

CONSTRUCTION DISPUTES MANAGEMENT AND RESOLUTION IN ZAMBIA

by

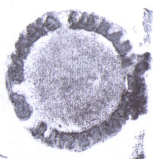
HENRY MBELE MUSONDA

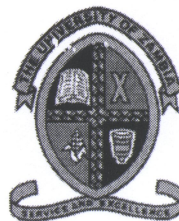
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Lusaka**

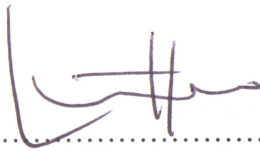
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DECLARATION

I, **Henry M Musonda**, do declare that this dissertation is entirely my own, except as specified in acknowledgements, and that neither the dissertation nor the original work contained herein has been submitted to this or any other institution for a higher degree.

Signed:.....

Date:.....

Lusaka, Zambia

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THE UNIVERSITY OF ZAMBIA

APPROVAL

THIS DISSERTATION BY HENRY MUSONDA ENTITLED:
"CONSTRUCTION DISPUTE MANAGEMENT AND RESOLUTION IN
ZAMBIA" IS APPROVED AS FULFILLING THE REQUIREMENT FOR THE
AWARD OF THE DEGREE OF MASTER OF ENGINEERING IN
CONSTRUCTION MANAGEMENT OF THE UNIVERSITY OF ZAMBIA.

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ABSTRACT

Disputes in the construction industry are often inevitable. Disputes arise from the interpretation and application of any part of ambiguous, unplanned and conflicting contract documents. There are many methods which can be used to resolve disputes. The study in this dissertation examined the concept of Alternative Dispute Resolution (ADR) and its application in the Zambian construction industry.

The aim of the research was to study the nature and extent of the application of ADR in the construction industry in Zambia. The study also sought to identify key issues relevant to the future development of ADR in Zambia. The research methods used in the study included preliminary interviews, questionnaire surveys and case studies. The respondent sample population involved stakeholders of the construction industry and those actively involved in ADR processes in Zambia. A detailed literature review and selected respondents of structured interviews, questionnaire surveys and case studies provided data regarding the application of ADR in Zambia.

The study revealed that ADR was not widely used in the construction industry due to various inherent obstacles such as: lack of knowledge and awareness about various ADR techniques and benefits; and absence of appropriate rules and an advisory centre to guide disputing parties on the overall process. It was also established that lack of standard procedures and regulation of practitioners caused delays in proceedings, inequality in bargaining powers between the parties resulting in unfair settlements, and non-compliance by the parties. Although arbitration was the most frequently used method for resolving disputes, other ADR methods or techniques like mediation, adjudication, expert determination and dispute boards were perceived to be more appropriate and cost effective for the Zambian construction industry.

The study identified training, regulation of practitioners, increased awareness of stakeholders, involvement of the National Council for Construction (NCC) and support and participation of the government as ways of improving ADR practice in Zambia. Re-

search results indicated that improved access and efficiency of proceedings was crucial to the promotion and acceptance of ADR in the Zambian construction industry.

Based on best practices recommended by the interview, questionnaire and case study respondents, an ADR model was developed and validated by industry stakeholders as a means of management and resolution of disputes at any stage of the construction cycle of a project in Zambia. The research findings were expected to contribute to the establishment of a framework for implementing, monitoring and regulating the application of ADR in the Zambian construction industry

Keywords: Alternative Dispute Resolution; Construction Industry; Zambia.

DEDICATION

To my parents, family and friends

Thank you for your encouragement, support and love.

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TABLE OF CONTENTS

DECLARATION..... i

APPROVALiii

ABSTRACTiv

DEDICATION.....vi

ACKNOWLEDGEMENTS vii

LIST OF FIGURES xiii

LIST OF ES xiv

LIST OF ABBREVIATIONS..... xv

Chapter One: Introduction

1.1 Background..... 1

 Rationale for the study 2

1.3 Problem statement 3

1.4 Main aims and specific objectives of the study 6

1.5 Research methodology 6

 1.5.1 Research methods 7

 1.5.1.1 Literature review 7

 1.5.1.2 Interviews 7

 1.5.1.3 Questionnaire surveys..... 8

 1.5.1.4 Case studies 8

 1.5.2 Data analysis 8

1.6 Organisation of the dissertation 9

Chapter Two: Literature review

2.1 Introduction..... 11

2.2 Standard forms of construction contracts 11

2.3 Definition of disputes 12

 2.3.1 Grouping of disputes 13

2.4 Causes of construction disputes 13

2.5	Resolution of disputes in the construction industry	16
2.5.1	Methods and procedures of resolving disputes	17
2.5.1.1	Alternative Resolution Methods (ADR)	18
2.6	Contractual methods for dispute a voidance and resolution	22
2.6.1	Allocating fair contract risk	22
2.6.2	Drafting dispute resolution clauses.....	23
2.6.3	Team building or partnering.....	23
2.6.4	Dispute boards	23
2.6.5	Achievements of application of ADR contractual provisions in settling construction contract disagreements in the USA.....	25
2.6.6	Proportionality of cost in dispute resolution.....	28
2.7	ADR application in the Zambian construction industry	28
2.7.1	Absence of default procedures or guidelines for dispute resolution.....	29
2.7.2	ADR legislation in Zambia	29
2.7.3	The Zambia Centre for Dispute Resolution	29
2.8	Literature reviewed.....	30
2.9	Summary.....	41

Chapter Three: Research methodology

3.1	Introduction	42
3.2	Definition of research.....	42
3.2.1	Objectives of research.....	42
3.3	Types of research.....	43
3.3.1	Basic research.....	43
3.3.2	Applied research.....	43
3.3.3	Other types of research	44
3.4	Research methods and methodology	45
3.4.1	Research methods	45
3.4.2	Research methodology.....	46
3.4.2.1	Quantitative research.....	46
3.4.2.2	Qualitative research.....	46
3.4.2.3	Mixed research strategy	47

3.5	Data collection.....	48
3.5.1	The desk study.....	48
3.5.2	Fieldwork	49
3.5.3	The method of data collection for this study	53
3.6	Sampling methods	53
3.6.1	Probability methods	54
3.6.2	Non probability sampling	55
3.6.3	Focus group and the sample population	56
3.7	Descriptive and inferential statistics	56
3.8	Triangulation	57
3.9	Summary.....	57

Chapter Four: Data collection and analysis

4.1	Introduction	59
4.2	Surveys	59
4.2.1	Structured interviews	59
4.2.2	Questionnaire survey	61
4.2.3	Pre-testing.....	63
4.2.4	Sampling.....	64
4.2.5	Sampling technique.....	64
4.3	Data analysis.....	65
4.3.1	Interview results	65
4.3.2	Questionnaire survey results.....	72
4.3.3	Descriptive and inferential statistics.....	73
4.3.3.1	Respondents background characteristics	73
4.3.3.2	Awareness and application of ADR.....	77
4.3.3.3	Challenges in the development of ADR methods.....	91
4.3.4	Priority issues for development of ADR in Zambia	99
4.3.5	Summary.....	100

Chapter Five: Case studies

5.1	Introduction	101
5.2	Selection of cases studies	101

5.3	Case study focus	103
5.4	Data collection.....	103
5.5	Data evaluation and analysis.....	104
5.5.1	Within-case analysis	105
5.5.2	Cross-case analysis	105
5.6	Case study findings	105
5.6.1	Background of the respondents and construction organizations	105
5.6.2	Years of establishment.....	106
5.6.3	Choice of ADR Methods	106
5.6.4	Delays in ADR Proceedings	107
5.6.5	Lack of awareness and understanding of ADR.....	109
5.6.6	Lack of standard ADR procedures	109
5.6.7	ADR and the construction and legal professionals	110
5.6.8	Fairness of ADR proceedings and decisions.....	110
5.6.9	Role stakeholders	111
5.6.10	Summary	114

Chapter Six: Alternative Dispute Resolution Model

61	Introduction	116
6.2	The ADR management model.....	116
6.3	Explanation of the model	117
6.3.1	Identify the problem.....	119
6.3.2	Negotiation	119
6.3.3	Dispute declared.....	121
6.3.4	Parties initiate ADR process using identified method	121
6.3.5	Reference of a dispute to ADR - with or without a provision in the contract	122
6.3.6	Appointment of a neutral ADR practitioner.....	122
6.3.7	Management of ADR proceedings by the neutral practitioner	124
6.4	Validation of the model.....	126
6.4.1	Respondents profile.....	126

6.4.2	Functionality.....	127
6.4.3	Usability	127
6.4.4	Usefulness	128
6.4.5	Summary	129
Chapter Seven: Discussion of results		
7.1	Introduction	130
7.2	Research findings	131
7.2.1	Development of a structured dispute resolution management system	133
7.2.2	Awareness and trends in the application of ADR in the Zambian construction industry.....	134
7.2	Most frequently used ADR methods in the Zambian construction industry....	136
7.2.4	Acceptance, promotion and application of other ADR methods	137
7.2.5	Challenges affecting development of ADR in Zambia and the role of key stakeholders	139
7.3	Summary	143
Chapter Eight: Conclusion and recommendations		
8.1	Introduction.....	144
8.2	Conclusion	144
8.3	Recommendations	146
8.4	Limitation of the study	148
8.5	Additional areas of research.....	148
REFERENCES		150
APPENDICES.....		156
Appendix A: Questionnaire survey on ADR application and practice in Zambia.....		156
A.1	Questionnaire survey cover letter.....	157
A.2	Questionnaire	158
A.3	List of questionnaire respondents.....	168
Appendix B: Structured interview guide.....		171
B.1	Structured interview.....	172
B.2	List of interviewees.....	178

Appendix C: Record of case study disputes reviewed	179
C.1 Dispute for Contractor A	180
C.2 Dispute for Contractor B	187
Appendix D: Model validation questionnaire	193
D.1 Validation questionnaire cover letter	194
D.2 Validation questionnaire - management and resolution of disputes model	195
D.3 List of participants for the validation of the ADR model.....	197

LIST OF FIGURES

Figure 1.1: Arrangement of chapters	9
Figure 2.1 Grouping of disputes	13
Figure 2.2 Stage approach to dispute resolution.....	18
Figure 4.1 Respondents by position of responsibility	66
Figure 4.2 Respondent institution types	67
Figure 4.3 Length of experience in construction industry by firm	67
Figure 4.4 Most frequently used ADR methods	69
Figure 4.5 Summary of the questionnaire survey responses	73
Figure 4.6 Percentage distributions of professional background	74
Figure 4.7 Distributions by ADR experience	74
Figure 4.8 Percentage distribution by years of experience of respondents.....	75
Figure 4.9 Distribution of years of operation of respondents.....	75
Figure 4.10 Percentage distribution by type of organization.....	76
Figure 4.11 Type of activity by organizations	77
Figure 4.12 Level of your familiarity with ADR.....	78
Figure 4.13 Percentage distribution of parties driving ADR proceedings	79
Figure 4.14 Reasons for delays in ADR proceedings.....	80
Figure 4.15 Perception of ADR outcomes	80
Figure 4.16 Perception of ADR.....	82
Figure 4.17 Perception of referral of disputes to ADR as unfair.....	82
Figure 4.18 Effect on working relationship as a consequence of using ADR	83
Figure 4.19 Organisation in a dispute with the other party but decided not to use the ADR provisions in agreement.....	84

Figure 4.20	Reasons for not proceeding with ADR option.....	85
Figure 4.21	Frequently used ADR method in the Zambian construction industry.....	86
Figure 4.22	Is adjudication and mediation appropriate for resolving disputes in Zambia.....	86
Figure 4.23	Reasons for preference of adjudication and mediation for the Zambian construction industry	87
Figure 4.24	Perception of the cost of ADR services compared to disputed amounts.....	87
Figure 4.25	Factors for using ADR services.....	88
Figure 4.26	Reasons for not using ADR in contracts	89
Figure 4.27	Acceptance level of ADR by stakeholder	91
Figure 4.28	Challenges for use of ADR.....	92
Figure 4.29	Ways to improve application of ADR methods in Zambia	93
Figure 4.30	Statutory provisions for mandatory reference to ADR.....	94
Figure 4.31	Stakeholder best description about security for costs	95
Figure 4.32	ADR sector priority issues for the construction sector	95
Figure 4.33	Support regulation and monitoring of ADR practice in Zambia.....	96
Figure 4.34	Use of dispute boards as prevention mechanism in ADR proceedings.....	96
Figure 4.35	Type of project suitable for use of dispute boards	97
Figure 4.36	Support for mediation being precedent to both adjudication and arbitration	97
Figure 4.37	Support for contractor's all risk insurance to include costs for resolution of disputes	98
Figure 4.38	Introduction of an ADR advisory centre	98
Figure 4.39	Introduction of a small claims court	99
Figure 4.40	Support for amending the NCC Act to incorporate ADR services	99
Figure 6.1	Flow chart for a dispute management process for reference, appointment and resolution processes.....	118
Figure 6.2	Breakdown by type of respondents' sub-sector representation.....	127

LIST OF TABLES

Table 2.1	Classification of dispute resolution methods	19
Table 2.2	Summary of literature reviewed	31

Table 3.1 Differences between basic and applied research..... 44

Table 3.2 Summary of data collection methods 52

Table 5.1 Contractors interviewed 102

LIST OF ABBREVIATIONS

ACEZ	- Association of Consulting Engineers of Zambia
ACP	- The African, Caribbean and Pacific Group of States
ADOT	- Arizona Department of Transportation
ADR	- Alternative Dispute Resolution
AGC	- American General Contractors
CDB	- Capital Development Board
CIArb	- Chartered Institute of Arbitrators
CSPro	- Census and Survey Processing
DAB	- Dispute Adjudication Board
DABs	- Dispute Adjudication Boards
DBs	- Dispute Boards
DB	- Dispute Board
DBs	- Dispute Boards
DRB	- Dispute Review Board
DRBs	- Dispute Review Boards
DRE	- Dispute Review Expert
EEC	- European Economic Community for the forerunner to the European Union (EU)
EIZ	- Engineering Institution of Zambia
FIDIC	- Fédération Internationale des Ingénieurs-Conseils
GCC	- General Conditions of Contract
GSC	- General Services Commission
IBA	- International Bar Association
ICC	- International Chamber of Commerce
ICE	- Institution of Civil Engineers
JBCC	- Joint Building Contracts Committee
JLC	- Joint Liaison Committee
LAZ	- Law Association of Zambia
MDB	- Multi Lateral Development Bank
NCC	- National Council for Construction
NRFA	- National Road Fund Agency

RDA	- Road Development Agency
RIBA	- Royal Institute of British Architects
SIZ	- Surveyors Institution of Zambia
SPSS	- Statistical Package for the Social Sciences
TDCJ	- Texas Department of Criminal Justice
TPR	- Texas Performance Review
TxDOT	- Texas Department of Transportation
UNCITRAL-	United Nations Commission on International Trade Law
UT System	- University of Texas System
ZCDR	- Zambia Centre for Dispute Resolution
ZIA	- Zambia Institute of Architect

Chapter One: Introduction

1.1 Background

There are very few construction projects where some form of dispute does not arise either during the design or construction stages. Disputes can be expensive and disruptive, particularly if they are allowed to become entrenched and to proceed to formal determination by a court or a tribunal. There are more often than not, no clear winners unless the dispute can be settled early and with finality.

Disputes are often embedded in the tender and construction documentation, only waiting for the right opportunity to materialize. Typical examples may be unfair risk transfer, information missing from specifications or drawings, or conflicting information only discovered after construction has commenced and which requires a determination by either the employer or the project manager. It is likely that some part of the project would suffer a delay whilst the unanticipated risks, omissions and discrepancies are being rectified, and the contractor would want to be compensated for any loss of time and perhaps also want to negotiate new rates for the affected works. The project manager and the employer would want to minimize any cost increases.

The project manager is generally an employee of the employer and would frequently make a fair determination in favour of either the employer or the contractor, which is a requirement of the contract conditions. In more instances than not, either party would be displeased with the project manager's decision (Chapman, 2006). This generally triggers a notice of dispute from either the employer or the contractor and under traditional conditions of contract the dispute is referred to arbitration or litigation. Often these disputes are still being heard long after the contract works have been completed, consuming large amounts of time and money.

The indirect costs of a dispute, such as loss of productivity of the staff engaged in resolution process and interruptions to the daily activity of running a project, can rarely be quantified and are never fully recouped by the winning party. In addition, the losing side often suffers heavy losses which can lead the business to go bankrupt. Disputes can also ruin established and prosperous business relationships and partnerships which has a further detrimental effect on businesses.

1.2 Rationale for the study

The economic policies of extroversion pursued by the Zambian government since the 1990s have paved the way for investment in large infrastructure projects and a flourishing construction industry. This has prompted participation of large international financial institutions, developers and contractors while promoting joint ventures with local parties. Amidst this internationalized environment, new contractual structures have emerged with contractors, private and public institutions which unavoidably generate disputes. Unresolved disputes have tainted the work environment and protracted the adversarial nature of the industry. This can be a drain on both resources and the resolution on disputing parties, the public sector and the wider social and business community. It is therefore of paramount importance to be prepared to handle such disputes through the use of effective dispute management systems and techniques on any project, thereby mitigating their damaging effects. Some disputes can stretch for years during or after project completion, tying up valuable resources and causing considerable financial loss.

Given that the best practice is to prevent potential conflicts that may or may not arise, several contractors and employers opt to wait and see if a dispute actually arises, and, if it does, to refer it to litigation or arbitration. A decision to put in place elaborate procedures for dispute resolution without any imminent dispute is, therefore, a challenge to any project supervisor, contractor or employer.

According to Gunta (2008), *as long as there is nobody, public or private, who questions why dispute resolution clauses are not implemented, contracting parties often relax in the enforcement of the clauses.* This view was supported by Dalland (2008), who suggested that, ‘there are many steps that can be taken to minimize the number and severity of disputes on any project, but these steps must be taken at the inception of a project if they are to be effective’.

In order to deal with complexities and escalations involved in the disputes, it is helpful to consider other approaches to the management and control of both projects and disputes. Therefore, the Zambian construction sector needs to adopt or develop dispute resolution management systems or procedures which will improve the delivery of social development objectives by prescribing the way in which construction disputes will be managed, to prevent disruption of works on projects. This way, delivery of infrastructure with little or no unnecessary additional cost of disputes will make a major contribution to the effectiveness of the local, bi-lateral and multi-

lateral investment to social and economic development. This study was aimed at contributing to such an effort.

1.3 Problem statement

Stakeholders in the construction industry in Zambia are aware of the numerous ills and disputes related to design and construction of projects. The industry is perceived to be the least efficient due to delayed completion, abandoned projects, the state of confrontation between the various parties. The strains in relationships while all these problems accumulate have affected many public funded projects. Some have ended up in protracted disputes thereby failed to meet their original goals and expectations, resulting into delayed completion, no beneficial use and a dissatisfied public. Some public institutions have suffered high arbitration and legal fees.

While worldwide attention and awareness of alternative dispute resolution methods has grown in recent years, as a result of dissatisfaction with the traditional methods of settling disputes such as arbitration and litigation, the Zambian construction industry seems to have paid very little attention to the legal environment in which it operates. Since the year 2000, the courts have encouraged the use of arbitration and mediation as more cost effective means. The courts have tended to instruct use of mediation in mostly financial services related disputes. Undertaking of mediation in commercial disputes is now, in effect, a requirement of the process of court litigation and can be a successful tool for settling construction disputes especially those involving small claims and small scale contractors.

Although the government enacted the construction Act by setting up the National Council for Construction (NCC) in 2003, to oversee both public and private construction activities, there were no provisions for dispute resolution regimes. The effectiveness of the resolution of construction disputes depends upon the support of the main legal system of the country. Despite the enactment of the Arbitration Act No.19 of 2000, the Zambian context of dispute resolution remains greatly influenced by litigation, which is still the most dominant method, followed by arbitration. Usually there is reluctance to go straight to arbitration especially by the defaulting party. Litigation is seen as the most effective and reliable as it uses the forces of the State courts that decides and enforces its judgment whether right or wrong.

But it seems the caseload of disputes in the courts in Zambia is at an all time high(2009 – 2010 media reports). The process of litigation is expensive, lengthy and is at times a hindrance to jus-

tice. Without other forms of dispute resolution in place the formal legal system constrained with infrastructure, time, personnel, communication as well as administrative and logistical inadequacies may pose considerable difficulties to parties to a dispute. This results into additional delays to project implementation, distressed relationships, escalating cost of construction.

During the years of one party state, 1964 to 1990, public works fell within national interest and dispute resolution procedures were mostly by the courts. The engagement of foreign financiers and contractors in the development of both private and public infrastructure has meant that the dispute resolution process has moved to arbitration. In recent years, the multilateral banks and foreign governments have imposed arbitration, based on the UNCITRAL Model Law of 1987, and other speedy and cost effective alternative methods as the only means of dispute resolution between the government and foreign investors and financiers.

As a reaction to increasing disputes on road construction projects in Zambia, there have been efforts to adopt multi-tiered dispute resolution procedures, allowing for good faith effort by all parties prior to referral to adversarial methods as a cost effective way of dealing with some of the disputes.

This study was aimed at contributing to the effort of finding solutions to the challenges of management and resolution of construction disputes in Zambia. Dissatisfaction with litigation as a time consuming and expensive process, and inaccessible by most contractors has been a primary factor in seeking alternative dispute resolution methods (ADR) to help avoid or resolve disputes. ADR is a broad term that includes a variety of methods or processes. Some ADR methods are adjudication, expert determination, mediation, negotiation and arbitration. The primary aim of ADR is to facilitate settlement of disputes through alternative processes which avoid litigation. ADR is more informal or less stringent in its rules and procedures. It is also intended to be flexible as to the potential outcomes by providing the parties greater latitude and input compared to litigation.

A fair amount of research and literature exists on ADR methods as it is employed in the construction industry worldwide. For example, the white paper on '*Creating an Environment for Reconstruction Growth and Development in the Construction Industry (1999)*', in South Africa, argued that the conventional mechanisms and procedures for final dispute resolution, normally arbitration or litigation, were both costly and time consuming (CIDB, 2003). It further stated

that small and emerging contractors were disadvantaged and even imperiled – in the event of a major dispute arising. The paper advocated the use of ADR mechanisms on contracts and recommended that the Latham report should be used as the point of departure in this regard (CIDB, 2003).

Following the report of Sir Michael Latham, *Constructing the team* (1994), the United Kingdom (UK) Government was persuaded that primary legislation was required to give all parties to construction contracts a statutory right to have disputes resolved in the first instance by adjudication, which was to be a rapid and relatively inexpensive process in all cases. That legislation (The Housing Grants, Construction and Regeneration Act 1996) is now in force in the UK and parties to construction contracts are allowed to refer a dispute to adjudication at any time. Similar legislation has been adopted in parts of Australia, New Zealand, Singapore and Hong Kong. The World Bank is also advocating that such procedures be used on projects which it funds.

The Zambian Construction Industry, however, has not shown concern with contractual matters and has not adopted any specific general conditions of contract or methods for dispute resolution for both building and civil engineering construction works. There are many types of contract agreements in use between parties and they vary in nature. Parties use mostly negotiation, arbitration or the courts to resolve disputes. The absence of an authority to take the lead to develop and guide the industry into mandatory adoption of construction agreements which have provisions for dispute resolution methods has had serious consequences on some projects. In some cases the dispute resolution clauses are poorly written or difficult to interpret as a result of the cut and paste approach or are omitted altogether. Some parties have resorted to courts to enforce dispute resolution obligations arising from such contracts.

