.9≤ μ ≤2.6	Low mean
2.7≤ μ ≤3.4	Neutrality
3.5≤ μ ≤ 4.2	High mean
4.3≤ μ ≤5	Very high mean
σ ≤0.5	Homogeneity of responses
σ >0.5	Heterogeneity of responses

Source: Franklin and Agresti (2012)

Respondents included registered professionals involved in planning, design, construction and operation of country's infrastructure such as construction project managers, engineers, architects, quantity surveyors, and urban planners in different public, private, contracting and consulting companies or institutions. According to the list of registered and compliant professionals from Institution of Engineers Rwanda (IER) (2019) and Rwanda Institute of Architects (RIA) (2019), the following formula was used Slovin's (1960):

$$n = \frac{N}{1 + Ne^2}$$

4.0 RESEARCH RESULTS AND FINDINGS

4.1 Demographic Findings of the Respondents

The study sought to establish the profile of the respondents in terms of the highest level of education, professional qualification and experience in the construction industry. The study also sought information on respondents' employing construction company in terms of RDB registration. The characteristics of study subjects were described using frequencies and percentages as shown in table 1.

4.1.1 Profile of respondents

This section presents the profile of the respondents. The factors considered include variables such as: profession; age groups, educational level, type of organization and years of experience. Here, the frequency table and percentages have been used to analyze the data as indicated

Table 2: Profession of Respondents

	$f(x)$	Percentage
Engineers	120	38.5
Architects	48	15.4
Quantity Surveyors	42	13.5
Geo-technicians	36	11.5
Land Surveyors	33	10.6
Environmentalists	21	6.7
Land Valuers	12	3.8
Total	312	100

Source: Field Survey, 2019

Figure 1: Profession of Respondents

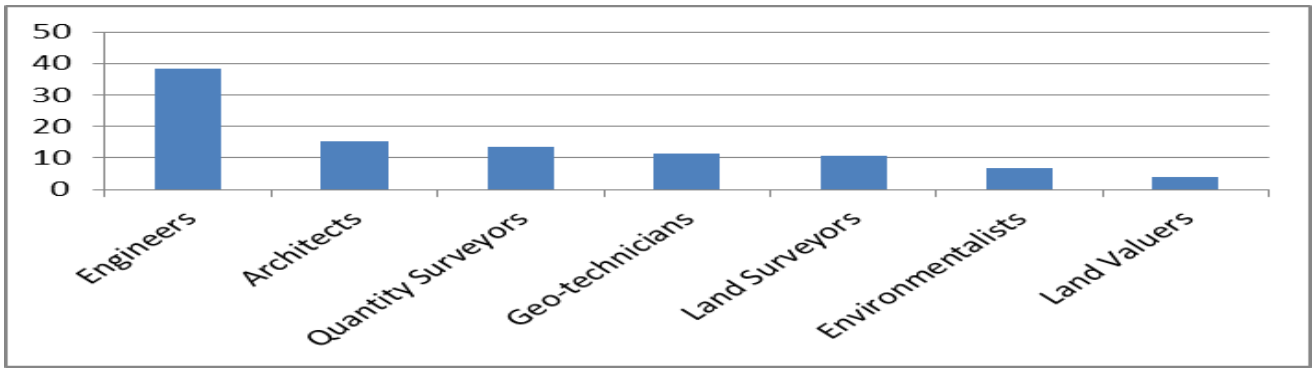


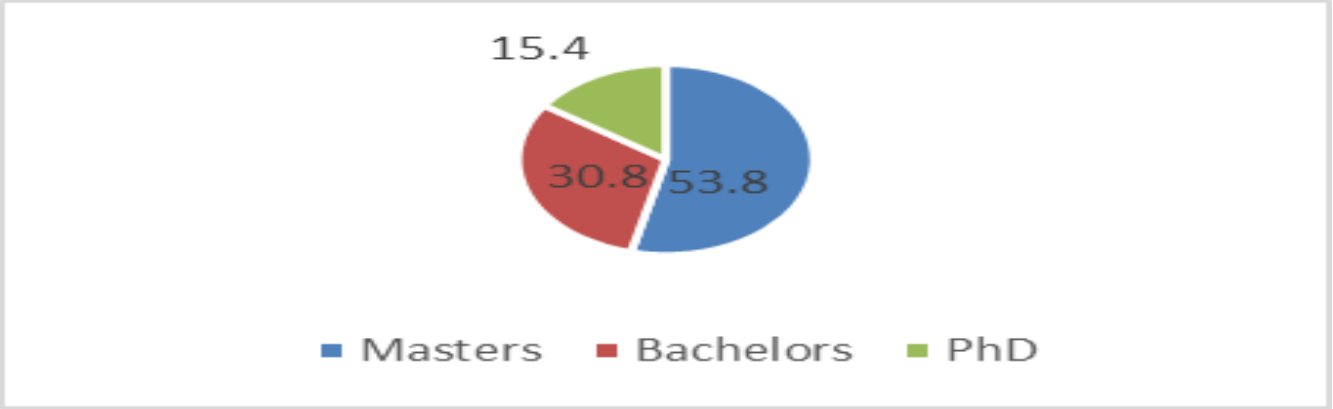
Table 3: Respondents Age group

Age group	Frequency	Percentage
45-55	180	57.7%
Above 55	60	19.2%
36- 45	48	15.4%
18-35	24	7.7%
Total	**312**	**100%**

Source: Field Survey, 2019

In Table 3, it is clear that the first group has 180(57.7%) for the age group of 45-55, second group has 60(19.2%) for the age group of above 55. the third age group has 48(15.4) for the age group of 36-45 and the last group is 24(7.7) of age group of 18-35**.**

Figure 2: Respondents level of Education



Source: Field Survey, 2019

Level of respondent's education were taken from the percentages whereby the highest level from the respondents are masters holder with 53.8% and the lowest level is PhD level which was 15.4% and in the middle researcher found 30.8% as bachelor's degree holders.