The ADR process is, therefore, appealing to parties because of the use of experienced neutrals who have the relevant experience and technical background which increases the likelihood of satisfaction with the final settlement. In Zambia, however, there is a multiplicity of options and little uniformity in the application of dispute resolution methods due to lack awareness and knowledge of ADR methods and procedures by most stakeholders especially in the area of construction disputes. There is also the lack of not only regulatory and supervisory mechanisms but also of on-going training and development for ADR practitioners. There is also very little practice among the practitioners as a result of lack of referrals by the disputing parties.

1.4 Main aim and specific objectives of the study

The main aim of the study was to develop a structured dispute resolution management system in order to improve the application of ADR during the life cycle of a construction project in Zambia. To achieve the above aim the specific objectives of the study were to:

- investigate the awareness and challenges affecting the application and development of ADR in the Zambian construction industry;
- determine the most frequently used ADR methods in the Zambian construction industry and why;
- investigate whether adjudication and mediation were appropriate methods for resolving construction disputes; and
- to determine whether the Zambian Construction Industry was ready to accept other ADR methods like Dispute Boards (DBs) promoted by the Fédération Internationale des Ingénieurs-Conseils (FIDIC), Expert Determination and partnering as means of preventing or settling construction disputes.

Generally, the study focused on ADR and its current development in terms of application in the Zambian construction industry, the obstacles and how to overcome them. Although, there were many types of dispute resolution methods under the ADR spectrum, the study only focused on negotiation, conciliation, adjudication, arbitration, expert determination, dispute boards and mediation due to their practicality in the Zambian construction industry.

1.5 Research methodology

The research aimed to address the objectives of the study and identify opportunities to improve the application of ADR in the Zambian construction industry. The following steps were envisaged:

- Identify the nature and impact of construction disputes in Zambia;
- Identify the ADR methods currently in use in the Zambian construction industry;
- Review factors affecting application and development of ADR;
- Identify suppliers of ADR services; and
- Identify the stakeholders and their roles and influence on ADR in Zambia

Various methods were considered for data collection and analysis of primary and secondary data relating to the nature of construction disputes in Zambia. Primary data collection activities involved field surveys which included interviews, questionnaires and case studies. Secondary data collection involved a comprehensive and detailed examination of relevant literature on management and resolution of construction disputes.

The concept of quota sampling was utilized in the study. Participants were purposively and carefully selected to provide a representative sample of individuals and institutions who dealt with construction contracts and dispute resolution in Zambia. Stakeholders included policy makers and regulators, public implementing agencies, particularly public and large private institutions like the mines, contractor associations, contractor development agencies, contractors of different grades and categories, academicians, providers of technical and support services like consultants, ADR and legal practitioners.

1.5.1 Research Methods

The research embraced four major avenues of enquiry described below.

1.5.1.1 Literature review

The process of conducting literature survey made use of important national and international sources of secondary information by reviewing relevant regulatory, policy, legislative and institutional frameworks that guide the construction sector. A detailed study of national documents relating to construction included the procurement policy, the National Council for Construction Act of 2003, the Arbitration Act No.19 of 2000 and Mediation Rules.

Literature sources included various international publications such as construction and dispute resolution, books, journals, the internet and any other relevant publications such as newspapers and magazines.

1.5.1.2 Interviews

Interviews were conducted with representatives of the key ADR and construction stakeholders employing mostly open - ended questions. The interviews were preliminary, consultative and provided a good opportunity to obtain important statements, experiences of the stakeholders in relation to management and resolution of construction disputes in Zambia.

1.5.1.3 Questionnaire surveys

In order to achieve the objectives the research, a questionnaire survey was undertaken using a representative sample or quota of the Zambian construction industry. Questionnaire surveys were conducted utilizing closed and open – ended questions. This was the main method of data collection and the information obtained was intended to provide a detailed understanding of the level of awareness and knowledge of dispute resolution methods with a view to explore and determine the level of development and application of ADR in the Zambian construction industry.

1.5.1.4 Case studies

Analysis of actual disputes in the construction industry and how they applied procedures in practice was key to understanding the factors inhibiting or enhancing the application and development of ADR in Zambia. It was also important to establish where ADR objectives were identified during the project cycle. In order to achieve these objectives, a detailed study of selected disputes was undertaken on two contractors chosen as case studies.

The case study contractors were identified from the interviews conducted and two most appropriate cases were further explored. They were intended to review the profile of management and resolution of disputes in the Zambian construction industry and explore ways in which information on perceptions and challenges could be used in improving the application of ADR in the industry.

1.5.2 Data analysis

Relevant data was collected using, interviews, questionnaires and case studies. The interview and questionnaire responses were analysed using basic descriptive statistics. The 47 questionnaire responses received from the target population of 50 represent 94% return. A response above 60% was considered a representative opinion. The research combined qualitative and quantitative approaches. The quantitative results were then used to assist with the qualitative interpretation of the responses.

(i) Qualitative analysis

The analysis revealed the varying experiences, attitudes and beliefs from the many respondents’ who were interviewed or participated in the questionnaire survey.

(ii) Quantitative analysis

The quantifiable data were drawn from the questionnaire survey such as that measured on the Likert scale and was aimed at determining respondents’ importance ratings.

1.6 Organisation of the dissertation

The dissertation is set out in seven chapters as shown in Figure 1.1

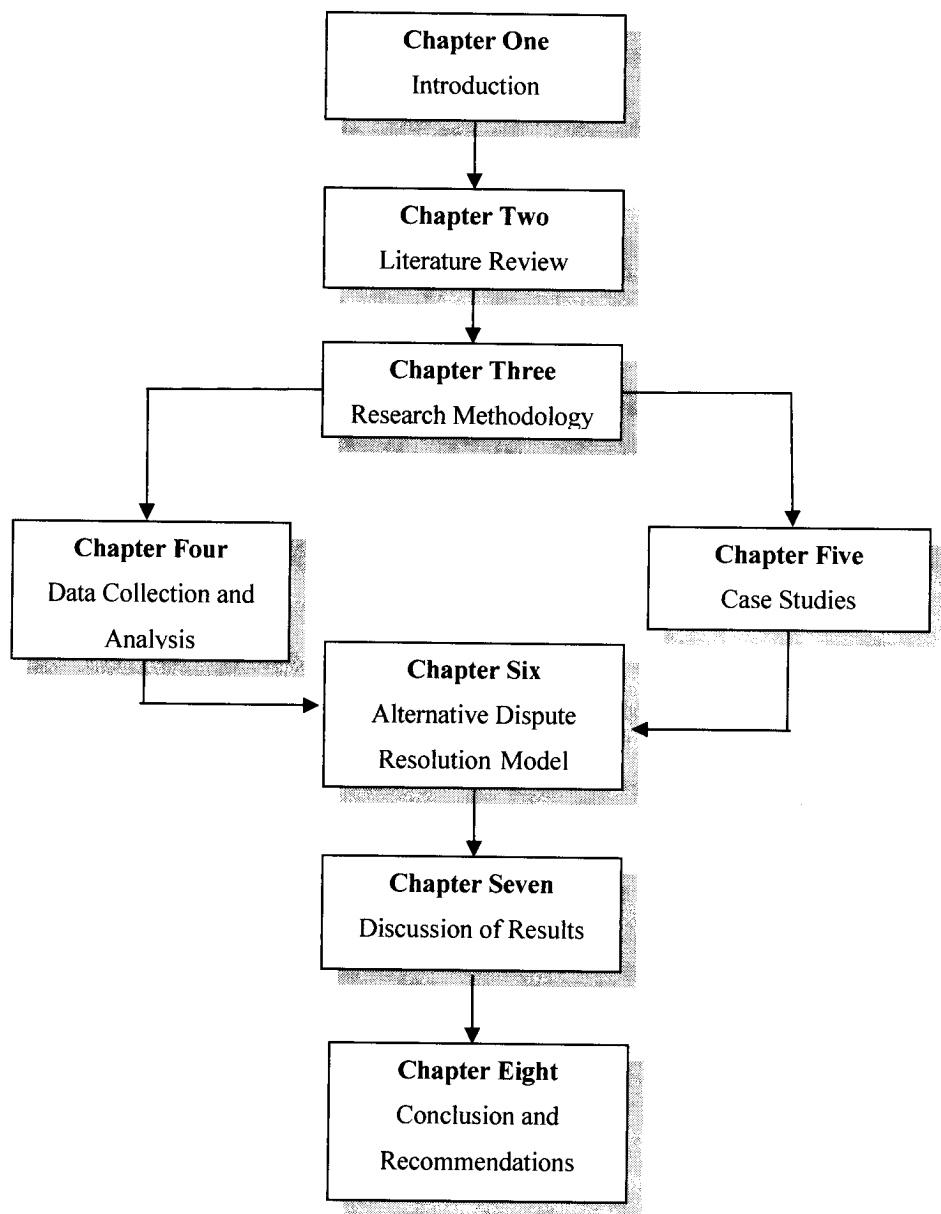


Figure 1.1: Arrangement of chapters

Chapter One gives the background of the research, statement of the problem, aims and objectives of the study and a brief of the research methodology.

Chapter Two presents a review of relevant literature on causes of construction disputes, methods of resolving disputes, relevant legislation and different methods in ADR, hindrances and challenges to resolution of disputes in the construction industry.

Chapter Three describes the available research methods and those used in the study, focusing on their advantages and disadvantages and their adequacy to achieving the specific objectives of the research. Procedural aspects of the research process and survey instruments for conducting preliminary interviews, questionnaire survey and case studies were then recommended.

Chapter Four presents a detailed analysis of interview and questionnaire survey data. The chapter also analyses the comments and opinions of survey participants on how to enhance the application of ADR in the Zambian construction industry.

Chapter Five presents a summary of the case studies that were conducted with two contractors and a representative of a government development agency, and provides a synopsis of the factors enhancing or inhibiting the application and development of ADR in the Zambian Construction industry.

Chapter Six presents the ADR model developed to guide the management and resolution of disputes on construction projects in Zambia. The model incorporates procedures for reference of disputes to ADR, appointment of a neutral practitioners, and selected techniques for resolving disputes at any stage of construction.

Chapter Seven gives the conclusions of the study and gives recommendations on ways in which the application of ADR in the Zambian construction industry could be improved. It also states limitations of the study and recommends how some of the identified limitations could be addressed through further research.

The **Appendices** contain the data collection instruments that were used in the study.

Chapter Two: Literature review

2.1 Introduction

Chapter One presented the background of construction disputes in Zambia, the rationale, aims and objectives of the study.

This chapter presents a review of previous studies and literature, definitions and causes of disputes and their impact on the construction industry. Construction disputes are categorized according to their characteristics. The chapter also presents a review of the practice of ADR and other methods employed in the prevention and resolution of construction disputes.

The purpose was to develop an overview of the nature, current practice and challenges of resolving disputes in the Zambian construction industry.

2.2 Standard forms of construction contracts

Standard forms of agreement are used when letting out a building or civil engineering contract. A standard form is an agreement drafted and or approved by a professional body such as for Architects, Engineers, or other international institutions and associations for Contractors. The forms are generally accepted and used by these bodies or institutions with or without amendments.

Chapel (2002) stated that “standard forms of contract are like standard suits, standard cars or standard housing. They are good enough across a broad spectrum of applications but may not always be appropriate. The standardized versions of anything are based on a notion of a majority requirement. This is the main disadvantage of a standard form of contract”. In practice, however, it is recognized that every contract would have certain common aspects. Standard forms of contracts emerge out of common elements that project participants and managers are familiar with. Chapel (2002) argued that a specially made suit or a customized car is designed to match precisely the requirements of the purchaser.

The standard forms of agreement used in the Zambian construction industry, included the Fédération Internationale des Ingénieurs-Conseils (FIDIC), Institution of Civil Engineers (ICE) and the General Conditions of Contract for Works of Civil Engineering Construction (GCC).

The Road Development Agency (RDA) forms of contract were mixed depending on the funding agencies or donor of the project but most common were those for FIDIC, World Bank, Asia Development Bank, the African Development Bank and the European Union. In most cases, however, they were made from a combination of the various forms.

The Buildings Department in the Ministry of Works and Supply and the Zambia Institute of Architects (ZIA) used standard forms of agreement which were based on those for the ICE and Royal Institute of British Architects (RIBA). The ZIA used the forms prepared by the Joint Liaison Committee (JCC) and those for the Joint Building Contracts Committee (JBCC) or a mix from many different forms including those of donors prepared using a cut and paste approach.

Therefore, many of the standard forms in use in the Zambian construction industry have undergone many changes over the years. The cut and paste approach has caused many misinterpretation or misunderstanding of the powers, duties and responsibilities of the parties. Building and civil engineering contracts have become more difficult to administer or execute due to the tendency to amend or add to the standard forms of contract without proper advice or consideration as to the consequences of such amendments, omissions or additions. It was not unusual to find that both the project manager and the contractor were quite vague regarding the extent of their obligations, powers and responsibilities as provisions were ambiguous giving rise to disputes. In some cases the parties were unable to interpret and correctly apply the contract documents.

Chapel (2002) advised against amending standard forms of contracts, “it is difficult to ensure that any amendment to a clause works correctly and is carried through to amend all cross references to it and anything else which depends upon it. Amendments are often necessary to ‘customize’ a standard form, but they should be carried out only by specialists”.

2.3 Definition of disputes

The Concise Oxford Dictionary (1990) defines a dispute as “controversy, debate, heated contention, quarrel or a disagreement between management and employees leading to industrial action”. According to the FIDIC Golden Book – Sub-clause 1.1.31, a dispute is any situation where:

- (a) one party makes a claim against the other party; or
- (b) the other party rejects the claim in whole or in part.

It can, therefore, be deduced that the word “dispute” when used within the context of the construction industry means “disagreement between the parties to the contract, that is the employer or its representatives (the architect, engineer or the project manager) and the contractor or between the contractor and the sub-contractor on matters connected with or arising from the contract which they have entered into”. A dispute may occur when a final determination has been rejected, or discussions have been terminated without agreement or when a party declines to participate in discussions to reach agreement or when so little progress is being achieved during protracted discussions resulting in parties having a disagreement or argument or a quarrel.

2.3.1 Grouping of disputes

According to NADRAC (2003) construction disputes can be categorized into four main groups as shown in Figure 2.1.

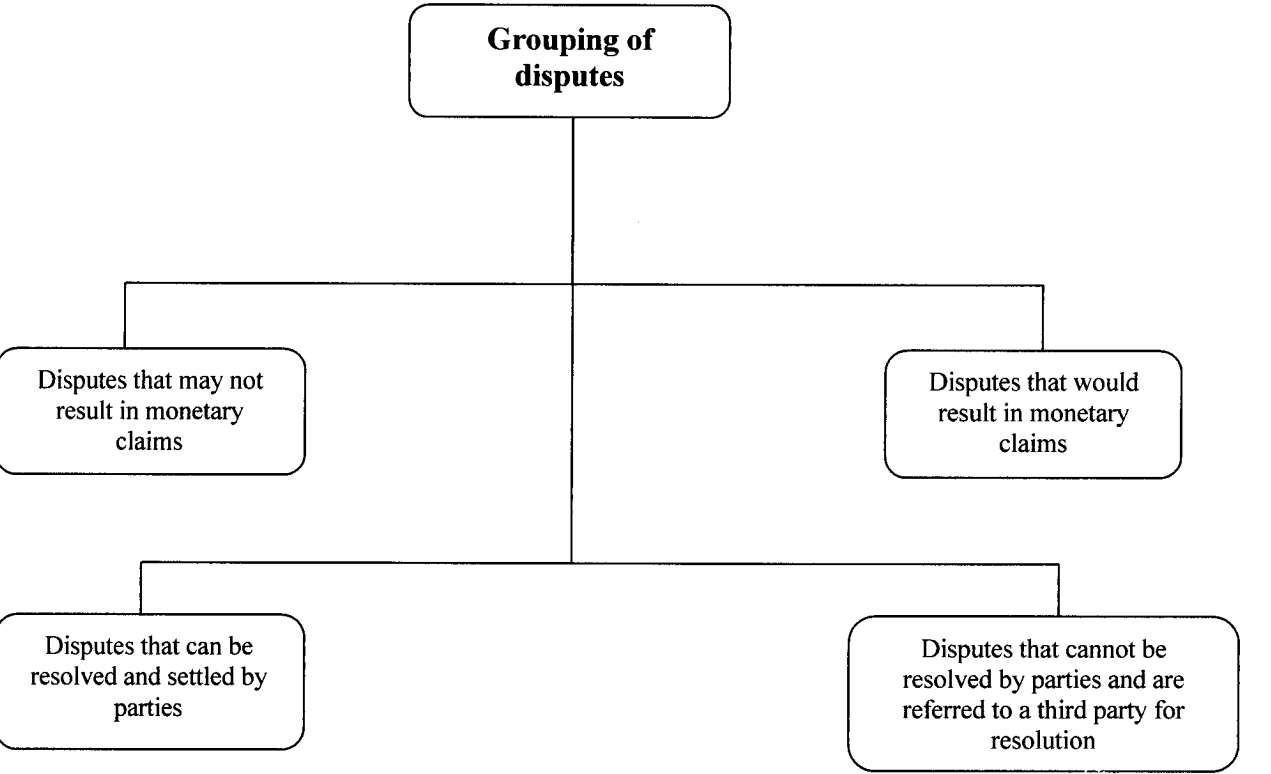


Figure 2.1: Grouping of disputes
(After NADRAC, 2003)

2.4 Causes of construction disputes

Construction is a risky business. Even identical buildings that have been constructed on adjacent or different sites create their own special circumstances; are subject to unforeseen ground, site and weather conditions, use labour that may have different trade practices even from one site to another, will have different costs and different problems associated with their construc-

tion. Poor margins of profitability also provide a fertile platform for disputes. Disputes are, therefore, likely to arise under even the best circumstances, where every possibility has been potentially eliminated.

According to Fenn *et al* (1997), the construction industry has recorded numerous adversarial relationships between owners and contractors. The priorities of one party are often relegated to second, third, or even lower-level priorities for the other party. This view is supported by Howard *et al* (1997, who argued that in a construction contract, “the owner usually wishes to obtain maximum quality, functionality, and capacity at minimum cost. The contractor, while hoping to develop a satisfied client, must in the long run achieve financial goals that are advanced by expending the minimum resources required to meet a minimum scope of work”. Howard *et al* (1997) further pointed out that these priorities were unsurprisingly at conflict with one another and this set the framework for a repetitive cycle of hostilities. Added to this, was the unexpected or additional changes in the conditions of the contracting parties (i.e., designers, subcontractors, material suppliers, etc.) and other variables were reasons why disputes during the construction process were so prevalent. Therefore, identifying potential conflict items at the onset of a project provided not only a basis for monitoring challenging areas during a project, but also an opportunity for preventing the issues from ever becoming the basis for claims.

Dick and Girard (1995) categorized the causes of disputes in the construction industry and identified three logical causal categories: people; process; and project. The study found that the people factors played the biggest role in project dispute potential, while the process and project attributes played important but less influential roles respectively.

According to Lian (2005), “construction projects are often complex and project participants are exposed to many uncertainties and risks. As a result, misunderstandings, disagreements and disputes regularly occur, resulting in litigations and arbitrations”. Latham (1994) attributed increased risks on construction contracts to the inconsistencies and gaps between consultant and contractors. He stated that, the causes and effects of disputes were as a result of claims for delay or disruption of the works by the contractor. Latham’s (1994) findings were supported by Groton (2005). According to Groton (2005), risk assessment and allocation allowed all parties to know and calculate their potential exposure into their planning and budgets. It was, therefore, clear from both Latham’s (1994) and Groton’s (2005) findings that all parties to a contract

needed to predict the potential risks in their construction methodologies and pricing to avoid unnecessary claims and misunderstandings on a project.

Murdoch and Hughes (2000) identified the following as causes of construction disputes:

- (a) technical, i.e. the technology involved in construction is difficult to understand and subject to change;
- (b) legal matters due to inconsistencies between various contracts; and
- (c) entitlement and magnitude i.e. entitlement arose from the legal interpretation of the contract and associated documents.

According to Murdoch and Hughes (2000), the factors of design and construction complexity and site limitations were important contributors to causes of construction disputes.

In the study by Diekmann and Nelson (1995), the major source of construction disputes, and hence claims, was identified as a combination of design errors and scope increases. This was supported by Whitefield (1994) who identified the following “top ten list” of specific causes of construction disputes in the USA:

- a) contract clauses, which unrealistically and unfairly shifted project risks to parties who were not prepared or not able to assume such risks;
- b) unrealistic expectations on the part of certain parties; generally owners, who did not have sufficient financing to accomplish their goals;
- c) ambiguous contract provisions;
- d) contractors who submitted unrealistically low bids;
- e) poor communications between and among the parties involved in the project.
- f) deficient management, supervision and co-ordination effort on the part of the general contractor;
- g) reluctance on the part of project participants to deal promptly with changes and unexpected conditions;
- h) the absence of “team spirit” among project participants;
- i) a predisposition toward adversarial relationship on the part of some or all of the parties to the project; and
- j) contract administrators who wanted to avoid making tough decision(s) by passing the problem to higher authorities within the organization, or to a lawyer, rather than resolving the problem at the project level.

According to Hibberd and Newman (1999), the potential for conflict is inherent in any contractual relationship, given the unique and complex nature of construction contracts. The best solution to the problem was, therefore, to prevent and so avoid disputes. Without the means to address them, minor issues escalated, with crippling consequences for the parties and the project.

2.5 Resolution of disputes in the construction industry

Diekmann and Nelson (1995) advised that any effort to prevent construction disputes began with identification of the root causes of disputes. This was considered important to plan the most suitable method for resolving the disputes. As the costs of adversarial relationships in the construction industry became more apparent, collaborative practices emerged and interest evolved regarding the development of informal and less adversarial dispute resolution processes. Interest grew, particularly in how dispute resolution processes contributed to maintenance of good business relationships that effectively supported project-centered construction management, planning and implementation.

Rising costs, delays and risks of litigation in construction disputes prompted the construction industry to look for new and more efficient ways to resolve disputes outside the courts. No single dispute resolution technique, regardless of how good it is, could be used for all disputes, or for different stages of the same dispute. The causes of disputes came from so many different sources and were so complex that there was no “one size fits all” technique for dispute resolution. At the same time, the spiral nature of disputes made it impossible to use a single dispute resolution technique to deal with all successive stages in the resolution of disputes. Latham (1994) suggested that Alternative Dispute Resolution [ADR] was one of the most appropriate mechanisms for settling disputes.

The construction industry in developed economies took steps to avoid litigation and to control disputes by developing and employing various mechanisms for alternative dispute resolution which ranged from simple negotiation, adjudication, mediation or conciliation, expert determination, dispute boards to arbitration.

Until recently, the processes of negotiation and mediation were the main alternatives to litigation and arbitration for settling construction disputes. Mediation had been used in the construction industry for settling disputes for the past couple of decades, with a mediation clause introduced into the General Conditions of Contract for Works of Civil Engineering Construction

(GCC) in 1982, and in 1991, into the Principal Building Agreement published by the Joint Building Contracts Committee (JBCC). With the increase in the use of the internationally accepted Fédération Internationale des Ingénieurs-Conseils (FIDIC) contract documents, especially the red book, 1999 edition, contractual adjudication and Dispute Adjudication Boards were incorporated in most standard forms of contracts.

2.5.1 Methods and procedures of resolving disputes

According to Teoh (1992), if any settlement could be reached between the disputing parties, it was necessary to lay down certain simple procedures or processes by which the disputes and claims could be systematically looked into. A process which gave each party the opportunity to present its case with a view to making decisions and reaching agreements, based on the merits and demerits of the arguments put forward by both parties. Where differences could not be resolved, at least the areas of difference can be identified and decisions can be made by either party whether to refer such disputes to the agreed or any other types of dispute resolution (Teoh, 1992).

Carmichael (2002) suggested a stepped approach to dispute resolution depicted in Figure 2.2 as follows:

- a) the first attempt is made to resolve the dispute at the project level;
- b) if this fails, involve people at a higher level with decision-making authority. At this level there is the potential for a compromise solution or one which serves the interests of the parties;
- c) if this fails, parties may opt for an ADR approach by referring the dispute to an independent or neutral third party; and
- d) if this fails, litigation can be used.

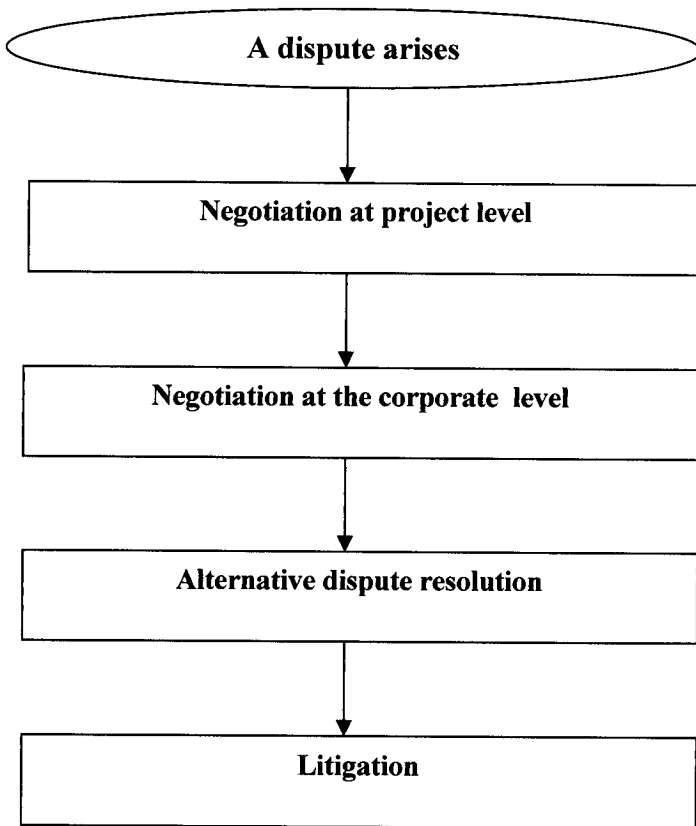


Figure 2.2: Stage approach to dispute resolution
(After Carmichael, 2002)

2.5.1.1 Alternative Dispute Resolution (ADR) methods

Rozlinda and Mohd (2002) clarified that “Alternatives...” in question actually referred to non-judicial methods of dispute resolution, which were alternatives to litigation. These encompassed expert determination, mediation or conciliation, adjudication, dispute boards and arbitration (Chapman, 2003).

According to Chapman (2003), mediation goes to the root of ADR, while the traditional methods of construction dispute resolution have always been through the courts – litigation and arbitration. Chapman (2003) pointed out that, dispute resolution techniques that keep control or the initiative in the hands of the parties in disagreement, like mediation, incur fewer costs during the resolution process and keep hostilities to a minimum. He argued that mediation was the root of ADR and must be the first alternative of any dispute resolution process while the traditional methods for resolving disputes like litigation and binding arbitration, relied entirely on the determination of a third party and both had higher costs and increased hostilities among parties.

The stated dispute resolution regimes can be further classified as adversarial or opposing each other such as adjudication, arbitration and litigation; and non-adversarial dispute resolution consist of negotiation, mediation, conciliation and expert determination (Fiadjoe, 2004). Table 2.1 illustrates ADR and dispute resolution options (Fiadjoe, 2004).

Table 2.1: Classification of dispute resolution methods

Traditional Dispute Resolution	Alternative Dispute Resolution	Adversarial Dispute Resolution	Non Adversarial Dispute Resolution
Litigation Arbitration	Negotiation Mediation/conciliation Expert Determination Adjudication Dispute boards Arbitration	Adjudication Arbitration Litigation	Negotiation Mediation Conciliation Expert Determination

(After Fiadjoe, 2004)

According to Whitfield (1994), disputes could be resolved by using informal dispute resolution methods, such as negotiation conciliation, mediation, adjudication and dispute review boards or formal resolution methods such as arbitration and litigation.

(i) Informal dispute resolution methods

The informal resolution method has two approaches as described below.

a) Negotiations

Negotiation is the only resolution method that does not involve a third party. As such, it may be described as a non-intrusive approach. Genuine discussion and negotiation should be promoted as a preferred way of resolving disputes as there are mutual advantages for both parties. Negotiation should be the first choice of solutions for the resolution of a dispute as it has positive benefits (Carmichael, 2002; Whitefield 1994). Negotiation is inexpensive and maintains good working relationships.

Whitfield (1994) also pointed out the negative side or pitfalls of negotiations. The process may fail after a long and protracted period of discussion because it is not binding and that because of the informality of the process, sometimes the parties tend to raise surprise or irrelevant issues.

b) Conciliation

It is a process in which the parties to a dispute, with the assistance of a neutral dispute resolution practitioner (the conciliator), identify the issues in dispute, develop options, consider alternatives and endeavor to reach an agreement. The conciliator may advise on or determine the process of conciliation whereby resolution is attempted, and may make suggestions for terms of settlement, give advice on likely settlement terms, and may actively encourage the participants to reach an agreement. A conciliator must be independent of the parties to the contract. Impartiality is essential, since the purpose of this process is to precipitate an agreement by persuasion and suggestion.

c) Mediation

The method is like an extended version of conciliation. The neutral third party or mediator, helps each party to understand the other party's view of the matters and then to help them to make an objective appraisal of the total situation. As part of the process, the mediator may hold confidential talks with each party to negotiate a settlement. The discussions are wholly without prejudice. Nothing that is said by either party can be used or referred to in any proceedings e.g. in a court case. The mediator arranges and chairs the discussions and acts as an intermediary to facilitate progress towards settlement. Mediation may be undertaken voluntarily, under a court order, or subject to an existing contractual agreement.

d) Adjudication

This is a process in which the parties present arguments and evidence to dispute resolution practitioner, the adjudicator, who makes a determination which is enforceable by the authority of the adjudicator if decision is not contested by any party within the stipulated time.

e) Expert determination

Expert determination is a process in which the parties to a dispute present arguments and evidence to a dispute resolution practitioner, who is chosen on the basis of their specialist qualification or experience in the subject matter of the dispute and who makes a determination.

*f) **Dispute Boards***

Dispute Boards would normally contain a representative from each contracting party and a mutually agreed impartial third party. Sometimes there may be one, three or more board members depending on the agreement or complexity of the dispute. All board members would have to be acceptable to both parties for the board to function effectively (Carmichael, 2002). When a dispute occurs, the board is given appropriate documentation. The board may meet informally, or there may be presentations and arguments made. By having open and free discussions, solutions are given quickly.

*(ii) **Formal dispute resolution methods***

Formal dispute resolutions procedures merely try to find the proper solution, whether or not it suits the parties. This is one reason why parties may find the arbitral and legal processes so unsatisfactory. On many occasions, winners and losers have left a hearing frustrated because their case, which seemed so simple, in the end appears too complex for them to follow (Whitfield, 1994).

*a) **Arbitration***

Arbitration is a process in which the parties to a dispute present arguments and evidence to a dispute resolution practitioner, the arbitrator, who makes a determination. Turning the decision over to an arbitration panel comprised of knowledgeable and experienced industry professionals has many advantages over a judge and jury. Although once seen as the only option, binding arbitration is now considered a last resort, after non-binding ADR techniques have failed.

*b) **Litigation***

Litigation is the use of the court system to resolve disputes. The process starts with the issue of a writ to a hearing and then a judgment. In contracts where there is no provision for any other dispute resolution method, litigation may be the only option that can resolve a dispute (Carmichael, 2002).

The relatively recent phenomenon of turning to ADR has been enthusiastically embraced by many members of the construction industry as a solution. ADR has proved to be quite effective as a tool to resolve disputes. However, ADR procedures, which are employed after a dispute has already arisen, deal primarily with the symptoms, not the root causes. Therefore, Carmichael (2002), suggested that a more productive solution to construction project's adversari-

al illness would be to employ preventive techniques to attack the root causes for problems, thus avoid disputes altogether.

Carmichael's (2002) view was in agreement with the earlier suggestion by Whitfield (1994) who noted the perceptible shift towards dispute avoidance and minimization strategies, through techniques such as partnering, dispute boards and disputes resolution advisers.

2.6 Contractual methods for dispute a voidance and resolution

There are many techniques that can be incorporated in preparing construction contracts so as to avoid disputes, costly and time-consuming litigation. On-site resolution of disputes using stepped-negotiations, Dispute Boards (DBs) or neutral dispute review experts, and other ADR options that do not rely upon third party binding decisions are one way to reduce the overall costs and acrimony of dispute resolution. Blumenfeld (2005) and Groton (2005) have praised the adoption of fair allocation of risks, drafting of appropriate dispute clauses, team building or partnering and the design-build delivery method as other ways to avoid or reduce the amount of conflict that could potentially turn into claims and, or disputes.

Gordon (2006) agreed with the concept of a neutral party or dispute boards and suggested that there are many steps that can be taken to minimize the number and severity of disputes on any project, but these steps must be taken at the very inception of the project if they are to be effective.

2.6.1 Allocating fair contract risk

It is common practice for architects and 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. According to Steen (1994), 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 basis for claims and disputes are eliminated.

Unfair shifting of risk, transferring of all responsibilities on a party that is not generally expected to control that risk, can result in that party having to spend time and effort looking for

ways to overcome the liabilities and risks on the project, usually to the detriment of the project itself.

2.6.2 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 (Steen 1994). This includes clauses containing explicit provisions and instructions for parties to resolve disputes as they arise, during the course of the project. Contractual provisions should always require that parties first try to settle all disputes by some non-binding techniques, such as negotiation, conciliation, adjudication and mediation.

2.6.3 Team building or partnering

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 (Steen 1994). Partnering involves the development of a charter based on the parties' need to act in good faith and with fair dealing with one another to form a partnership which focuses on achieving of mutual objectives, improved communications well as to minimize disagreements and claims.

2.6.4 Dispute boards

According to (Steen 1994) even the most careful planning cannot always prevent disputes and provision of a dispute board or expert on a project is the last chance to resolve a dispute before resorting to a binding settlement. He pointed out that providing for a neutral party to analyze issues and providing dispute resolution, if negotiations come to an impasse, is an important step towards minimizing the negative impact of disputes on a project.

Because the neutral board or expert is readily available and knowledgeable about the project, he or she often can help to mediate or encourage the prompt resolution of disputes. In addition, the time and cost saved by immediately addressing disputes can help to preserve the good relationships among the parties and keep the project focused on mutual goals.

(i) Dispute boards under FIDIC and the International Chamber of Commerce (ICC) guidelines

There are three main international models for the establishment, use and operation of Dispute Boards (DBs). Here DBs are used to collectively refer to all types of Boards i.e. Dispute Review Boards (DRBs), Dispute Review Expert (DRE) or Dispute Adjudication Boards (DABs). FIDIC first provided for the optional inclusion of Dispute Adjudication Boards (DABs) in the 1987 Fourth Edition of the Red Book and Part II Conditions of Particular Application. In 1999, FIDIC published three new Standard Conditions of Contract, all of which provided for DABs to resolve contractual disputes.

In 2005, FIDIC licensed Multilateral Development Banks (MDBs) to use a revised version of the 1999 conditions of Contract for Construction. This is known as the MDB Edition. The MDB Editions can only be used for Contracts that are financed by one of the participating Banks. The participating Banks are listed on the FIDIC website – www.fidic.org. Some of the changes made related specifically to actions that involve the Bank. One of the changes was that the DAB became the Dispute Board (DB).

(a) Resolution of disputes using the FIDIC and ICC Dispute Boards

The DBs receive submissions, conduct hearings and make a determination which is enforceable within the stipulated time, usually 28 days, if the decision is not contested by any party. Non-compliance may be a breach of contract. Enforcement is through arbitration or litigation. Dispute Boards would normally contain a representative from each contracting party and a mutually agreed impartial third party. Sometimes there may be one, three or more board members depending on the agreement or complexity of the dispute. All board members would have to be acceptable to both parties for the board to function effectively. When a dispute occurs, the board is given appropriate documentation. The board may meet informally, or there may be presentations and arguments made. By having open and free discussions, solutions are given quickly. The other main feature of the DB process which made it different from other determinative processes such as arbitration and litigation was the ability of the Employer and the Contractor to jointly obtain advisory informal opinions on any simmering issue before it developed into a fully blown dispute requiring a determination.

(b) Amicable settlement after DB decision

Although the parties have another opportunity to reach an amicable settlement after the DB has issued its determination, it is more beneficial for the relationship between the parties if the matter can be informally determined and a basis for negotiations established. As in adjudication, the Board’s decision is binding on the parties, in the interim. That is, the Employer and the Contractor must comply with the decision until it has been reviewed by an amicable settlement and or revised by an arbitration process.

The establishment of DBs as part of standard contract conditions on major international infrastructure projects has proven very successful in reducing formal disputes and the costs associated with dispute resolution processes such as litigation and arbitration. In some cases, DBs have helped control incidences of political interference and corruption on projects.

2.6.5 Achievements of application of ADR contractual provisions in settling construction contract disagreements in the USA

In the USA, the use of ADR as a means to settle disputes grew steadily, achieving explosive growth since 1980, according to the USA Congress Senate committee on Governmental Affairs report no. 543 of the 101st Congress, second session. The growth was a result of the broad acceptance by businesses, labour groups, legal communities, and many other groups. The judicial system had also recognized its utility, and in many states and federal jurisdictions around the country, there were mandatory and voluntary court sponsored ADR programs that had been established to assist parties in reaching settlements without litigation.

In 1990, Congress enacted legislation to deal with government dispute settlement of disputes. Faced with delays in state construction contracts resulting from unresolved disputes which substantially increased the cost of projects, various states were looking for best ways of reducing the number and length of contract disputes to a minimum. They opted for alternative dispute resolution (ADR) to help them avoid or resolve disputes instead of litigating the disputes in court. ADR was a broad term that included a variety of methods or processes. Some of the more common methods were partnering, negotiation, mediation, and binding arbitration.

The Texas Performance Review (TPR) reviewed the processes at the General Services Commission (GSC), Texas Department of Transportation (TxDOT) Texas Department of Criminal

Justice (TDCJ), and the University of Texas System (UT System). GSC's process was a two year pilot project created by the 1993 Legislature and included binding arbitration. TxDOT's, TDCJ's, and the UT System's ADR did not include binding arbitration and focused instead on dispute avoidance methods, such as partnering and resolving the issues at the lowest possible level of management.

Other states also used ADR to resolve construction disputes. TPR reviewed the ADR programs of the Illinois Capital Development Board (CDB) and the Arizona Department of Transportation (ADOT). These agencies focused on remedies such as partnering for dispute avoidance and used formal ADR processes such as mediation for dispute resolution. Illinois' CDB contractually required ADR processes before contractors could file suit in the Illinois Court of Claims.

(ii) ADR results

Texas agencies' use of ADR reduced construction costs and time and the number of contractor claims. TxDOT reported that during the first five years, after implementing an ADR process that included partnering, only a few projects had major disputes. According to a report on partnering at TxDOT, "partnering was having a positive impact on schedule duration and claims costs." According to the study, partnered projects had a higher on-schedule percentage than non-partnered projects, resulting in an estimated savings of \$7 million." TDCJ found that while nine of its fiscal 1993 projects had post-closing claims, all 29 projects that it awarded in fiscal 1994--after it had instituted ADR and partnering--were completed without claims. UT System had not had any major claims since it instituted partnering as part of its ADR process. While GSC had an ADR process in place, no contract disputes had triggered the process.

Other states also reaped benefits from using ADR to resolve construction disputes. The Arizona Department of Transportation (ADOT) ADR process, which included partnering, was credited with a 13-percent reduction in the agency's contract administration costs and a time savings of 5.1 percent. ADOT also reduced the number of claims going to mediation after a project's completion, resulting in an estimated additional annual savings of \$5 million. These savings were significant when compared to the small price of the agency's ADR efforts, which was estimated at about 0.2 to 0.3 percent of the total project cost.

Illinois' CDB cited a case in which it used ADR processes to deter potential major claims: "The \$61 million Chemical and Life Sciences Building at the University of Illinois at Champaign-Urbana was a prime example of the CDB Partnering program. The complex nature of the project was underscored by the fact that there were over twenty (20) contractual parties to the project. In one instance, a dispute involving alleged delays and extra costs for a significant amount of money threatened the schedule, as well as the working relationships of all the contractual parties, subcontractors and suppliers. However, the dispute was resolved during a five-month period, using negotiations, while work continued unaffected. The parties resolved the differences face-to-face, without intervention of legal counsels. The end result validated the concept of Partnering and ADR, and encouraged the parties' use of the processes in the future."

In addition to state agencies, American General Contractors (AGC), an association of contractors, supported formal ADR processes that provided contractors an avenue for resolving claims quickly and equitably. AGC supported partnering as a vital first step in any ADR process. The association indicated that it was very impressed with TxDOT's ADR process, which began with partnering and, if necessary, ended with a neutral party making the final determination on claims.

(iii) ADR components

According to the Center for Public Policy Dispute Resolution, successful ADR processes had three components. The first was a formal ADR process that was flexible enough to meet the agency's needs. The second component was an avoidance and early resolution process such as partnering, negotiation, and mediation. The third component was allowing a neutral party to make the final determination of claims that could not be resolved at the agency level.

In at least six other states--Arizona, Colorado, Iowa, North Carolina, South Carolina, and Tennessee - agencies used an administrative hearings process to resolve disputes and allowed claims to be appealed to the courts.

(iv) Recommendation

The Texas Performance Review recommended the amendment of the state law to require state agencies to use alternative dispute resolution to resolve construction contract disputes in order to reduce or possibly eliminate the need for contractors to seek legislative permission to file suits to resolve construction disputes.

In summary, the increase in the use of ADR provisions in Federal Government contracts was fueled by improvements in legislation and executive as a result of the many studies undertaken including the TPR in 1996. Continual refinement of the various ACTs served to show commercial industries that Federal agencies were committed to the implementation and utilization of ADR where appropriate and in ensuring that disputes were settled in a timely manner, without the burden of litigation, where possible.

2.6.6 Proportionality of cost in dispute resolution

Proportionality has emerged as a relatively new concept in the ADR literature. Put simply, proportionality in dispute resolution recognizes the need for dispute resolution procedures and their transactional cost to be proportionate to the nature of the issues involved. NADRAC (2003) explains the “proportionality objective” as dealing with the case in ways which are proportionate to:

- (i) the amount of money involved;
- (ii) the importance of the case;
- (iii) the complexity of the issues; and
- (iv) the financial position of each party.

Transactional costs do not include money paid out in settlement of a dispute because these are, in general, amounts that have been recognized as being owed. In construction disputes, transactional costs play an important role in a party’s decision to accept or reject a settlement offer because of the additional expenditures to pursue the dispute further. Transactional costs are also a proposed method by which practitioners can evaluate which ADR techniques truly saves money and time.

2.7 ADR application in the Zambian construction industry

ADR is not new to the Zambian construction industry. ADR clauses exist in all major standard forms of construction contracts for both private and public institutions. Arbitration is, however, the main and in some cases the only option for ADR. In some contractual provisions, the suggestion is that any person can be appointed to act as an arbitrator. And indeed, there have been such appointments in the past, such as the appointment of non trained arbitrator as chairman of an arbitration tribunal for the dispute involving Zambia Railways and a contractor, or the appointment of an architect as a member of the dispute board on a road project. Comparatively, RDA contract forms recognize conciliation, adjudication and arbitration as means of dispute

resolution. On most public and private sector contracts and donor funded projects where FIDIC contract forms are used, conciliation and/or adjudication are also conditions precedent to arbitration. Mediation is rarely applied in the Zambian construction industry unless ordered by the court. At the time of the study, there were no records at the Buildings Department, the Ministry of Local Government and Housing (MLGH) or RDA, of any disputes settled using mediation.

2.7.1 Absence of default procedures or guidelines for dispute resolution

The construction industry did not provide a default procedure for dispute resolution in the event that the contracting parties' own contract agreement did not provide a set of guidelines governing the process of resolving any disputes. In such situations, parties used litigation, unless their legal counsels were cooperative and advised that an ADR agreement was still possible after a dispute had arisen.

2.7.2 ADR legislation in Zambia

The Arbitration Act No.19 of 2000 was one of the few pieces of legislation that have been enacted following lobbying of government from the users and beneficiaries. The Act has provision for domestic and international arbitration through the adoption, with modifications, of the Model Law on International Commercial Arbitration adopted by the United Nations Commissions on International Trade Law (UNCITRAL). Section 6 of the Act stated that, “*any dispute, which the parties have agreed to submit to arbitration, may be determined by arbitration*”.

Order XXXI of the High Court Rules as amended by Statutory Instrument No. 71 of 1997 provided the rules for mediation. The relevant rules were Rules 4- 14 of Order XXXI. Rule 4 provided that, “every action may upon being set down for trial, be referred by the trial judge to mediation except in matters involving constitutional issues; reference to liberty of an individual; an injunction or where the trial mediation judge considers the case to be unsuitable for referral”. Rule 14 provided that no appeal shall lie against a registered mediated settlement.

2.7.3 The Zambia Centre for Dispute Resolution

The Zambia Centre for Dispute Resolution (ZCDR) was established by a statutory instrument and was established as an Alternative Dispute Resolution (ADR) centre in Zambia. The main services the centre offers are arbitration; mediation; and training, accreditation and appointment of arbitrators and mediators. The Centre has a permanent secretariat that manages the aforementioned functions.

2.8 Literature reviewed

The literature reviewed identified a number of inputs to the study which are expected to determine the extent of the application and development of ADR in the Zambian construction industry.

The literature reviewed showed that the importance of identifying potential conflict items at the onset of a project provides not only a basis for monitoring challenging areas during a project but also an opportunity for preventing these issues from ever becoming the basis for a claim. The literature reviewed also identified the causes of construction disputes. These included differing site conditions, unrealistic expectations, change of scope, delay, workmanship, weather and people factors. There is no doubt that people factors have a ripple effect on both field operations and project success.

The literature review also showed that a search for secondary data sources should precede any primary research activity as it helps the researcher understand the problem under study better. It also showed that multiple sources should be used so that one source is cross-checked for consistency with another. With the advent of internet and CD-ROMs, it is clear that computer based information sources are more efficient and more effective and give access to numerous databases; online, bibliographic, numeric, directories and full-text.