Table 4: Type of organization

Type of Organization you work for	$f(x)$	Percentage
Main Contractor.	144	46.2
Consultant	96	30.8
Sub-contractor	48	15.4
Developer	24	7.7
Total	312	100

Source: Field Survey, 2019

Figure 3: Respondents' level of experiences

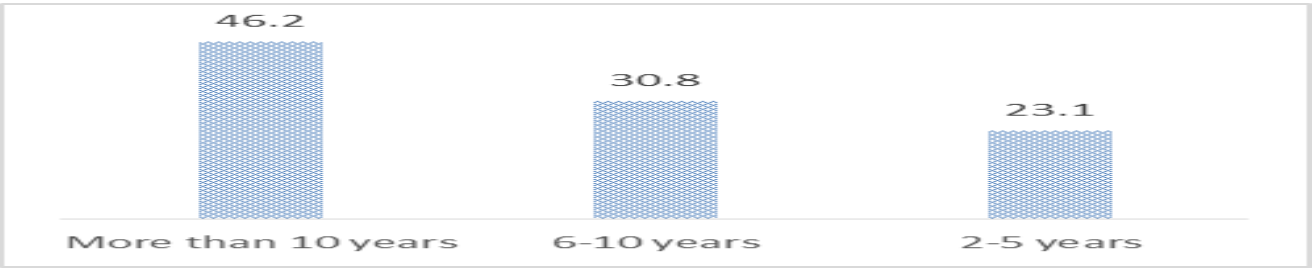


Table 5 : Stage of the project they came into participation

Elements	Frequency	Percentage
Superstructure	132	42.3
Finishes	96	30.8
Substructure	48	15.4
Inception	36	11.5
Total	**312**	**100**

Source: Field Survey, 2019

4.2 Application of effective dispute resolution in construction contract

Table 6: Application of effective dispute resolution in construction contract

Variable	Mean	Std. Dev.	Interpretation
Delays	4.62	0.68	Very high mean with heterogeneity of responses from the respondents
Workmanship	4	1.11	High mean heterogeneity of responses from the respondents
Plans	4.12	0.75	High mean heterogeneity of responses from the respondents
Specification	4.15	0.86	High mean heterogeneity of responses from the respondents
Defective	3.15	0.91	Neutrality heterogeneity of responses from the respondents
Wastage	2.81	1.18	Neutrality heterogeneity of responses from the respondents
Refund	3.15	1.1	Neutrality heterogeneity of responses from the respondents
Unauthorized	3.58	1.08	High mean heterogeneity of responses from the respondents
Liquidated	3.08	1.18	Neutrality heterogeneity of responses from the respondents
Resolution	3.15	1.2	Neutrality heterogeneity of responses from the respondents

Table 6 shows the responses from the 312 respondents per item. It revealed that Delays were high for the items for dispute resolution in construction contract "resolution of project delays due to variation is the main cause of disputes in construction contract" with mean and standard deviation ($\bar{x} = 4.62, SD = 0.68$). This indicated that the responses had heterogeneity given that SD=0.68>0.5. The lowest level of dispute resolution in construction contract was for the item "resolution" with mean and standard deviation ($\bar{x} = 3.15, SD = 1.20$). This indicated that the responses had heterogeneity given that SD=1.20>0.

Table 7: Construction contract disputes from the Contractor

Variable	Mean	Std. Dev.	Interpretation
Delays	4.62	0.68	Very high mean with heterogeneity of responses from the respondents
Workmanship	4	1.11	High mean heterogeneity of responses from the respondents
Plans	4.12	0.75	High mean heterogeneity of responses from the respondents
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Liquidated	3.08	1.18	Neutrality heterogeneity of responses from the respondents
Resolution	3.15	1.2	Neutrality heterogeneity of responses from the respondents

NHR= Neutrality with heterogeneity of responses from the respondents, HMHR= High mean with heterogeneity of responses, VHR: Very high mean with heterogeneity of responses, Std. Dev*: standard deviation.*

Table 8: Level of contract disputes appear

	Freq.	Percent	Cum.
0%-24%	36	11.54	11.54
25%-49%	48	15.38	26.92
50%-74%	96	30.77	57.69
75%-100%	132	42.31	100
Total	312	100	

Table 9: Measures used to settle disputes arising from construction contracts

Variable	Mean	Std. Dev.
Negotiation	4.69	0.82
Mediation conciliation	4.15	0.72
Determination	3.42	0.84
Adjudication	2.81	0.96
Dispute Boards	2.5	1.12
Arbitration	2.58	1.01
Arbitration Mediation	2.85	1.13

5.0 CONCLUSION

The research studied application of effective dispute resolution in construction contracts in Rwanda. Various project team members had different choices of dispute resolution.In Rwanda, Architects and engineers were appointed prior to the design process in most projects. This meant that most projects were conceived with inaccurate information since there was no professional input at the planning phase in most projects. Consequently in majority of the projects, the client alone, did site selection and validation, and, the needs identification and validation, which often happens at planning phase. This lead to unsuitable sites that increased variation for sub-structure works. The ones executing were not involved in needs identification and validation process in many projects surveyed.

Compliance with external political strategy and organization strategies was the main criteria in needs identification. There were change orders in a majority of the projects arising from change in needs during construction works. The contract development process was inefficient in many projects and led to inaccurate estimates that later negatively affected project performance. Most estimates for time and cost were done early at project planning without the active role of skilled professionals.

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