Table 2.2 summarizes the literature reviewed.

Table 2.2 Summary of Literature Reviewed on construction disputes and ADR

Author	Title	Objectives	Methodology	Conclusions/Comments
Blumenfeld (2005)	A. Equitable Allocation	Risk To make provisions for potential risk of conflicts on a project	Case Study	In his paper, Blumenfield urged construction parties to incorporate both active and passive risks allocation strategies into their contract to address uncertainties which may be beneficial in conflict decision making. The paper deplored the trend towards increased litigation in the industry, and highlighted the little quantitative data collected and analyzed to check the severity of the effects of dispute occurrences on projects. The paper attempted to address the missing information and integrate it into a larger scheme of conflict risk management which focused on conflict identification, assessment, and control.
Carboneau and McConnaughay (2007)	Handbook on Construction Arbitration and ADR, American Arbitration Association	To provide the reader with comprehensive and accurate information and knowledge on Arbitration and ADR	Book	The handbook contains articles selected from various journal writings and provides comprehensive and practical introductions to the use of arbitration and ADR. It also provides essential orientation for anyone with interest in the study of ADR. The various chapters address contemporary problems in ADR.
Carmichael, David G. (2002)	Disputes and International Projects	Methods and procedures of resolving disputes	Book	According to Carmichael, a large range of alternative dispute resolution techniques is available for use in the construction industry. If negotiation is not successful, ADR can be attempted. He added that arbitration is sometimes still the default dispute resolution procedure, perhaps because it was originally included as the only procedure in the most popular standard forms of contract.

Author	Title	Objectives	Methodology	Conclusions/Comments
Chapman P. H. (2003)	Resolving Disputes in on Going Projects	Options for resolution of disputes on ongoing projects	Workshops presentation	In his paper, Chapman (2005) indicated that mediation goes to the root of ADR, while arbitration and litigation are traditional resolution methods of construction disputes. The paper suggested that mediation can of course be used, in theory, at any stage not just during litigation but during or when other forms of dispute resolution, such as arbitration, adjudication are contemplated or progressing.
Chapman, (2006)	Dispute Boards Infrastructure projects	Role of Dispute Boards as a 'Job-site' dispute adjudication process	Workshop presentation	In his presentation, Chapman argued that the Dispute Board (DB) concept provides a practical and effective method of dispute control and limitation but it's up to the Dispute Boards members to ensure high standards. He further cautioned that early appointment and regular site visits enable the DB to become highly conversant with the project.
Construction Industry Development Board (CIDB), 2003	"Creating an Environment for Reconstruction Growth and Development in the Construction Industry (1999)"	Options for resolution of construction disputes in South Africa	Desk study	The CIDB report argued that the conventional mechanisms and procedures for final dispute resolution, normally arbitration or litigation, were both costly and time consuming. It further stated that small and emerging contractors were disadvantaged and even imperilled – in the event of a major dispute arising. The paper advocated the use of ADR mechanisms in contracts and recommended that the Latham Report (1994) should be used as the point of departure.
Dalland, P. (2008)	Proposed Amendments to the FIDIC Yellow, Silver and DBO conditions of contract affecting Dispute Boards provisions	To highlight problems arising from the proposed amendments	Workshop presentation	Dalland highlighted the need to amend Dispute Board procedures in the Multilateral Development Banks (MDB) Harmonized contracts to overcome the various problems. Dalland recommended that it should be mandatory to seek advisory opinions before a dispute is submitted to the DB for determination or else the most important purpose of the DB, the dispute avoidance function is lost. He further argued that the use of the MDB Contracts made the application of DB provisions compulsory and therefore a condition of the loan approval. He pointed out that this was the extent of the involvement the MDBs had with the DB process. If or when, problems arose, the Bank had no contractual involvement and very little influence on either the employer and/or contractor. He pointed out that most MDBs' project Staff had no in depth experience as to the proper function and operation of a DB. He recommended training financed as part of the project support at the outset of the contract.

Author	Title	Objectives	Methodology	Conclusions/Comments
David Chappel (2002)	Parris Standard Form of Building Contract	Book	Book	Chapel stated that a standard form was an agreement drafted and or approved by a professional body such as for Architects, Engineers, Contractors or other international association or institution. He pointed out that standard forms of contracts emerge out of common elements that project participants and managers are familiar with and are generally accepted and used by these bodies or institutions with or without amendments.
Diekmann, J. E., and Girard, M. J. (1995)	Are Construction Disputes Predictable? Journal of Construction Engineering and Management	Categorization of causes of conflicts	Case study	Identifying potential conflict items at the onset of a project provides not only a basis for monitoring challenging areas during a project but also an opportunity for preventing these issues from ever becoming the basis for a claim. Many researchers have examined the causes of construction conflict and have identified numerous reasons including: differing site conditions, unrealistic expectations, change of scope, delay, workmanship/quality, weather, and many others. Diekmann and Girard, in their paper identified one of the most straightforward categorizations of conflict causes in the construction industry which identified three logical causal categories – people, process and project. In their analysis, Diekmann and Girard found that the people factors, were unpredictable, played the biggest role in project dispute potential, while the more predictable process and project attributes played important but less influential roles respectively.
Diekmann, J. E., and Nelson, M. C. (1985)	Construction Claims: Frequency and Severity	Major sources of construction claims	Case study	According to Diekmann and Nelson (1985), major source of claims and conflicts is a combination of design errors and increases in scopes of works – all are outside the control of the contractor. This paper examined the frequency of occurrence of 427 separate construction claims which were experienced on 22 federally funded and administered construction projects. The data examined included various claim types, the frequency of their occurrence and the average cost of these claims. The study indicated that the largest proportion of change orders and modifications originated with the owner of the project or with those responsible to the owner.

Author	Title	Objectives	Methodology	Conclusions/Comments
Fédération Internationale des Ingénieurs-Conseils (FIDIC) 1999, 2001, 2000	Conditions of contract for building and engineering works designed by the employer or contractor	International standard conditions of contract used worldwide. Many model forms are available – the 1999 Red, Yellow and Silver versions, the 2000 and 2005 MDB Harmonised version	Descriptive	FIDIC Conditions of Contract documents for construction for building and civil engineering works are prepared for the purpose of obtaining tenders, awarding and administering contracts. As such they legally define the responsibilities and duties of Employers (who commission work) and contractors (who carry out work) in the Works Information. The Works Information consists of the Contract Data part one (Data provided by the Employer) and Contract Data part two (Data provided by the Contractor). Several approaches are included making it a family of options. The contract documents are used internationally.
Fenn P., Lowe D., and Speck C. (1997)	Conflict and dispute in construction	Book	Book	The book explains that disputes between owners and contractors have always existed due to different priorities of the parties. Whilst the owner wishes maximum quality and functionality at minimum cost, contractor wants a satisfied client by expending minimum resources to meet minimum scope of work.
Fiadjoe A. (2004)	Alternative Dispute Resolution: Developing Work Perspective	Classification of dispute resolution options	Case study	According to Fiadjoe (2004), Litigation, Arbitration, Adjudication are adversarial dispute resolution methods – opposing each other. Negotiation, mediation/conciliation and expert determination are non-adversarial.

Author	Title	Objectives	Methodology	Conclusions/Comments
General Conditions of Contract (GCC) for Works of Civil Engineering Construction in 1982	Conditions of contract for construction for building and engineering works	International standard conditions of contract used worldwide.	Descriptive	Conditions of Contract for construction for building and civil engineering works is a formalized system created by professional institutions such as the Institution of Civil Engineers, that guides the drafting of documents on building and construction projects for the purpose of obtaining tenders, awarding and administering contracts. As such they legally define the responsibilities and duties of Employers (who commission work) and contractors (who carry out work) in the Works Information. The Works Information consists of the Contract Data part one (Data provided by the Employer) and Contract Data part two (Data provided by the Contractor). Several approaches are included making it a family of options. The contract documents are used internationally.
Gordon J. (2006)	Dispute Boards – Good News and Bad News. International Construction Law Review	To highlight possible misunderstandings or arguments flowing from deletion of certain text in the MDB Harmonised of FIDIC Contracts compared to the 1999 Edition	Correspondent's Report	According to Gordon (2006), it was good news that the MDB accepted the use of Disputes Board for all contracts for value more than US\$ 10 million. Bad news that some clauses of FIDIC 1999 were changed and presented contractual challenges. But he acknowledged that, the good news outweighed the bad news. Gordon Jaynes, in his article “discussed and compared the 2005 Draft Harmonised Conditions of Contract with the FIDIC 1999 Conditions of Contract. In his comparison and evaluation of the two contract conditions, Gordon Jaynes flagged possible misunderstandings or arguments flowing from the deletion of the certain text from the MDB Harmonised contract document allowing the parties “at any time the parties so agree”, to refer a matter to the DB for it to give its opinion. In FIDIC 1999 Conditions of Contract this very important provision is stated in Sub-Clause 20.2 of the contract. In the 2005 Draft MDB Harmonised version, the authority of the DB to give advise and/or opinions if requested to do so jointly by the Parties, was only contained in the agreements with DB members. He argued that the DB agreements were not always available in the site copies of the contract documents and the Employer, Contractor and Engineer through their site representatives were often not aware of their existence.
Groton J. P. (2005)	How to Keep Your Project Out of Litigation, Arbitration, and Even Mediation	Prevention of disputes on a project	Workshop presentation	Groton pointed out that, the construction industry had been a leader in both dispute occurrences and dispute resolution systems for many years. In this paper, he suggested that parties should assess and allocate potential risks at project start to know how to calculate their positional exposure into their planning and budgets

Author	Title	Objectives	Methodology	Conclusions/Comments
GRZ (2000)	The Arbitration Act No 19 of 2000	To provide for domestic and international Arbitration and recognition and enforcement of the Awards to international standards.	Descriptive	Regulates the conduct of Arbitration in Zambia. The Act provides procedures for resolution of disputes, setting up of Arbitral centres, appointment of Arbitrators, and prescribes the role of the courts in Arbitration.
GRZ (2003)	National Council for Construction (NCC) Act No. 13	The Act is intended to regulate the construction industry in Zambia to and to provide an enabling environment.	Descriptive	The Act has no statutes that provide for involvement of the NCC in the resolution of construction disputes.
GRZ (1997)	Statutory Instrument No. 71 of 1997	Statutory instrument	Descriptive	Aspects of the High Court rules were amended to make provisions for rules of procedure for mediation as part of the legal reforms in Zambia.
Hibberd P & New Man 1999) Blackwell Science	ADR and Adjudication in construction disputes	The book surveys the growth of ADR and looks in detail at the various methods	Book	The book describes the processes of ADR and adjudication to provide an informed choice for resolution options for practitioners. The book concludes by suggesting that ADR may challenge the supremacy of arbitration and litigation if parties believe the quick fix is more desirable than other slow methods of resolving disputes.
Howard W. E., Bell L. C., and McCormick R. E. (1997).	Economic principles of contractor compensation	N/A	Case study	The paper pointed out various variables to explain why the parties' priorities were unsurprisingly at conflict with one another and so prevalent during the construction process hence setting up the framework for a repetitive cycle of hostilities. The paper indicated that with unexpected or changed contracting conditions, parties (i.e., designers, subcontractors, vendors/material suppliers, etc.), there is little doubt as to why conflict during the construction process was so prevalent.

Author	Title	Objectives	Methodology	Conclusions/Comments
Joint Building Contracts Committee (JBCC) (1991)	Principal conditions of contract for construction for building works	International standard conditions of contract used worldwide.	Descriptive	<i>The Joint Building Contracts Committee or Tribunal, also known as the JCT, produces standard forms of contract, guidance notes and other standard documentation for use in the construction industry. Following recommendations in the 1994 Latham Report, the current operational structure comprises 8 members who approve and authorise publications. They are the Association of Consulting Engineers, the British Property Federation, the Construction Confederation, the Local Government Association, the National Specialist Contractors Council, the Royal Institute of British Architects, the Royal Institution of Chartered Surveyors and the Scottish Building Contract Committee. The conditions of contract for construction for building and engineering works have provisions for alternative dispute resolution methods.</i>
Latham M (1994)	Constructing the Team: Joint Review of Procurement and Contractual Arrangements in the United Kingdom Construction Industry	To review procurement and contractual agreements in the UK Construction Industry	Exploratory Interviews and questionnaire surveys	Sir Michael Latham's Report was a comprehensive review of the UK construction industry. One of the 30 recommendations in the report was that adjudication should be used as the normal method by which disputes in the construction industry are resolved in the first instance. Latham stated in his report that, "If a dispute cannot be resolved first by the parties themselves in good faith, it is referred to the adjudicator for decision, such a system must become the key to settling disputes in the construction industry."
Lian O. S. (2005)	Avoidance and Management of Construction Disputes	Identification of construction risks in order to prevent construction disputes	Workshop presentation	<p>The paper acknowledged that construction projects were complex and as such parties were exposed to many uncertainties and risks. As a result misunderstandings and disputes occur. The paper suggested that identifying potential conflict items at the onset of a project provide not only a basis for monitoring challenging areas during a project but also an opportunity for preventing the issues from ever becoming the basis for a claim.</p> <p>There are better ways in which risks can be identified at start of the design so that the owner has an opportunity to put in place measures to prevent disputes, some of the options are Design and build type of contract (D&B) or Single source selection.</p>

Author	Title	Objectives	Methodology	Conclusions/Comments
Murdoch, J. and Hughes, W. (2000)	Construction Contract – Law and Management	Comprehensive coverage of the legislation, administration and management of construction contracts and developments in dispute settlement	N/A	Murdoch, J. and Hughes, W. (2000) identified causes of construction disputes as (1) the technology involved in construction as it was difficult to understand and subject to change; (2) legal matters due to inconsistencies between various contracts; and (3) entitlement and magnitude arising from the legal interpretation of the contract and associated documents. Murdoch and Hughes recommended that the first method of resolving any dispute was by the contract administrator who had extensive decision making powers supported by the terms of the contract. Beyond the contract administrator, contract should have relevant provisions for ADR or litigation. They also acknowledged Adjudication, as recommended by Latham (1994) as a more speedy and inexpensive procedure for resolving disputes that should be legally enforceable by both parties.
NADRAC (2003) Stands for National Alternative Dispute Resolution Advisory Council (Australia)	Dispute Resolution Terms: The use of Terms in (Alternative) Dispute Resolution	To provide definitions for dispute resolution terms and applications	Descriptive	NADRAC seeks to foster high quality Alternative Dispute Resolution (ADR) research to contribute to the development of ADR services and interventions in Australia. NADRAC undertakes data collection and research concerning ADR and provides advice on ADR services and programs. This includes providing definitions of various ADR terms and applications.
Rozlinda F. & Mohd Haris A. R. (2002)	Negotiations, Mediation, Litigation, Arbitration: Significance of Arbitration; Arbitration Agreement; Governing Law; Conduct of Proceedings	Aims to promote alternative methods of Resolution of Disputes	Explanatory Collaboration/Brain Storming	In their paper, they established that ADR refers to non-judicial methods of dispute resolution – which are alternatives to litigation including expert determination, negotiation/Conciliation/Adjudication, Dispute Boards and Arbitration. Rozlinda F. & Mohd Haris A. R. indicated that utilizing alternative dispute resolution (ADR) in the construction industry should be presented from the perspective of finding a better way to resolve inevitable disputes. They promoted ADR as any method by which disputes are resolved privately and other than through litigation.
Steen, Richard H. (1994).	Five Steps to Resolving Construction Disputes Without Litigation.	Use of contract language to transfer risks	Workshop presentation	Steen (1994) claimed that disputes are often won and lost at the contract drafting stage. He indicated that there many techniques that can be incorporated in a contract so as to avoid disputes – through appropriate drafting of the contract and partnering. He pointed out that the construction industry has experience to solve disputes with Arbitration.

Author	Title	Objectives	Methodology	Conclusions/Comments
Teoh, C H. (1992)	Arbitration in Construction Disputes	To investigate the suitability of arbitration in resolving construction disputes	Case study	In investigating the suitability of arbitration as a dispute settling mechanism in the construction industry, Teoh found that mediation was considered a more suitable method than litigation or arbitration. The paper pointed out that, the primary question which needs to be asked was whether arbitration is still the ultimate method of dispute resolution in settling Malaysian construction disputes? He argued that although domestic arbitration was perceived to be cheaper than litigation, the answer may be "yes" /or may be "no" depending on whether arbitrators and the parties were all local and the amount at stake. He further argued that for international arbitration where "the seat" is in Malaysia, the answer was arguable.
Texas Performance Review CG 14, May 20, 1996	Improve Alternative Dispute Resolution d Texas Legislative Council, Survey of Other States Treatment of Claims Against the State	To reduce the number and length of contract disputes to a minimum.	Case study	The Texas Performance Review report recommended that state law should be amended to require state agencies to use alternative dispute resolution to resolve construction contract disputes. This change in policy was to reduce or possibly eliminate the need for contractors to seek legislative permission to file suits to resolve construction disputes.
1996 HMSO, London	The Housing Grants, Construction and Regeneration Act 1996	An Act to make provision for grants and other assistance for housing purposes and about action in relation to unfit housing; to amend the law relating to construction contracts and architects;	Descriptive	The Act came into effect on 1 May 1998. The Act required all construction contracts made from that date to provide for compulsory adjudication as a first instance formal dispute resolution method. If not provided for in the contract, then the terms are implied statutorily. The Act had a major effect on adjudication and construction contracts considering both procedural and legal issues.

Author	Title	Objectives	Methodology	Conclusions/Comments
Whitfield, (1994). J.	Conflict in Construction: Avoiding, Managing, Resolving	How to avoid, manage and resolve construction conflicts	Book	The book identified the “top ten list” of specific causes of construction disputes in the USA which included contract clauses, project risks, unrealistic expectations, ambiguous contract provisions; unrealistically low bids; poor communications among the parties, deficient management and supervision, absence of “team spirit” among project participants.
Yin, R. K. (1984).	Case Study Research Design and Methods. 2 nd Edition	How to use the case study method to construction disputes.	Case study	The study recommended retelling and triangulation of responses of specific stories related to the successes or disappointments experienced by the organizations that were conveyed during data collection. The studies’ conclusion makes assertions and suggestions for further research activity, so that another researcher may apply these techniques to other construction dispute to determine whether similar findings are identifiable in other situations. The report also highlighted the importance of using case studies to confirm any conflicting findings from literature reviews.
Yu, T. (2007).	Expert Determination as a means of resolving surveying disputes	To investigate on the feasibility in term of legal view, practical situation and procedural matters regarding whether expert determination is an effective means of resolving surveying dispute in Hong Kong.	Exploratory Interviews an questionnaire surveys	The suggestion to promote expert determination in resolving surveying disputes are in the conceptual stage. As the suggestion would probably involve substantial changes of the existing legal frameworks and assistance of the relevant institutions for the education of expert determination, more consultation and investigation should be carried out.

2.9 Summary

This chapter has presented an analysis of issues arising out of literature on alternative dispute resolution. The next chapter examines the research methods that will be employed to achieve the objectives of the dissertation.

Chapter Three: Research methodology

3.1 Introduction

Chapter two presented a review of literature on dispute resolution. Literature review is a prerequisite step before attempting to plan research methods.

This chapter discusses research methods. The chapter also examines and evaluates available research methods and explains how data was collected and analyzed, in order to achieve the objectives of the study.

3.2 Definition of research

Rajasekar and Philominathan (2006) defined research as a logical and systematic study to generate new and useful information on a particular topic and explained that:

- it is an investigation into finding solutions to scientific and social problems through objective and systematic analysis;
- it is a search for knowledge, that is, information about matters and a discovery of hidden truths. The information might be collected from different sources like previous research, reports, books, journals, internet and newspapers;
- research can lead to new contributions to existing knowledge; and
- only through research is it possible to make progress in any field.

Rajasekar and Philominathan concluded that research is accomplished through study, experiments, observation, analysis, comparison and reasoning.

According to Webster (1985), to research is to search or investigate exhaustively. "It is a careful or diligent search, studious inquiry or examination especially investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts or their practical application. It can also be the collection of information about a particular subject" (Webster, 1985).

3.2.1 Objectives of research

Rajasekar and Philominathan (2006) stated that the prime objectives of any research were:

- (a) to discover new facts;

- (b) to verify and test important facts;
- (c) to find out the unknown facts of an event;
- (d) to find new things ; or
- (e) to serve society by solving social problems.

3.3 Types of research_

Research is broadly classified into two main categories:

- fundamental or basic research; and
- applied research.

3.3.1 Basic research

According to Rajasekar and Philominathan (2006), basic research is an investigation into basic principles and reasons for occurrence of a particular event or process or phenomenon. It is also called theoretical research. Studies or investigations of natural phenomena relating to pure science are termed basic research. Basic research may not lead to immediate use or application. It is not concerned with solving any practical problems of immediate interest. But it is original or basic in character. It provides a systematic and deep insight into a problem and facilitates extraction of scientific and logical explanation and conclusion on it. It helps build new frontiers of knowledge. The outcomes of basic research form the basis for many applied studies. Researchers working on applied research have to make use of the outcomes of basic research and explore its utility. Research on improving a theory or a method is also referred to as fundamental research.

3.3.2 Applied research

In applied research, one solves certain problems employing well known and accepted theories and principles. Most of the experimental, case studies and interdisciplinary studies are essentially applied research. Applied research is helpful for basic research. A study, the outcome of which has immediate application is also termed as applied research. Such research is of practical use to current activity. Applied research is concerned with actual life studies such as research into social problems, increasing the efficiency of a machine or gain factor of production of a material, pollution control or preparing vaccination for a disease. Such studies have immediate potential applications (Rajasekar and Philominathan, 2006).

Basic and applied studies can be quantitative or qualitative or both. Table 3.1 below shows the differences between basic and applied research.

Table 3.1: Differences between basic and applied researches

Basic research	Applied research
Seeks generalization	Studies individual or specific cases without the objective to generalize
Aims at basic processes	Aims at any variable which makes the desired difference
Attempts to explain how things happen	Tries to say how things can be changed
Tries to get all the facts	Tries to correct the facts which are problematic
Reports in technical language of the topic	Reports in common language

After Rajasekar and Philominathan (2006)

3.3.3 Other types of research

These types of research include:

- a) action research which deals with fact finding to improve the quality of action in the social world;
- b) explanatory research which deals with searching explanations for events and phenomena, for example finding answers to the question why things are like what they are;
- c) exploratory research which deals with getting more information on a topic; and
- d) comparative research which obtains similarities and differences between events, methods, and techniques.

3.4 Research methods and methodology

All the methods used by a researcher during a study are termed research methods. It is important to note that even if the research methods considered in two problems are the same, the methodology may be different. It is therefore necessary to design a suitable research methodology for the problem being studied.

3.4.1 Research methods

Research methods are essentially planned, scientific and value-neutral procedures. They include theoretical procedures, experimental studies, numerical schemes and statistical approaches. Research methods help collect samples, data and find solutions to problems. Particularly, scientific research methods call for explanations based on collected facts which can be verified by experiments, measurements and observations and not on reasoning alone (Rajasekar and Philominathan, 2006). They highlighted the following examples of research methods:

- a) analysis method in which classes of data are collected and studies conducted to discern patterns and formulate principles that might guide future action;
- b) case study method in which the background, development, current conditions and environmental interactions of one or more individuals, groups, communities, businesses or institutions is observed, recorded and analyzed for stages of patterns in relation to internal and external influences;
- c) comparison method in which two or more existing situations are studied to determine their similarities and differences;
- d) correlation-prediction method in which statistically significant correlation coefficients between and among a number of factors are sought and interpreted;
- e) evaluation method in which research is carried out in order to determine whether a program or project followed the prescribed procedures and achieved the stated outcomes;
- f) sign - demonstration method in which new systems or programs are constructed, tested and evaluated;
- g) experimental method in which one or more variables are manipulated and the results analyzed;
- h) survey-questionnaire method in which behaviours, beliefs and observations of specific groups are identified, reported and interpreted;

- i) status method in which a representative or selected sample of one or more phenomena is examined to determine its special characteristics;
- j) theory construction method in which an attempt is made to find or describe principles that explain how things work the way they do; and
- k) trend analysis method involves predicting or forecasting the future direction of events.

3.4.2 Research methodology

Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research methodology. It is also defined as the study of methods by which knowledge is gained. Its aim is to provide a work plan of the research study.

3.4.2.1 Quantitative research

Quantitative research is objective in its nature. It is defined as an inquiry based on testing a hypothesis or theory composed of variables, measured with numbers, in order to determine whether the hypothesis or theory is correct. Quantitative data is therefore not abstract. It is based on hard, reliable and tangible information. This type of research is used to find out facts about a question, or to gather evidence and study relationships to test a theory.

Thus, quantitative research actually examines, and measures the relationship between people, situations or events by way of questionnaire surveys (Holmes, Hazadiah and Habibah, 2005). It is also a research type that describes phenomena in numbers and measurements instead of words.

3.4.2.2 Qualitative research

Qualitative research has the ability to seek and gain substantial insights into people's perspectives. Qualitative research focuses more on the beliefs, understanding, opinions and views of the people who are investigated.

There are two forms of qualitative research:

- a) exploratory, which relates to unfamiliar topics; and
- b) attitudinal, which is used to subjectively evaluate the opinions or the perceptions of

respondents towards a particular subject (Naoum 1998).

Naoum (1998) described the differences between quantitative and qualitative research as similar to the difference between counting the shape and types of design of a sample of green houses as against to living in them and feeling the environment.

Denizen and Lincoln (1998) stated that qualitative research “involves an interpretive, naturalistic approach to the world” and that “qualitative researchers study subjects in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people attach to them”. Holmes et. al (2005) argued that qualitative research is used if the researcher wants to understand a phenomenon about which they know very little of, or when they do not have complete knowledge of a particular entity.

In order to develop “complete knowledge of a particular entity” two types of research instruments, under qualitative studies, will be used. These are structured interviews and case studies.

3.4.2.3 Mixed research strategy

This study has a requirement for both quantitative and qualitative research to be able to fulfill the aim and objectives of the dissertation. The use of mixed research strategy increases the quality of final results and helps provide a more comprehensive understanding of analyzed issues. Studies using mixed-methods have shown that integration of the quantitative and qualitative traditions within the same study can be seen as complimentary to each other (Greene and Caracelli, 1997).

In this study, the research approach combined quantitative and qualitative methods. Creswell (1994) stated that there were five objectives for combining such methods in a single study:

- a) triangulation tests consistency in the classic sense of seeking convergence of results;
- b) complementality, in that overlapping and different facets of a phenomenon may emerge. It clarifies and illustrates results from one method with the use of another;
- c) development, wherein the first method is used sequentially to help inform the second method. Partial results from one method might suggest that other assessments should be incorporated;

- d) initiation, wherein contradictions and fresh perspectives emerge. This stimulates new research questions or challenges; and
- e) expansion, wherein the mixed methods add scope and breadth to a study providing more details on the specific issues.

3.5 Data collection

The two main methods of collecting data for a research are:

- (i) desk study; and
- (ii) fieldwork

3.5.1 The desk study

This is often referred to as secondary data collection, which is acquired from publications such as government reports, books and journals. Secondary data forms the literature review section or chapter two of the study.

a) Importance of literature survey

Literature survey helps to collect relevant information about the research problem, complementary data and clarity of ideas. Sources of information include:

- (i) journals and newspaper articles;
- (ii) research articles related to the topic chosen;
- (iii) published text and books on the chosen topic;
- (iv) proceedings of conferences and workshops;
- (v) reprints or collections available with the research supervisor and other experts working on the topic chosen; and
- (vi) the internet which is a global data bank of information. Although some of the information is for general use and maybe not be as reliable as reference material, the internet has a lot of reliable sources of information suitable for inclusion in literature review. Due to lack of suitable books and journals, the internet was utilized to compare trends in other countries.

According to Rajasekar and Philominathan (2006), review of the literature is a prerequisite step before attempting to plan the study and it helps to:

- a) refine the research topic;

- b) get proper understanding of the topic;
- c) acquire proper theoretical and practical knowledge to investigate the problem;
- d) show how the subject of the study relates to previous research studies; and
- e) know whether the proposed research problem has already been solved.

A review of past work helps to understand the outcome of previous studies where similar problems were solved. Literature reviewed helped to design an appropriate methodological approach, data collection and analysis methods for this study.

3.5.2 Fieldwork

This is often referred to as primary data collection, which is acquired first hand through interviews, questionnaires and case studies.

The primary research method is acknowledged to be difficult due to the increasing number of researchers targeting the same respondents for data, and this is often reflected in poor response rates to surveys.

The collection of primary data through questionnaires will form the quantitative part of this study. The data collected through interviews will form the qualitative part.

a) Interviews

This method of data collection is associated with the qualitative research approach. Interviews can take place over the phone, but ideally face to face interactions are common. This form of data collection allows for depth which cannot be gained through questionnaires. According to Dillon *et.al* (1994), there are three types of interviews techniques:

- (i) **unstructured interview** is without any formal questions listed prior to meeting the interviewee. This allows freedom to explore areas of interest and if the interviewee is knowledgeable in the subject, this type of interview can provide in-depth data. The main disadvantage is that the analysis and comparison of data obtained from unstructured interviews is difficult and presents a challenge to the researcher.
- (ii) **semi-structured interview** allows a greater freedom to consider various areas of research topics identified prior to the interview, and also allows the interviewee to digress to be able to fully justify their perspective. Data obtained from this type of inter-

view is easy to compare, quantify and analyze. This method allows for exploration in the area of interest resulting in in-depth information being provided.

- (iii) **structured interview** involves pre-set or written questions asked in a given order, with no option to deviate throughout the interview. This method allows a quick interview and the data obtained is easy to compare and analyze. The biggest disadvantage is that the method does not allow further exploration or investigation into the topic of interest.

With the interview method, the levels of knowledge, experience and awareness on the development of ADR around levels of satisfaction and dissatisfaction were identified based on the answers given and the background of the respondents.

The focus group selected was expected to represent the main characteristics of ADR from which the results of the research could be generalized to all construction participants.

a) Questionnaires

According to Naoum (1998), questionnaire surveys are used to gather data from a relatively large number of respondents within a limited time frame. The essential element of a successful questionnaire is simply the format of the questions “The questions should be very carefully worded and free from faults such as ambiguity, vagueness, technical expressions, difficulty questions and so forth”, (Naoum 1998). The design of the questionnaires was simple with aspects that provided feedback on all the information needed for this dissertation.

b) Case studies

In order to understand specific situations in detail, case studies are the most appropriate research technique (Yin, 1984). According to Yin (1984), “case study research excels at bringing us to an understanding of a complex issue or object and can extend experience or add strength to what is already known through previous research. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships”. Researcher Robert K. Yin (1984) points out that critics of the case study method believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of findings. Others feel that the intense exposure to study of the case biases the findings. Some dismiss case study research as useful only as an exploratory tool. Yet re-

searchers continue to use the case study research method with success in carefully planned and crafted studies of real-life situations, issues, and problems (Yin, 1984). Yin (1984) recommended techniques for organizing and conducting a case study research successfully. The six steps of the case study method are:

- determine and define the research questions;
- select the cases and determine data gathering and analysis techniques;
- prepare to collect the data;
- collect data in the field;
- evaluate and analyze the data; and
- prepare the report.

The construction industry has several distinct types of interest parties; clients; contractors; sub-contractors; consultants; financiers; and beneficiary communities, each one a good candidate for the case study research. The case study method is applicable to this set of users because it can be used to examine the issue of whether or not a construction dispute in some way affects the organization and what those effects might be in terms of compensation or loss of income.

According to Yin (1984), a case study uses both primary and secondary data collection methods utilizing techniques like interviews, questionnaires and observations.

Structured interviews were used to gather general data regarding the particular respondents' involvement with ADR. Case studies were identified from the structured interviews conducted and two most appropriate cases were further explored. Case studies consisted of one successful ADR case and one unsuccessful. The word "success" in this research is referring to the fact that it worked in a satisfactory way or had intended a favourable outcome (Concise Oxford Dictionary, 1990).

In deciding on the research methodology, serious consideration was given to a case study approach only. It was decided, however, that although this approach would provide data rich in detail, the data would not reflect the existence of any variability in the way in which ADR was being applied in the Zambian construction industry. As data on a wider range of views, practices and approaches was preferred to an in-depth account of a limited number of ran-

domly chosen cases, a qualitative approach, using both the descriptive survey study and the case study methods were considered the most appropriate methods for answering the re- search question.

Primary data were collected by way of interviews and questionnaires received from the vari- ous construction stakeholders. The interview and questionnaire responses were analyzed us- ing basic descriptive statistics. The quantitative results were then used to assist with the qua- litative interpretation of the responses.

Table 3.1 below gives a summary of the data collection methods described in Section 3.5 above giving the advantages and challenges of each method.

Table 3.2 Summary of data collection methods

Method	Overall Purpose	Advantages	Disadvantages
Document Review, Internet	To get an impression of how the project/programme operates and to get background/historical data	<ul style="list-style-type: none"> • Provide comprehensive and his- torical information • Does not interrupt respondents project/programme too much • Information already exists • Few biases about information • Internet accessible 24hrs and information easy to compare 	<ul style="list-style-type: none"> • Often takes time to process • Information may be incomplete • One needs to be quite clear what to look for • Data restricted to what already exists • Access to internet may be restricted
Interviews	To fully understand someone's impression or experience, or learn more about their answers to questionnaires	<ul style="list-style-type: none"> • Get full range and depth of in- formation • Develops relationship with re- spondents • Can be flexible with respondents • Gives a higher response than written questionnaires 	<ul style="list-style-type: none"> • Can be time consuming • Can be hard to analyse and compare • Can be costly • Interviewer can bias respon- dents' responses
Questionnaires, Surveys or Checklists	To quickly and/or easily collect a lot of information from respondents	<ul style="list-style-type: none"> • Can be done anonymously • Inexpensive to administer • Easy to compare and analyse • Administer to many respondents • Can collect a lot of data 	<ul style="list-style-type: none"> • Might not get careful feedback • Wording can bias respondent's responses • Are impersonal • Does not always get full story • Low response rates common
Case studies	To gather accurate information of a complex issue or object or how an activity actually operates in a real-life context.	<ul style="list-style-type: none"> • View operations of an activity as they are or did actually occur • Can adapt to events as they occur 	<ul style="list-style-type: none"> • Can be difficult to interpret seen behaviours • Can be complex to categorise observations • Can influence behaviours of project/programme partici- pants • Can be expensive

3.5.3 The method of data collection for this study

In order to ensure the reliability of the research, it was decided that the four survey methods outlined in Table 3.1 were all appropriate and therefore were used in data collection for this dissertation.

3.6 Sampling methods

Following decisions about how data is to be collected, the next consideration by a researcher is to select a sample of the population of interest that is truly representative. At the same time, the requirement that samples be representative of the population from which they are drawn has to be considered with respect to time and other resource considerations.

This being the case, it is incumbent on the researcher to clearly define the target population. There are no strict rules to follow, and the researcher must rely on logic and judgment. The population is defined in keeping with the objectives of the study.

Sometimes, the entire population will be sufficiently small, and the researcher can include the entire population in the study. This type of research is called a census study because data is gathered on every member of the population (Webster, 1985).

Usually, the population is too large for the researcher to attempt to survey all of its members. A small, but carefully chosen sample can be used to represent the population. The sample reflects the characteristics of the population from which it is drawn.

The construction industry has several distinct types of stakeholders who included: clients; contractors; sub-contractors; consultants; financiers; and beneficiary communities. Data collection was done in a manner which allowed information and viewpoints from the wide variety of stakeholders who were consulted.

According to Webster (1985), sampling methods are classified as either *probability* or *non probability*. In probability samples, each member of the population has a known non-zero probability of being selected.



3.6.1 Probability methods

This includes random sampling, systematic sampling, and stratified sampling. The advantage of probability sampling is that sampling error can be calculated. Sampling error is the degree to which a sample might differ from the population. When inferring to the population, results are reported plus or minus the sampling error. In non-probability sampling, the degree to which the sample differs from the population remains unknown. Examples of probability methods of sampling are described below:

- a) **Random sampling** is the purest form of probability sampling. Each member of the population has an equal and known chance of being selected. When there are very large populations, it is often difficult or impossible to identify every member of the population, so the pool of available subjects becomes biased. According to Cook and Campbell (1979), “one problem with random samples is that often the researcher is unable to obtain a reasonable response rate, which is why convenience samples are so common in construction research. That is, we ask respondents that we feel are likely to agree to participate”. Another problem with random samples is that there may not be enough firms in a particular group to make conclusions about;
- b) **Systematic sampling** is often used instead of random sampling. It is also called an Nth name selection technique. After the required sample size has been calculated, every Nth record is selected from a list of population members. As long as the list does not contain any hidden order, this sampling method is as good as the random sampling method. Its only advantage over the random sampling technique is simplicity. Systematic sampling is frequently used to select a specified number of records from a computer file; and
- c) **Stratified sampling** is the commonly used probability method that is superior to random sampling because it reduces sampling error. A stratum is a subset of the population that share at least one common characteristic. Examples of strata might be males and females, or managers and non-managers. The researcher first identifies the relevant strata and their actual representation in the population. Random sampling is then used to select a *sufficient* number of subjects from each stratum. “*Sufficient*” refers to a sample size large enough for to be reasonably confident that the stratum represents the population. Stratified sampling is often used when one or more of the strata in the

population have a low incidence relative to the other strata. "Stratified samples, in which we include specific numbers of firms from each subgroup that we are interested in researching, are therefore common. Ideally, respondents within each sub-group are randomly selected, but this is not always possible", Cook and Campbell, (1979).

Random stratified sampling is more precise and more convenient than simple random sampling. Some practical problems limit the desirability of a large number of strata:

- (i) past a certain point, little improvement will be affected by creating more strata; and
- (ii) a point may be reached where creation of additional strata is economically unproductive.

3.6.2 Non probability sampling

This is a method in which members are selected from the population in some non-random manner (Cook and Campbell, 1979). These include convenience judgment, quota and snowball sampling. The situations when any one of them is used is explained below.

- a) **Convenience sampling** is used in exploratory research where the researcher is interested in getting an inexpensive approximation of the truth. As the name implies, the sample is selected because they are convenient. This non probability method is often used during preliminary research efforts to get a gross estimate of the results, without incurring the cost or time required to select a random sample;
- b) **Judgment sampling** is a common non probability method. The researcher selects the sample based on judgment. This is usually an extension of convenience sampling. For example, a researcher may decide to draw the entire sample from one "representative" city, even though the population includes all cities. When using this method, the researcher must be confident that the chosen sample is truly representative of the entire population;
- c) **Quota sampling** is the non probability equivalent of stratified sampling. Like stratified sampling, the researcher first identifies the strata and their proportions as they are represented in the population. Then convenience or judgment sampling is used to select the required number of subjects from each stratum. This differs from stratified sampling, where the strata are filled by random sampling; and
- d) **Snowball sampling** is a special non probability method used when the desired

sample characteristic is rare. It may be extremely difficult or cost prohibitive to locate respondents in these situations. Snowball sampling relies on referrals from initial subjects to generate additional subjects. While this technique can dramatically lower search costs, it comes at the expense of introducing bias because the technique itself reduces the likelihood that the sample will represent a good cross section from the population.

3.6.3 Focus group and the sample population

This research aimed to look into the “construction participants’ perceptions and application of ADR in the Zambian construction industry. In general, there are at least three major parties involved in the construction industry (Murdoch and Hughes, 2000):

- a) employers;
- b) consultants; and
- c) contractors.

From the literature reviewed, the most frequent disputes and claims in the construction industry involved employers and contractors. Notwithstanding this, disputes and claims were also common between main contractors and their subcontractors or suppliers or both.

Therefore, for the purpose of this research, the main focus group was donor agencies such the World Bank, European Union, African Development Bank, DANIDA as well as implementing government agencies and departments, provincial and district authorities, other public, parastatal and private contracting agencies, consultants and registered contractors in Zambia.

3.7 Descriptive and inferential statistics

The study employed both descriptive and inferential statistics. Descriptive statistics simply describe what is or what the data shows whereas inferential statistics try to infer from the sample data what the population might think (Trochim, 2006). In other words, inferential statistics make inferences from collected data to more general conditions. Descriptive statistics were used to describe the basic features of the data in the study. A database was constructed on the basis of frequency tables used to perform a count against each question to discover the frequency of each response. A frequency table is a simple device for array-

ing data (Cooper and Schindler, 2003). In addition, pie and bar graphs were used as common ways of displaying relative comparisons of nominal data. These were generated from SPSS and Microsoft Excel computer softwares. The descriptions and inferences were then used to explain the generated results based on responses given in the survey.

3.8 Triangulation

Triangulation derives its name from a technique used by surveyors. It involves looking at the research question from several viewpoints as in mapping in land surveying when instruments are placed on two or three known control points to get overlapping data sets concerning the area or plain bound by the three control points to verify the accuracy of the points or data. In research it is therefore important to ensure that information gained from one method or source is triangulated by obtaining comparable information from other methods and sources (Creswell, 1994). Triangulation was used in this study to:

- a) check that data collected in one form such as through a structured interview was both reliable and valid by using another method such as questionnaire or case study;
- b) verify that data collected was accurate; and to
- c) overcome problems of bias.

Approaching the subject from different directions helped clarify the data collected. Similarly, it was important to validate any information by asking comparable questions to members of the same group of informants, to see if everyone shared that point of view. In circumstances where answers from one method, say interviews or questionnaires widely differed with those from another group of respondents, then, further questions were posed to find out the reasons for the apparent discrepancies.

3.9 Summary

This chapter described the research methodology or simply the action plan for achieving the aims and objectives of the study. It explained the essential role that literature review, research methods and data collection played in the study.

The importance of an appropriate sampling strategy was explained. Stratification was chosen as the method of sampling for this study. There is no departure from the principles of randomness. Random stratified sampling was considered more precise and more convenient

than simple random sampling. In this study, specific sub-groups were identified from the key stakeholders and limited selective and random sampling was applied rationally.

The methodology and research instruments applied provided input to determine the level of utilization of ADR in the Zambian construction industry.

In the next chapter, data was collected, analyzed and presented. Evaluation methods and tools applied to the data collected will also be described.

Chapter Four: Data collection and analysis

4.1 Introduction

Chapter three described the common research methodologies and methods used to collect data. It was determined that the most appropriate method of collecting primary data for this study were structured interviews and self administered questionnaires and case studies.

This chapter presents an analysis and discussion of the data collected concerning the application of ADR in Zambia. The data presented were collected through surveys of the key stakeholders in the Zambian construction industry. The respondents were informed about the nature of the study. Some of the questions were framed with responses on a Likert scale of 1-5, while other were left open-ended to promote responses that would lead to meaningful issues for further discussions.

Although input was gathered on a non-attribution basis, all individuals who responded gave permission to be included on the list of respondents. The list of individuals from various firms, companies and organizations who responded to the data collection process is provided in Appendix A3.

4.2 Surveys

The two forms of surveys, interviews and questionnaires employed in this research share a number of common features. The intention was to try and relate or compare the results from the two different methods. The data was collected using two approaches:

- structured interviews with selected senior representatives of ADR institutions and construction stakeholders or key informants employing mostly open-ended questions; and
- questionnaires completed by ADR and construction stakeholders utilizing closed-ended questions;

4.2.1 Structured interviews

The interviews provided a preliminary stage of the data collection process and were intended to obtain important statements, facts, experiences of the stakeholders in relation to management of construction disputes and the application of ADR in Zambia. The process

was also intended to provide additional information to the literature reviewed and then feed into the final questionnaire survey instrument. The interviews were conducted with a range of key ADR stakeholders and formed a basis from which the survey instruments were drawn up.

(i) Identification of interviewees

The interviewees were chosen to represent a wide range of views about ADR in the construction industry. The interviewees represented ADR and legal practitioners, senior contracting officers of government implementing agencies, consultants, donors and contractors. For interviewees operating outside the construction industry, the answers sought from them were generally tailored towards their experiences of ADR in the construction industry.

(ii) Number of interviews

A total of twenty interviews were targeted. The interviews were intended to gain insight into ideas and concerns about the use of ADR as an effective and viable tool for resolution of construction disputes in Zambia. The interview questions were developed with the main study objectives in mind. The interviewees included those working for government implementing agencies, donors, legal and ADR practitioners, contractors and consultants.

(iii) Design of interview questions

The aim of the interviews was to elicit a range of qualitative data relevant to the study objectives. The interview questions sought information about:

- background of the interviewee;
- definition of ADR;
- application of ADR;
- current developments and challenges in the application of ADR in the construction industry;
- role of Government in the application and implementation of ADR in Zambia; and
- best practices and recommendations.

In all cases, the interviewees were senior members of the selected organizations. This was deliberately intended to examine “big picture” questions that were high-level policy and practice questions regarding ADR. It was considered that senior representatives would be in

the best position to offer views that extend beyond their own organizational experience. The structured interview questions are presented in Appendix B1.

(iv) Confidentiality

To elicit reliable information, interviewees were informed at the beginning of the interview that stakeholder comments quoted in the study report would not be attributed to individual informants without express permission from them. They all agreed to have their names published. Appendix B2 provides the list of stakeholders interviewed.

All key informants approached agreed to be interviewed and they gave extensive, highly informative answers.

4.2.2 Questionnaire survey

The second phase of data collection from a large number of stakeholder organizations and individuals in the Zambian construction industry applied was the questionnaire survey. The method utilized questionnaires employing mostly closed-ended questions to gather quantitative data. The use of closed-ended questionnaires was essential to enable speedy completion of the questionnaire by respondents and to facilitate the analysis of data from a large number of respondents within a relatively short timeframe. Where possible, the closed-ended questions were formulated using information collected during the literature review stage and interview survey. Where this information was not available, open-ended questions were used.

The final questionnaire survey instrument incorporated responses to the interview questions. The survey instrument was then pilot-tested with three ADR practitioners practicing as construction consultants prior to undertaking the survey. This approach provided useful information relating to the amendments, redrafting and improvements made to the final form of the questionnaire. The sample questionnaire is included under Appendix A2.

(i) Questionnaire respondents

A letter inviting completion of the survey questionnaire was prepared and it is included as Appendix A1. The list of individuals or organizations that completed the questionnaire is presented in Appendix A3. A total of fifty (50) questionnaires respondents were targeted.

The number 50 was arrived at after consultations with the study supervisor and the desire to achieve the maximum precision within the time and resources available.

(ii) Questionnaire response rate

A total of fifty (50) questionnaires were sent out to respondents. Over a period of eight weeks from October to December, 2009, 47 questionnaires were returned completed, giving a response rate of 94 percent.

As predicted by the literature review on research methodology, there was a large volume of responses in the first four weeks after the questionnaire was mailed. This then tapered down to a trickle. Six weeks later a follow up email and telephone calls were made to increase the responses but the few who did not respond indicated that they were not able to complete the questionnaires due to lack of understanding of the subject.

There is no 'standard' for an acceptable response rate. Published opinion indicate that below 80 percent, bias is likely to occur and a response rate below 60 percent is 'barely acceptable' (Peninsula RDSU, 2003). It was, however, felt that the eight weeks already given was adequate and that waiting for more responses would further delay the study.

(iii) Questionnaire design and layout

The questionnaire was designed for ease of use and completion and was deliberately kept to the minimum length necessary to collect the appropriate data and to provide information about:

- a) the application of ADR in the construction industry in Zambia; and
- b) ideas and concerns about the use of ADR as an effective and viable tool for resolution of construction disputes.

Following the basic research design outlined in Chapter Three, the survey instrument was planned with five distinct parts:

- Section 1 - dealt with respondents' history and background;
- Section 2 - dealt with awareness and perception of the application of ADR in the Zambian construction industry, the nature of disputes and the current methods of dispute resolution. This section was designed to give a measure of the respondents' "dispute

resolution awareness", and their knowledge of what was happening in the dispute resolution field in Zambia;

- Section 3 - dealt with current developments and challenges in the application of ADR in the industry. This part of the questionnaire explored the respondents' degree of involvement in ADR and other dispute resolution processes;
- Section 4 – dealt with beliefs or attitudes about dispute resolution; with best practices and recommendations. This part focused on respondents' attitudes and beliefs. The direction and strength of respondents' reactions was measured on the Likert scale representing degrees of sentiment along a polarised continuum. Rather than ask respondents to state their views through open-ended questions, they were asked to express single ideas about which they were expected to have definite views. The section was intended to bring out concerns about cost, efficiency and the suitability of dispute resolution processes for construction disputes. Some questions dealt with the potential for preservation of business relationships in alternative dispute resolution processes; and
- Section 5 - dealt with respondents' knowledge of dispute resolution processes and recommendations for best practices or factors important for the development of an ADR framework that would benefit the Zambian Construction Industry. This part of the questionnaire further explored respondents' degree of involvement in ADR and other dispute resolution processes. These questions provided a somewhat more objective measure of the extent to which respondents' views had in relation to the development of an ADR framework.

The questionnaires were distributed both by post and by email. However, respondents were only given the option of providing a hard-copy response.

4.2.3 Pre-testing

The preparation of the survey instruments involved literature review, consultations, suggestions and frequent amendments. This was done to ensure that the instruments were correct, unambiguous and in line with the study objectives. The process which was followed in arriving at the final wording and layout included circulating an original draft to a small focus group of three ADR practitioners for comment followed by redrafting and recirculation. A further draft was piloted amongst a varied group of ADR and construction practitioners. At all of these stages, changes were made to reflect the feedback received.

4.2.4 Sampling

The biggest challenge associated with organizing a study of this nature is to sample as large a population as possible within the constraints of the time and budget.

The approach was to create strata on the basis of variables, for which information believed to be highly correlated with the principal survey characteristics of interest, e.g. study aimed to look into the “construction participants’ perceptions and application of ADR in the Zambian construction industry. In general, key informants from the ADR and constructions industry representing employers, consultants and contractors were the three major parties involved in the construction industry (Murdoch and Hughes, 2000). It was important to maximize differences in quotas for the key survey variables of interest.

The survey budget was fixed at US\$1,000.00 and the cost per observation was estimated at US\$ 20.00. The available total sample size was therefore, 50. Therefore, 5% of estimated quota size was considered appropriate as against sampling the same proportion of respondents in each quota. This is termed proportional allocation. In this study, there was no reliable data on overall sample sizes, best estimates were made. From a size of 50, the quota sizes were determined. In situations where respondents assigned to “quota A” were more varied with respect to their opinions than those assigned to “quota B”, optimum allocation minimized the bias by ensuring that more respondents are assigned to the quota within which there was greatest variation. It was advantageous, in such cases to make a disproportionate allocation.

The population sample was restricted to ADR and legal practitioners, government funding and implementing agencies, the judiciary, consultants, donor agencies, contractors and other construction professionals, including academicians.

4.2.5 Sampling technique

The concept of quota sampling was utilized in this study. The selection of respondents was non-random in the sense that the respondents did not have a known non-zero chance of being selected. Participants were purposively selected to provide a representative sample in terms of the definition of the Zambian Construction Industry, i.e. consultants, contractors,

government implementing agencies, and other ADR, legal and construction professionals. Individuals were identified and contacted by telephone and email. In the case of institutions, a qualified person was selected by the responding institution to complete the questionnaire. This process was done until a satisfactory response was achieved. The advantage of this procedure while being faster and more cost effective was in the selection of the respondents by the researcher.

Quota sampling allowed the researcher to select the potential respondents based their market share of ADR or the construction industry than would have been possible in other sampling techniques. Fifty questionnaires were distributed to the various stakeholders identified. A glossary of ADR definitions and terms to help respondents complete the document accompanied the questionnaire.

4.3 Data analysis

As outlined above, data collection in this study comprised both quantitative and qualitative methods. This section presents the results of the interviews and the questionnaire survey. The survey results were collated and analyzed using Microsoft Excel and SPSS programs.

4.3.1 Interview results

Of the twenty ADR interest groups that were targeted, thirteen were interviewed. This represented a response rate of 65 percent. Though the sample size was small it encompassed the key stakeholders of the Zambian construction industry and provided an indicative feedback on the application of ADR in the industry. Interviews were intended to provide preliminary indicators as to the level of application of ADR in the Zambian construction sector. The responses were representative and brought out both diversity of views and common issues in the use of ADR in the construction industry in Zambia. Any further submission to reach 100 percent response would not have altered significantly the results provided in this section.

The feedback received from the interviews together with the literature reviewed formed the basis for the preparation of the questionnaire survey instrument.

(i) Respondents by position of responsibility

The interviewees were professionals of different backgrounds. However, most of them were civil engineers followed by legal practitioners. Other respondents were architects and quantity surveyors. All the respondents held positions of high responsibility in their institutions, with over two thirds being directors or partners. Figure 4.1 below shows the respondents' positions of responsibility.

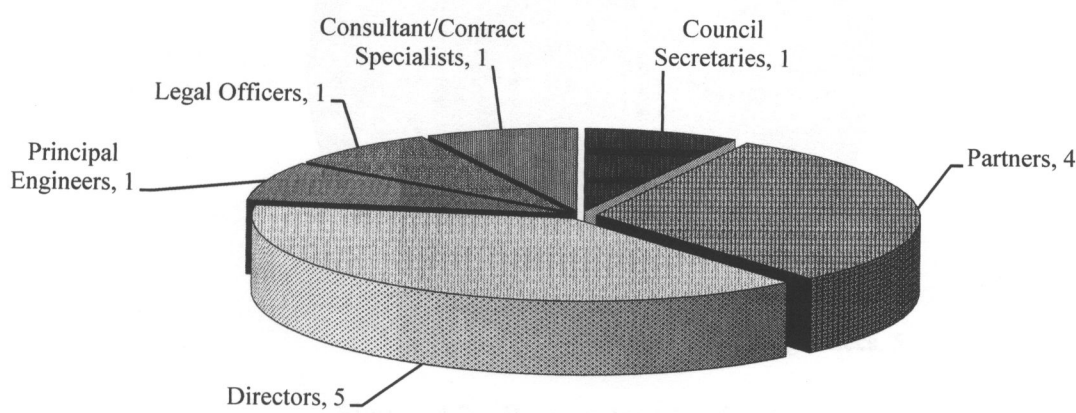


Figure 4.1: Respondents by position of responsibility

(ii) Respondent institution types

Figure 4.2 shows the distribution of respondents by organization type. Most of the respondents were drawn from government institutions or implementing agencies engaged in infrastructure development or construction activities. Of all the thirteen respondents, five were from government agencies representing the majority. The rest were private sector consultants and contractors, legal practitioners and donor or funding agencies.

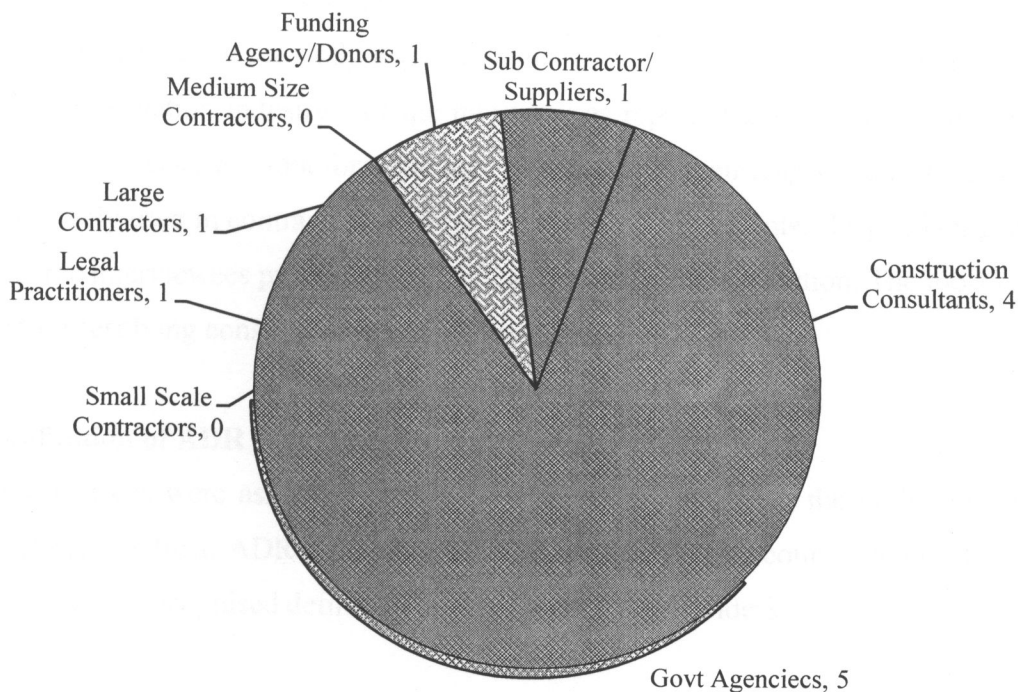


Figure 4.2: Respondent institution types

(iii) Interviewees' experience

The results in Figure 4.3 indicated that 8 out of 13 interviewees had been in the industry for more than 20 years. This reflected a measure of the extent to which respondent's views had a reliable basis of experience in the construction industry.

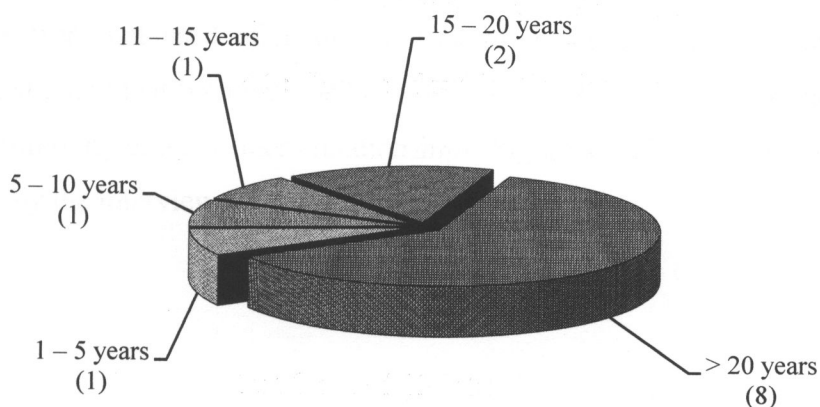


Figure 4.3: Length of experience in construction industry by firm

(iv) Application of ADR in Zambia

One of the objectives of the study was to establish awareness and applications of ADR in the Zambian construction industry. All the interviewees reported not only to be aware, but to have employed ADR as a tool for settlement of disputes in their respective institutions. ADR was reportedly used in contractual work, documents and agreements. Despite being aware of ADR, some interviewees preferred using litigation for dispute resolution. The most preferred method for resolving construction disputes was arbitration.

(v) Definition of ADR

The interviewees were asked an introductory question concerning the definition of ADR. Many of them defined ADR as an alternative to litigation in the court system. This was the most commonly recognised definition of ADR among stakeholders.

(vi) Involvement in ADR

The study also investigated the level of participation in ADR proceedings. Participation was measured using the frequency of the use of the different methods by the respondents. Results showed that all the interviewees, except one, had either used one or more of the available methods. The most frequently used was arbitration followed by conciliation or negotiation.

(vii) Frequency in the use of ADR methods

Arbitration was identified as the most frequently used method for settling construction disputes followed by negotiation. Of the 13 interviewees, 5 reported that arbitration was binding and enforceable. Interviewees who supported adjudication and mediation reported that the two methods were not used often due to lack of understanding and finality of the processes but highlighted that both provided a good platform for informal dispute resolution and a basis for promoting good business relationships. Figure 4.4 gives the frequency of use of ADR methods by the interviewees.

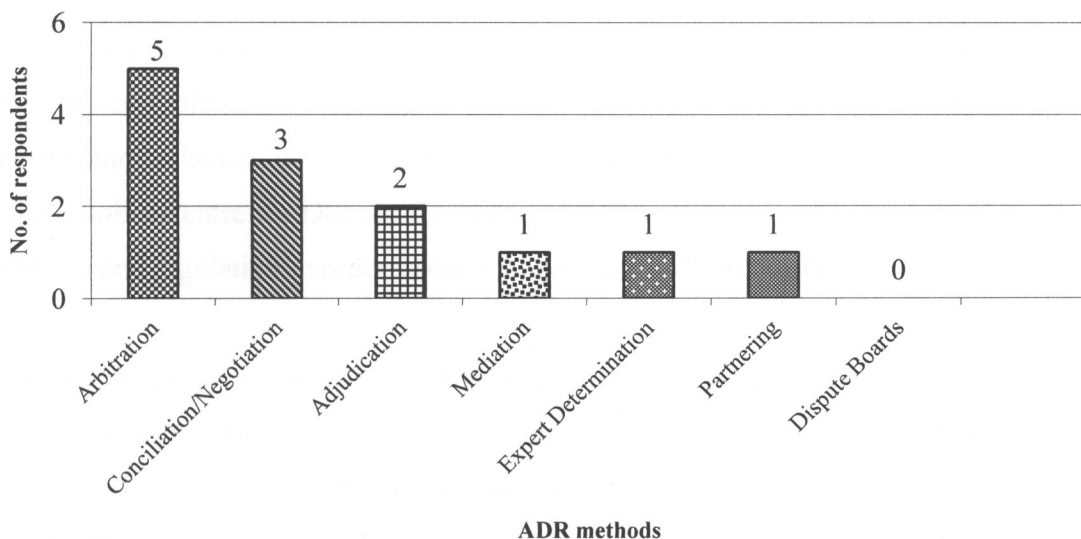


Figure 4.4: Most frequently used ADR methods

The majority of the interviewees felt that despite adjudication and mediation being speedy and cost effective methods for dispute resolution, there was need for more sensitization, rules and guidelines for application.

(viii) Training and regulation

The majority of interviewees indicated overall satisfaction with the quality of ADR practitioners. They generally felt that the standard of practitioners was good and acceptable but nevertheless required more training and exposure to improve the quality of executing ADR proceedings.

The interviewees further indicated that the skill base for ADR practitioners was higher in legal practitioners and relatively low in architects, contractors, engineers and quantity surveyors. They further identified lack of local training for adjudicators compared to that for mediators which was conducted by the ZCDR.

(ix) Skills in ADR by the professions

On who is most suitable to be an ADR practitioner, six (6) interviewees responded that any person with training in construction contracts was suited to handle construction disputes. Four (4) responded that the best persons to be ADR practitioners for construction disputes were construction professionals as they understood the processes and the contracts better.

The study further revealed that contemporary provisions for regulation of ADR in terms of supervisory controls and monitoring of approved practice were virtually non-existent. As a result, recommendations were made that both the National Council for Construction (NCC) and the Zambia Centre for Dispute Resolution (ZCDR) should be more involved by way of monitoring and regulation in order to enhance speedy ADR proceedings.

The interviewees gave suggestions on how to improve the quality of ADR practitioners. Training was identified as a cardinal ingredient to improving the quality of practitioners as well as the need to equitably distribute cases so as to expose practitioners to skills of handling construction disputes. Another suggestion was the establishment of a dedicated ADR office that could handle all construction related activities.

(x) Current developments and challenges of applying ADR in Zambia

A number of challenges in applying ADR in Zambia were identified and reported by all the interviewees. The most reported challenge was lack of ADR knowledge and awareness of procedures and benefits by construction participants. Other constraints included lack of local training, lack of ADR provisions in contract agreements, inadequate funding resulting in failure to establish a centre for ADR activities. It was also reported that there were insufficient practitioners, lack of knowledge and appreciation of ADR by construction participants. As a result, legal practitioners preferred litigation to ADR.

Following the identification of obstacles to the development of ADR in Zambia, a number of solutions were offered to mitigate the suggested constraints. Awareness and training were identified as the biggest assuaging factors to the obstacles facing the industry as regards ADR. It was suggested that basic knowledge of ADR be included in tertiary curriculum so that new graduates were acquainted with basic ADR proceedings. The other suggestion was increased promotion of benefits of ADR.

(xi) Role of government

The survey results showed that there was need for more Government involvement and participation in ADR practice. The respondents called for the NCC, the regulator of the construction industry in Zambia, to provide ADR services and protect contractor interests. Addi-

tionally, government was urged to include ADR in all agreements and construction contracts. The results also showed that there was need for government to support ADR by funding promotional activities as government had lost huge sums of money from failed projects as a result of delayed or non resolution of disputes.

The interviewees considered the use of ADR by government agencies as being very low compared to the private sector. The respondents gave perceptions of how the use of ADR by government would promote or hinder the dispute settlement processes. The responses evidently showed that government or its agencies hindered application of ADR by its preference for litigation and by maintaining procedures which were not tailored to ADR procedures and therefore contributed to delays in ADR proceedings. As a result, there was a call for government to play a leading role in the development of ADR rules and procedures by coming up with a policy on ADR, which would also provide judicial support to adjudication and mediation processes. The majority of respondents indicated that the government's increased involvement would build confidence in ADR.

(xii) Best practices, recommendations and other views

The interviewees were asked to provide other views about ADR in the Zambian construction industry. Divergent views given included:

- need for increased awareness and promotion of ADR among contractors;
- need to promote mediation, adjudication, conciliation, negotiation and expert determination as more cost effective means of resolving disputes;
- increased promotion and provision of ADR information were important to the construction industry;
- government participation and support was important;
- competence and integrity of practitioners was key to ADR development;
- universities and colleges needed to incorporate ADR training in their curricula;
- funding for promotion and management of construction disputes prevention and resolution was required;
- need for key stakeholders like government, consultants, contractors, donors and funding agencies to play their role in providing an enabling environment for application and the development of ADR;
- lengthy ADR proceedings hindered the development and promotion of ADR; and

- need for government policy on ADR to ensure participation and acceptance of various ADR methods and decisions, by government implementing agencies.

4.3.2 Questionnaire survey results

The questionnaire in Appendix A2 was the main data collection instrument during the study.

(i) Data analysis

In every study, the methods of collecting and analysis data determine its quality. The processing phase undergoes various stages before data can be organized into meaningful information, reported and presented as deliverables, other users and to the general public. The following were the stages of data processing for the study.

- (a) Upon receiving filled-in questionnaires, they were checked and edited. Some respondents were contacted to help correct or complete unanswered questions. Thereafter, all responses to open-ended questions were extracted and assigned equivalent codes to ease data entry. The data was captured using the Census and Survey Processing system (CSPro) and collated and analyzed using the Statistical Package for the Social Sciences (SPSS) which is more specialized in processing, manipulation and data analysis.
- (b) SPSS and Microsoft Excel computer software were used to tabulate, analyse and present the data in various formats for ease of interpretation. Percentages were used in data presentation in that they simplified and translated data to a standard basis for easy comparison.

Given the response rate of 94 percent, the quality of data collected was adjudged to be of high standard in as far as describing the application of ADR in the Zambian construction industry.

Analysis of those who responded reflected valuable information as it brought out both diversity of views and common issues affecting or explaining the situation surrounding the application ADR in the construction industry.

(ii) Cross tabulation

Cross tabulation was carried out to determine how ADR practitioners or those familiar with ADR responded to some key issues of ADR.

4.3.3 Descriptive and inferential statistics

The basic results of the survey can be seen in the frequencies of responses to the questionnaires in Figures 4.5 to 4.40.

i) Summary of the questionnaire survey responses

A total of fifty (50) questionnaires were sent to respondents. The response rate was 94%. Figure 4.5 presents the questionnaire responses.

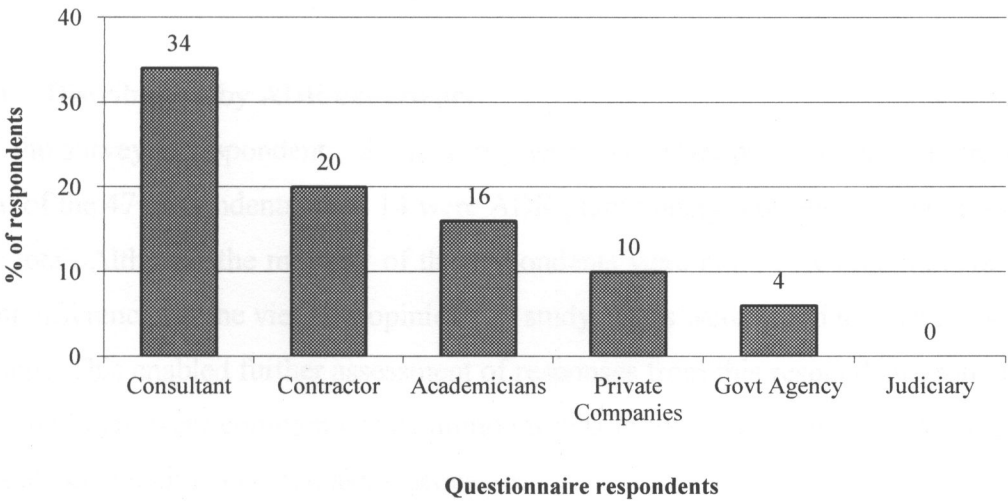


Figure 4.5: Summary of the questionnaire survey responses

4.3.3.1 Respondents background characteristics

Figures 4.6 to 4.11 provide answers to the questions on the professional backgrounds of all respondents in the survey.

(a) Distribution by professional background

Figure 4.6 shows that of the total respondents, the majority were professionals in civil engineering and construction. The purpose of establishing the professions of the respondents was in order to assess whether they would be able to respond to the subsequent questions in the questionnaire with a high degree of certainty. The analysis concluded that the vast majority had the requisite background and experience.

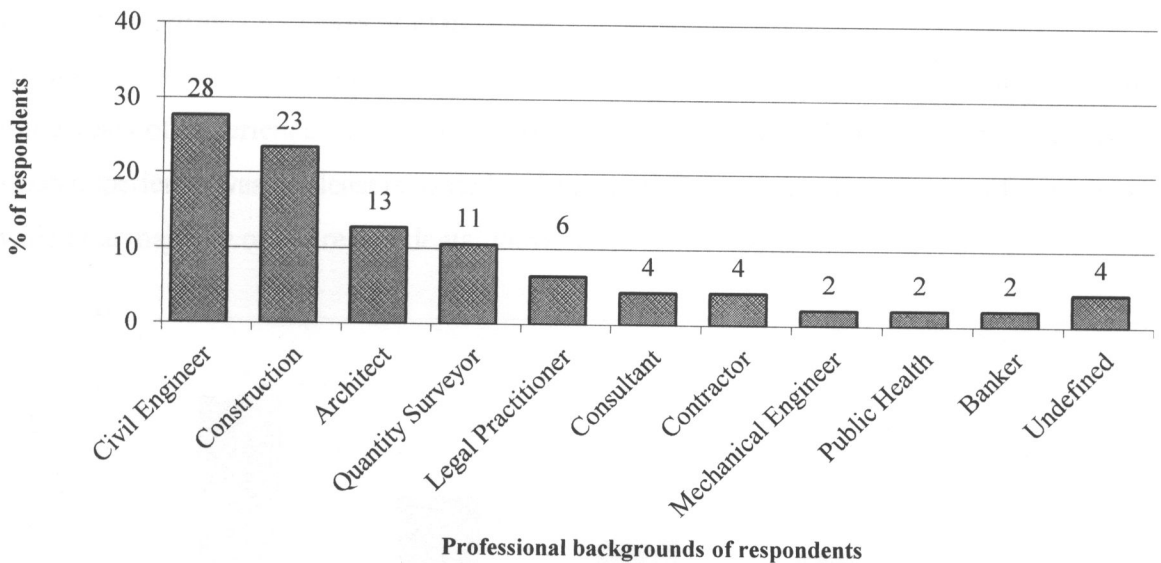


Figure 4.6: Percentage distribution of professional background

(b) Distribution by ADR experience

Of the surveyed respondents, the majority were not ADR practitioners. Figure 4.7 reveals that of the 47 respondents, only 14 were ADR practitioners representing about 30 percent of the total. Although the majority of the respondents were non ADR practitioners, no significant differences in the views or opinions on study issues were found to exist between the two groups. This enabled further assessment of responses from this respondent group to establish whether there were common or uncommon trends in their experiences of ADR and whether this affected their decision making processes.

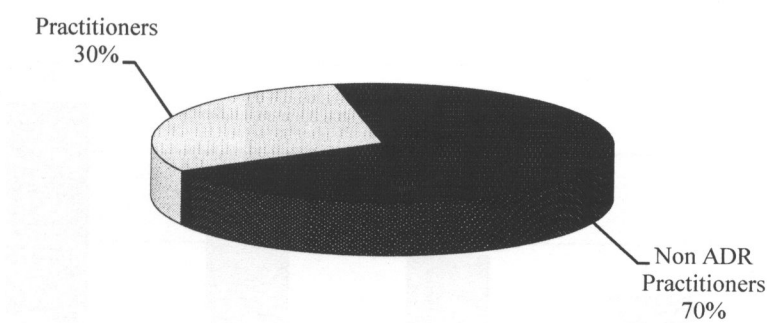


Figure 4.7: Distribution by ADR experience

(c) Distributions by years of experience

Figure 4.8 shows the years of experience of all the respondents. The upper bracket of 20 or more years of experience was highest with 38 percent whilst the lower bracket of less than 5 years experience was the least recorded at 6 percent. This reflected a measure of the extent to which the majority of the respondents' views were relied upon.



Figure 4.8: Percentage distribution by years of experience of respondents

(d) Distributions by years of establishment

The trend in Figure 4.8 was similar for Figure 4.9 for the lower bracket of less than 5 years experience by profession and operation. There was no correlation established between the years of establishment and the application of ADR, but the majority of respondents had been established long enough to have been exposed to numerous construction disputes.

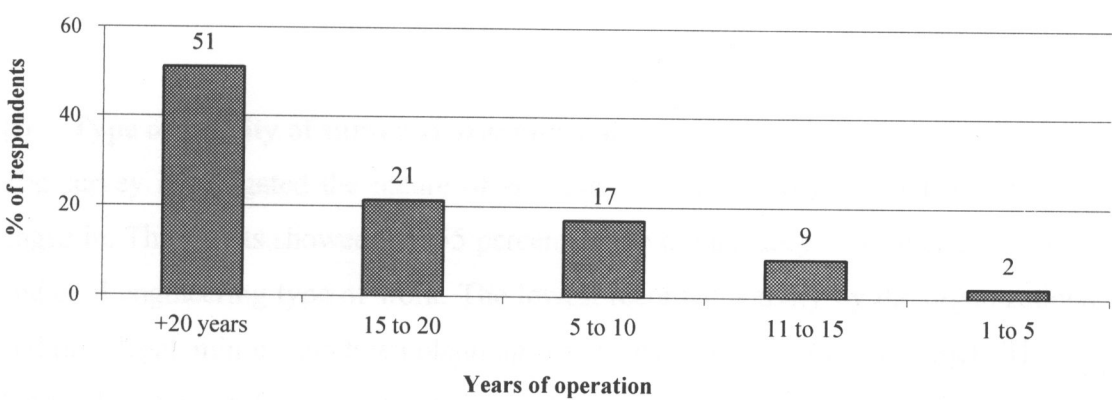


Figure 4.9: Distribution of years of operation of respondents

(e) Distribution of respondents by type of organization

Data for ADR was collected from a wide range of institutions. Figure 4.10 shows that the majority of the respondents were from government implementing agencies representing 21 percent. Contractors in the Grade IV category or above, and consultants, each represented 17 percent. The lowest contribution came from the subcontractor or supplier group, contractors' associations and mining companies, each of which represented 2 percent.

The purpose of the question was to identify any trend that might exist in attitudes and experiences within similar institutions with later responses in the questionnaire survey.

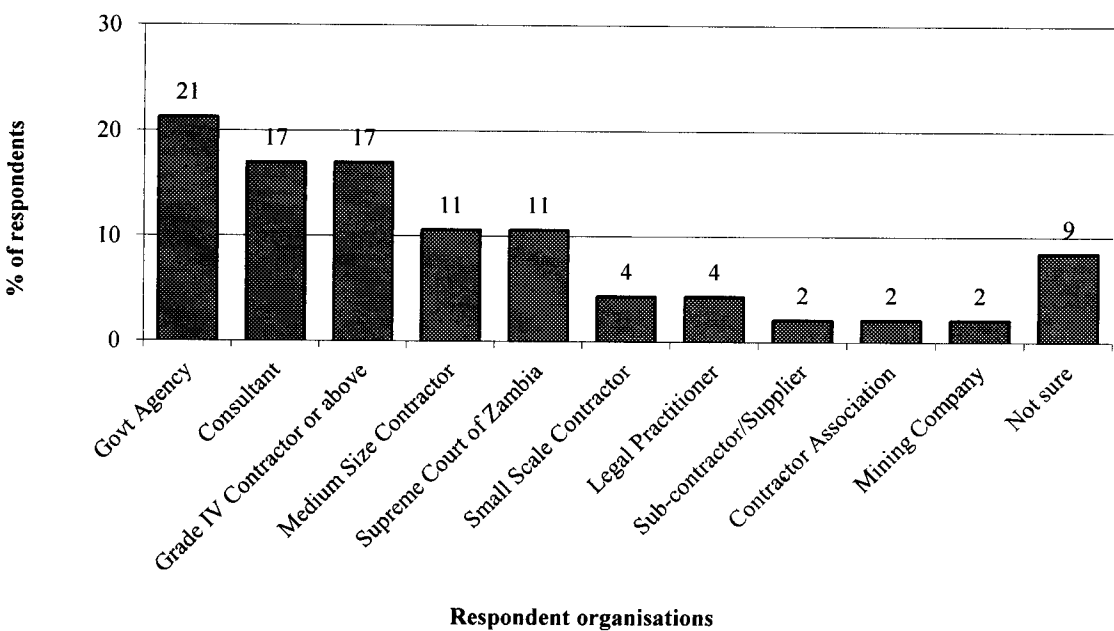


Figure 4.10: Percentage distribution by type of organisation

(f) Type of activity of surveyed organizations

The survey investigated the nature of activities that the surveyed organizations were engaged in. The results showed that 55 percent of the organizations were engaged in building and civil engineering type of work. The lowest recorded activity by the organizations were auditing, legal, mining and town planning which accounted for 2 percent each. The results in Figure 4.11 further show that there was little involvement in legal and ADR training activities with only two institutions reporting any such engagement.

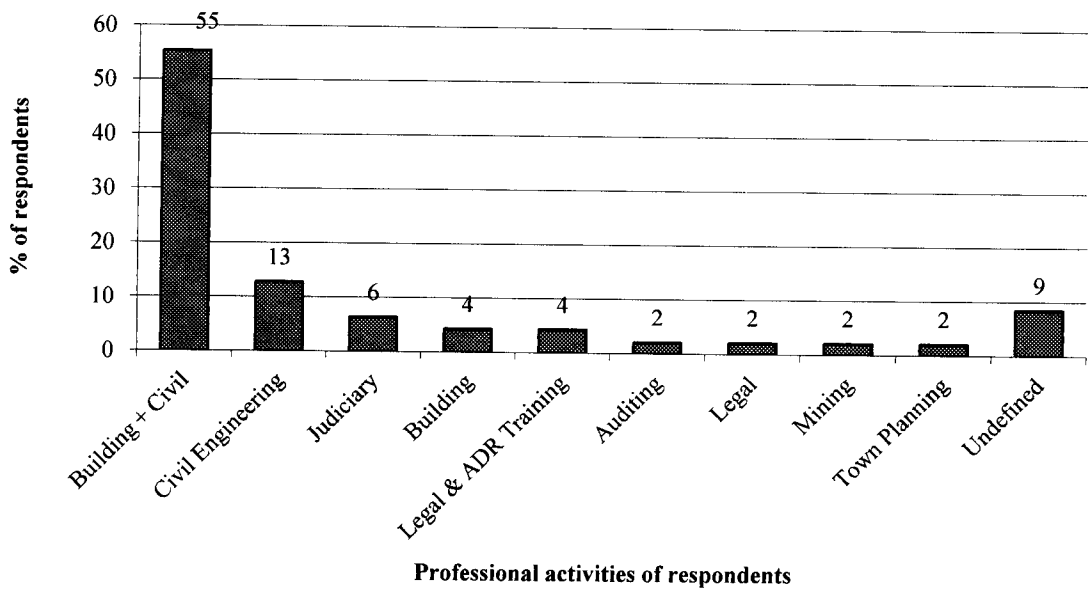


Figure 4.11: Type of activity by organizations

4.3.3.2 Awareness and application of ADR

Figures 4.12 to 4.29 provide answers to the question on the application of ADR.

(a) Level of familiarity with ADR

The survey included a question on respondents’ level of familiarity with ADR. The question was intended to give a measure of the respondents’ ADR awareness and how their views had a basis of experience with dispute resolution.

Figure 4.12 shows that there was some reasonable level of familiarity with ADR among the respondents with 20 of the total of 47 respondents or 43 percent reporting to be somewhat familiar whilst only three or 6 percent reported unfamiliarity. The results also showed that the second highest level of familiarity with ADR was 30 percent representing 14 respondents who reported to be very familiar with ADR.

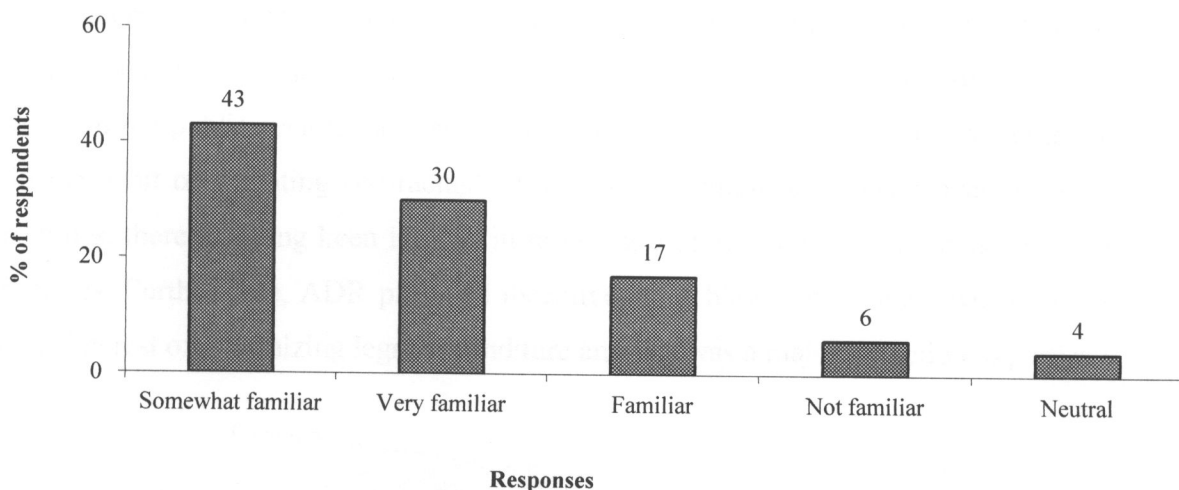


Figure 4.12: Level of familiarity with ADR

(b) ADR practitioners' level of familiarity with ADR

The level of familiarity of ADR was compared between the practitioners and non-ADR practitioners. Results indicated that there was progressive familiarity with ADR for practitioners compared to non practitioners. Though only three of the practitioners were completely not familiar with other ADR methods apart from arbitration, a majority, 30 were familiar. Out of a total of 14 non-ADR practitioners, none were totally unfamiliar, with 11 respondents being very familiar. .

ADR practitioners who were not familiar with ADR were asked to explain their situation. They all confirmed having trained as arbitrators in their early days of practice, more than 30 years ago, long before ADR came on the scene. Three out of 30 practitioners only practiced arbitration and had not taken interest in other ADR methods.

(c) Parties driving ADR proceedings

The respondents' perception of parties driving ADR proceedings in the majority of disputes are presented in Figure 4.13. On one hand, employers and contractors were considered to be relatively influential in ADR proceedings. On the other hand, ADR practitioners and legal representatives were least thought to be a driving force behind the proceedings. ADR and legal practitioners accounted for 9 percent while contractors and employers accounted for about a third each at 33 and 32 percent respectively.

Donors' concerns and financial audits of the utilization of public funds and events like the recession in the financial markets during the period 2008 to 2010 had triggered protection of investment in the public sector. Inevitably, contractors and employers like the government were in the habit of disputing contractual provisions that might have been overlooked in 'boom' times, thereby taking keen interest in referring disputes and ensuring conclusion of the processes. Furthermore, ADR provided incentives to achieve settlements, where possible, in the interest of minimizing legal expenditure and this was a major attraction to parties.

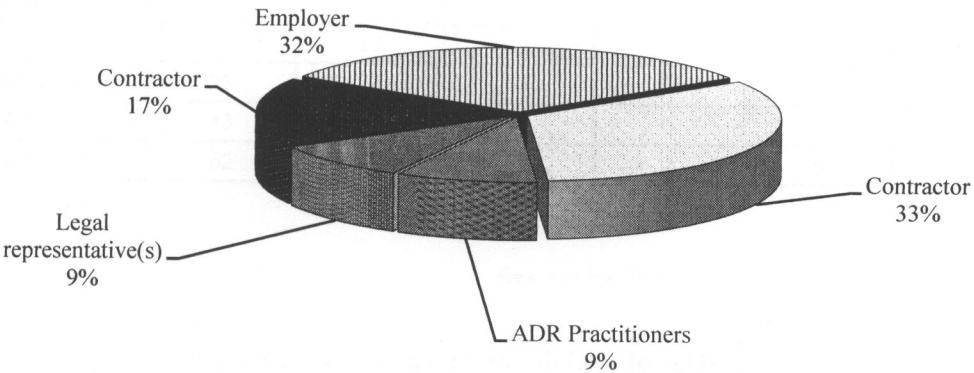
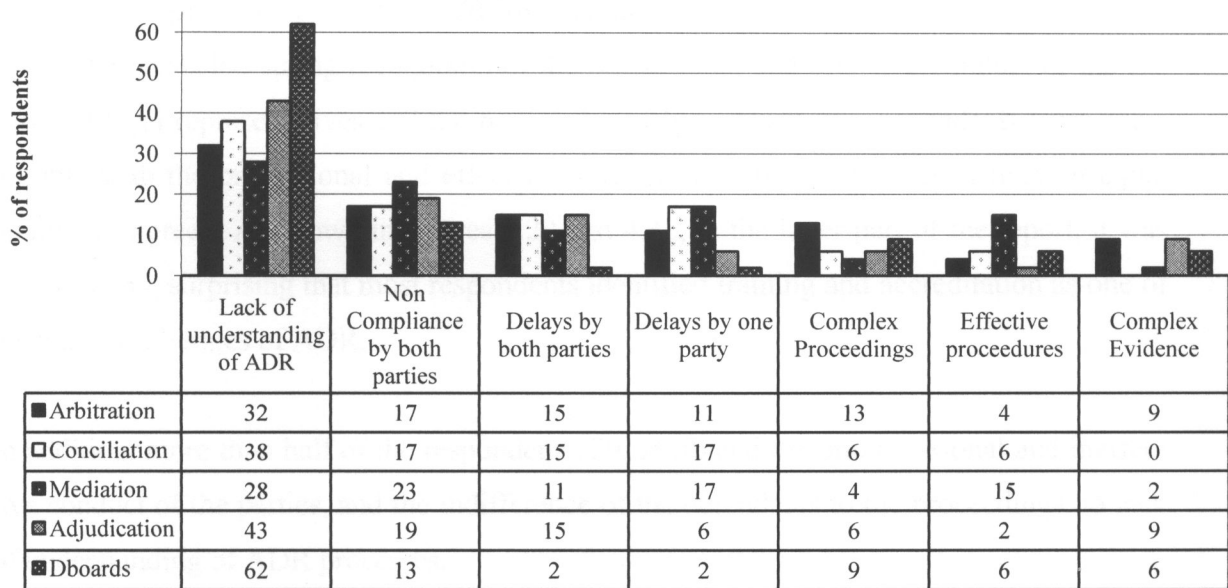


Figure 4.13: Percentage distribution of parties driving ADR proceedings

(d) Reasons for delays in ADR proceedings

From Figure 4.14, lack of understanding of ADR processes and procedures emerged as the main reason for delays in ADR proceedings. Non-compliance by one or both parties was another.

Some respondents were asked to explain how full compliance by the parties would delay ADR proceedings. Interestingly, majority of them attributed to procedural irregularities and lack of respect for time limits set. A significant part of their explanation seemed to support lack of understanding of ADR procedures. As a result, parties took a long time to fulfill ADR procedures and requirements.



Reasons for delays (%)

Figures 4.14: Reasons for delays in ADR proceedings

(e) Perception of ADR outcomes

Most respondents described the majority of ADR outcomes as fair and just, representing 37 of the total 47. Four respondents described the outcomes as legally unacceptable. Another three thought of the outcomes to be biased whilst two others lacked an opinion.

The results in Figure 4.15 reflect a positive perception that, with the right ADR practitioner or neutral, and careful consideration as to the appropriateness of the dispute, ADR could be a very successful tool for settling disputes.

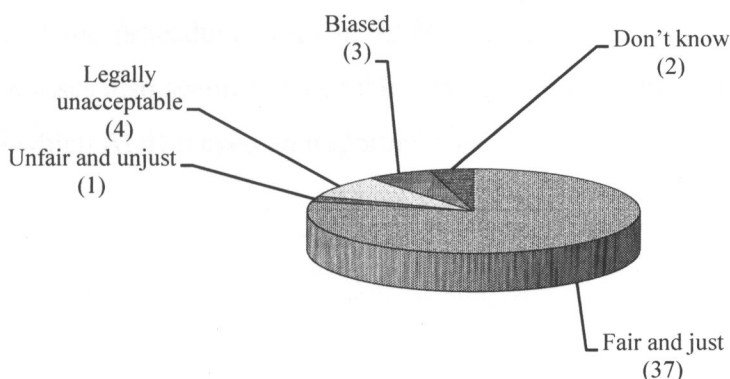


Figure 4.15: Perception of ADR outcomes

(f) Description of conduct of ADR participants

The survey revealed strong recognition of the professional and effective conduct of the expert and legal representatives and the parties themselves. Thirty six respondents were comfortable with the professional and effective conduct of ADR practitioners whilst an equal number disagreed. As shown in figures 4.29 and 4.32, in the latter part of the report, it was therefore, not surprising that most respondents identified training and accreditation as one of the major challenges of ADR.

In addition, more than half of the respondents, 39, attributed the unprofessional and ineffective conduct of the parties, and the indifference of the defendants to the proceedings, to lack of understanding of ADR processes.

(g) Description of perception of ADR

Study results in Figure 4.16 showed that most resolution of disputes provided by ADR were highly perceived to be quick and fair to all parties. The majority of respondents agreed that ADR provided quick resolution but others still felt that much as such resolutions may be quick, it also favoured some parties involved. Of the total 47 respondents, 79 percent described ADR resolution of disputes as quick and fair to all parties, 9 percent described them as quick but favoured employees, 2 percent felt that they favoured contractors, whilst 4 percent still felt that resolutions favoured complainants. Others were of the opinion that some ADR decisions were legally unacceptable.

The relatively high number of respondents whose view of ADR was very positive was a reflection of the trends in the construction industry and this was attributed to the fact that the flexibility of the procedural rules in ADR encouraged parties to participate. At the same time, businesses also seemed to be taking more care to maintain commercial relationships – a trend in which ADR played an important role.

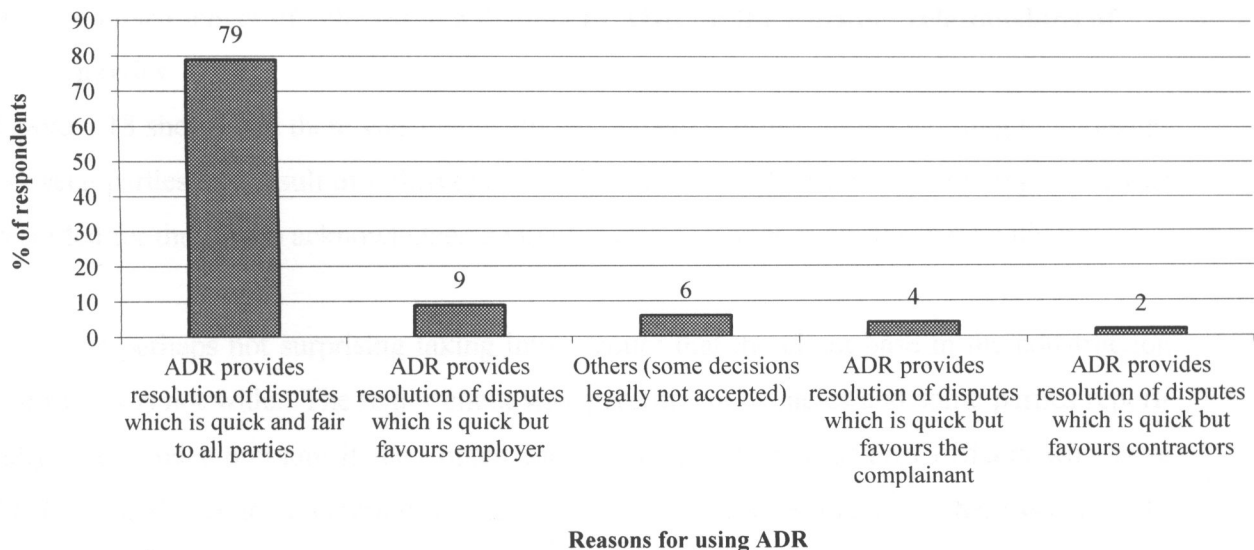


Figure 4.16: Perception of ADR

(h) Perception of referral of a dispute to ADR as unfair

Figure 4.17 shows data was collected to assess how respondents felt about the other party referring disputes to ADR. Most of the respondents felt that referring disputes to ADR was a fair path to take once such dispute was declared. Over half of the respondents 58 percent strongly disagreed that referring a dispute to ADR was unfair and only 2 percent strongly thought it was. The survey results revealed strong support for parties referring disputes to ADR.

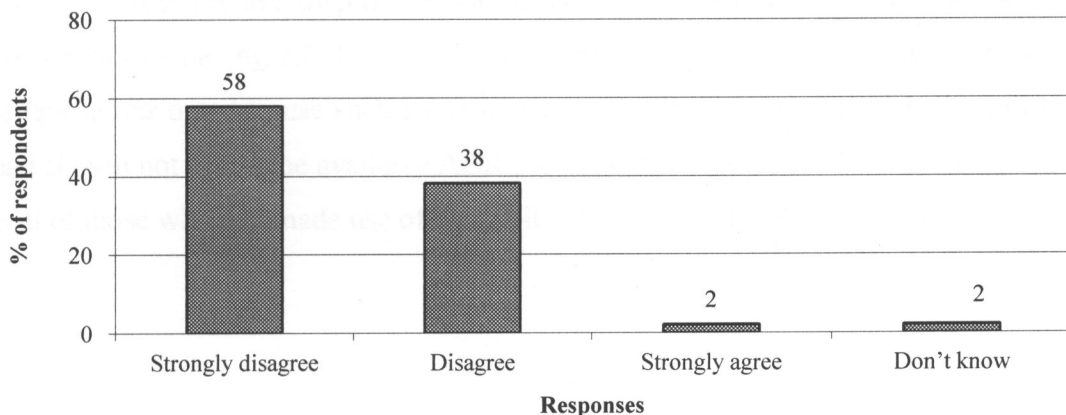


Figure 4.17: Perception of referral of disputes to ADR as unfair

(i) Consequences of referral of a dispute to ADR on the working relationships of parties

Figure 4.18 shows that there was practically no perceived effect on the working relationship between parties as a result of referring of a dispute to ADR. A difference of two percent was recorded for those who acknowledged a tangible effect as opposed to those who did not.

This was perhaps not surprising taking into account that the client base in the construction industry was not wide. The major client was government agencies and some parties reportedly came under pressure if they opted for declaring a dispute against officers who were likely to be the same contracting officers on future projects. Sometimes, there was a backlash against some parties or contractors who had done so. Some had been removed from the tender list or future awards of projects as a result of opting to refer a dispute to ADR.

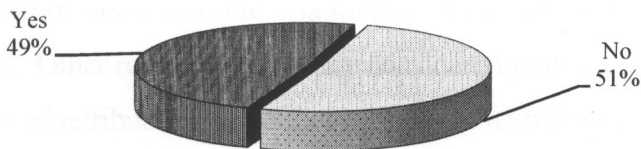


Figure 4.18: Effect on working relationship as a consequence of using ADR

(j) A party in a dispute with another but decided not to refer to ADR provisions
As a result of having ADR provisions in contract agreements, majority of the responding organizations opted to use such provisions when a dispute was declared. Organizations that had chosen not to use the available ADR provisions accounted for 28 percent against 70 percent of those who had made use of the available provision for dispute resolution.

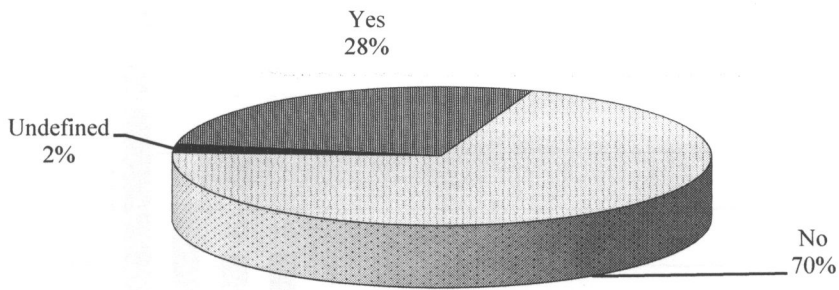
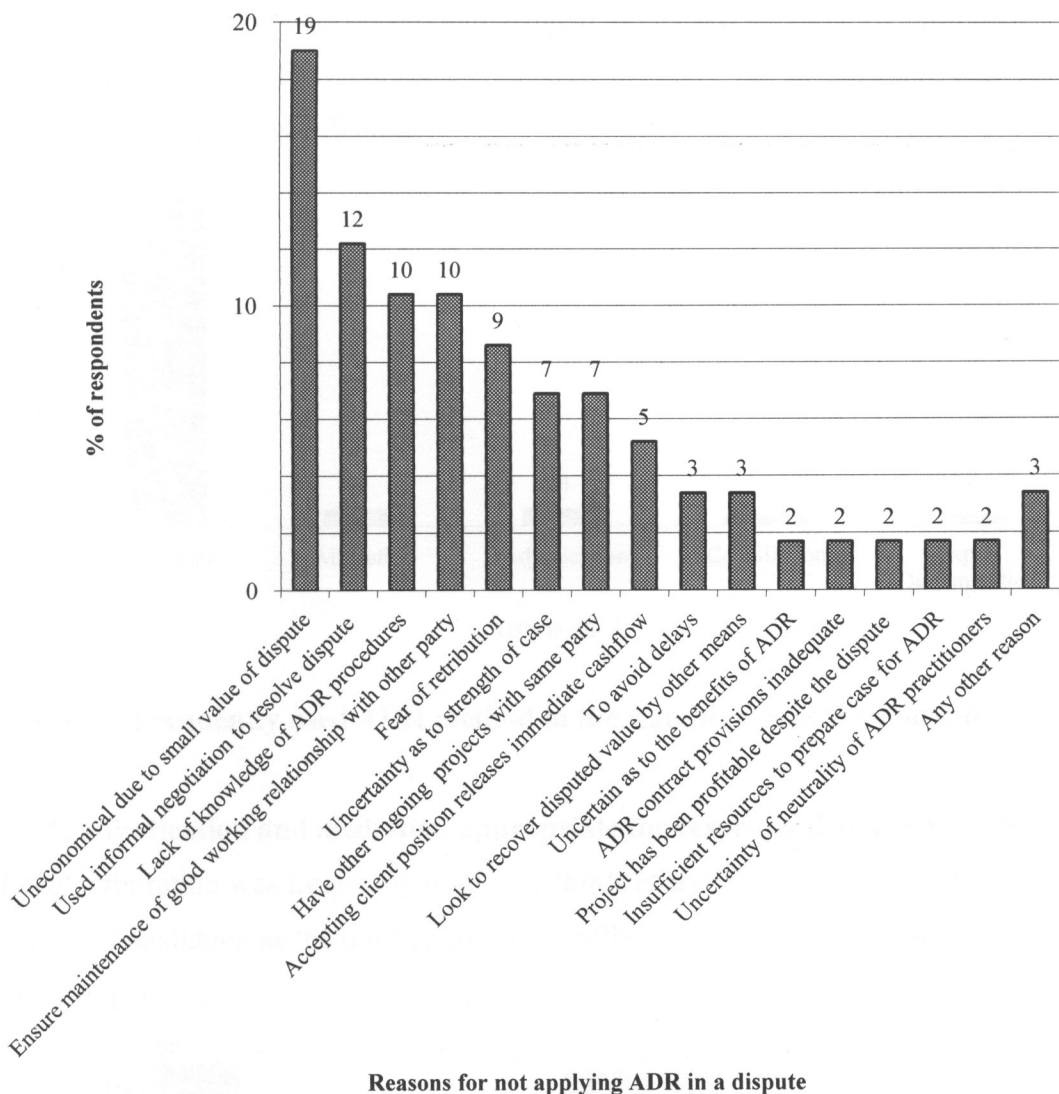


Figure 4.19: Organisation in a dispute with the other party but decided not to use the ADR provisions in agreement

(k) Decision not to proceed with ADR option

Figure 4.20 indicates that the respondent's main reason for not referring a dispute to ADR, despite a contractual right, was the high cost of fees compared to the small value disputes followed by the option for informal negotiations to resolve a dispute. The respondents also indicated maintenance of good working relationships and lack of knowledge of procedures as important reasons. Other reasons which they considered important in their decision not to use ADR, were, fear of retribution, had ongoing projects with the same party and, accepting the employer's position which often led to release of any withheld payments.



Reasons for not applying ADR in a dispute

Figure 4.20: Reasons for not proceeding with ADR option

(I) Most frequently used ADR method in the Zambia construction industry

The Zambian construction industry uses a number of methods for resolving construction disputes. The study undertook to investigate the most frequently used ADR methods. Results in Figure 4.21 show that the most preferred method was arbitration with 87 percent of the total respondents reporting as such. The other available methods reported a low preference of between 2 and 4 percent. The finding was significant in that it supported the interview results in Figure 4.4, an indication that arbitration dominated the ADR processes in the Zambian construction. Those who preferred arbitration highlighted the binding and enforceable decisions as the main reasons.

The remainder of the respondents reported a much more even split in their reasons in support of other ADR methods. They indicated that ADR methods like adjudication and mediation were speedy and more cost effective.

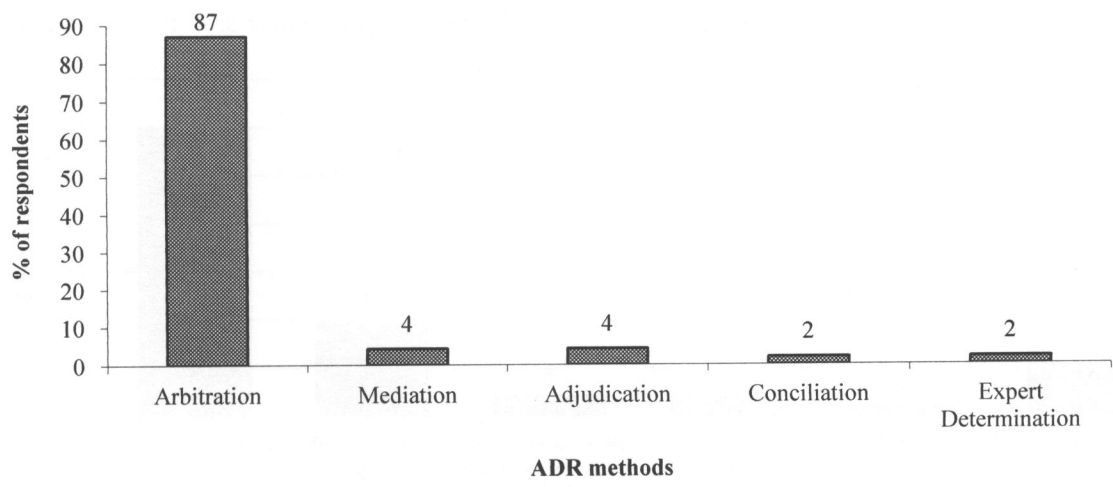


Figure 4.21: Frequently used ADR method in the Zambian construction industry

(m) Is adjudication and mediation appropriate for resolving disputes in Zambia?

Although arbitration was frequently used, two thirds of the respondents identified both adjudication and mediation as the most appropriate methods for settling construction disputes, as shown in Figure 4.22.

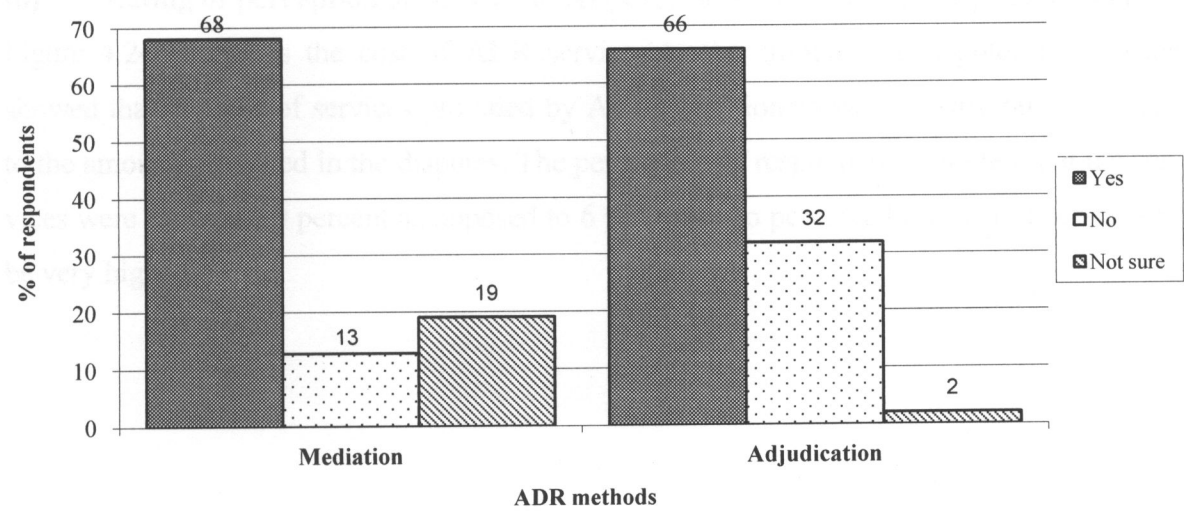


Figure 4.22: Is adjudication and mediation appropriate for resolving disputes in Zambia

(n) Reasons for suitability of adjudication and mediation

Figure 4.23 shows the main reasons advanced for preference of adjudication and mediation. Those who favoured the two methods were much more in support of the parties’ control of the process and the wide range of remedies both methods offered.

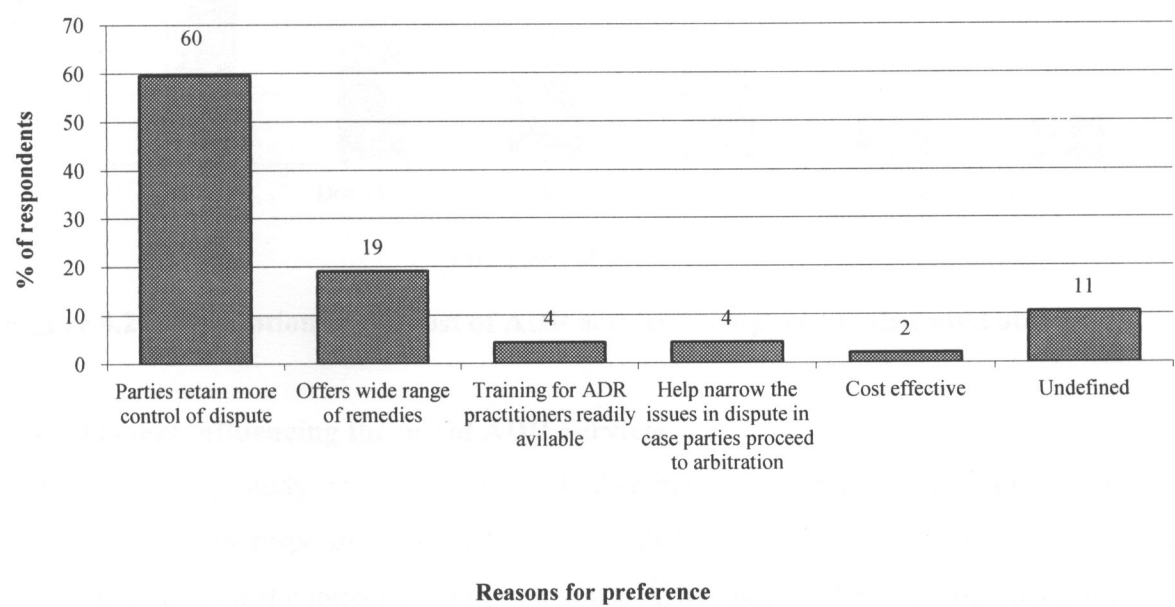


Figure 4.23: Reasons for preference of adjudication and mediation for the *Zambian construction industry*

(o) Rating of perception of the cost of ADR services compared to disputed amounts

Figure 4.24 compares the cost of ADR services to the amounts in dispute. The results showed that the cost of services provided by ADR practitioners were mostly fair compared to the amounts involved in the disputes. The percentage of respondents who felt that the services were fair was 40 percent as opposed to 6 percent who perceived the cost of services to be very high.

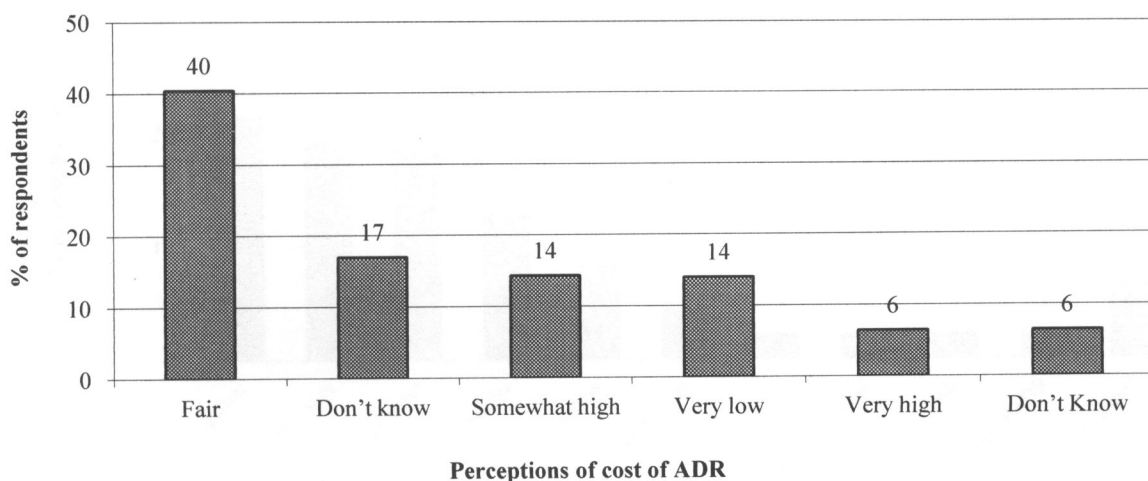


Figure 4.24: Perception of the cost of ADR services compared to disputed amounts

(p) Factors influencing the use of ADR Services

In Figure 4.23 the study investigated possible factors that influence concerned parties to use ADR services. The responses in Figure 4.25 indicated a range of answers. Of all the possible factors provided most contractors preferred to use ADR because they did **not** want litigation, and this accounted for 21 percent of the respondents. Others used ADR because confidentiality was guaranteed and also because there was an ADR clause in the contract and these accounted for 19 percent. Other respondents indicated they were influenced by: a court order, 12%; a speedy process, 9%; and ‘just trying’ 4% as reasons for using ADR services. A very small number, one respondent in each case indicated factors such as: contract provided for a mandatory reference; to minimize costs; an acquaintance suggested; and fairness of the process as some of the reasons for using ADR services.

Three respondents, representing 6 percent were not sure about the reasons for using ADR but when phoned, they described a process of dispute resolution that invariably involved ADR. They all described a process either involved bringing in senior level management who had the ability to make binding decisions or a known, respected neutral person who would assist in coming to a consensus.

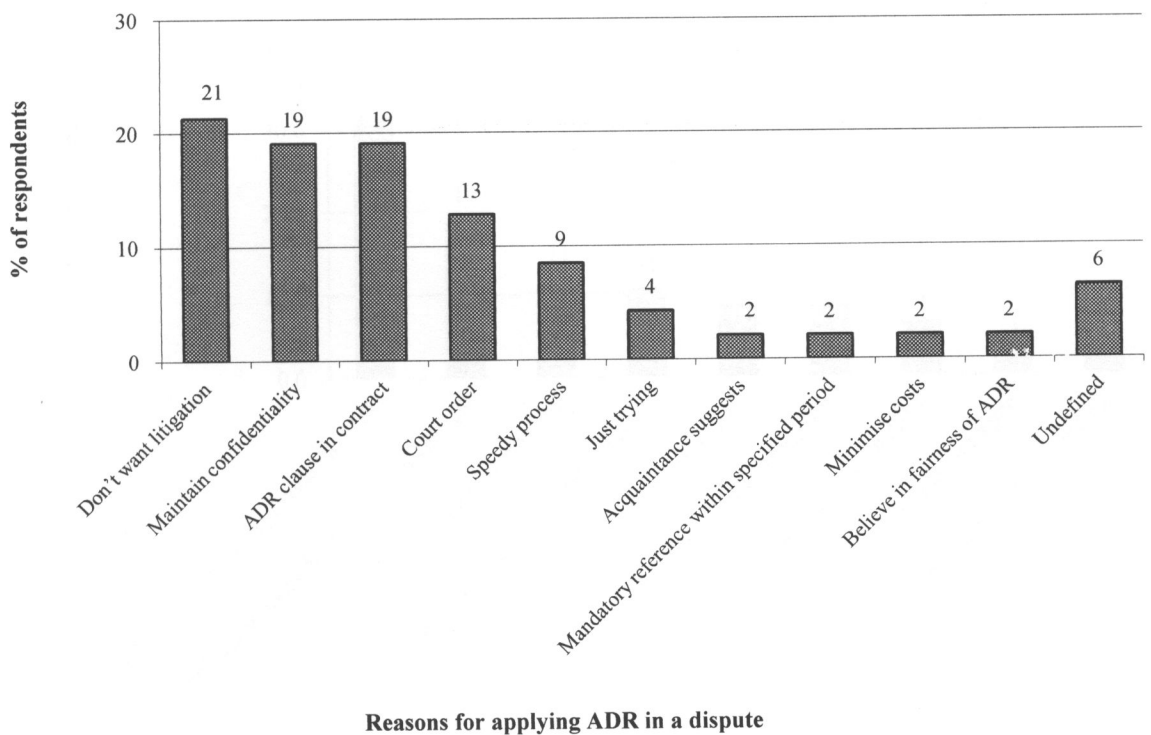


Figure 4.25: Factors for using ADR services

(q) Reason for not using ADR

The study also investigated reasons for which parties would not use ADR methods for resolving disputes as shown in Figure 4.26. Most frequent reasons for not using ADR were the fact that available contract agreements did not provide for ADR. This accounted for 32 percent, followed by 19 percent of respondents who reported that ADR mitigation was not suggested when a dispute was declared. The least reported reason for not using ADR was the speedy and binding nature of the whole ADR process. Preference for litigation, resistance to ADR by legal practitioners and fear of retribution accounted for approximately 10 percent each. This indicated that ADR’s application in the construction industry was not fully understood and appreciated. Respondents still preferred to resolve their disputes using litigation than ADR unless the contract agreement or legal counsel suggested or recommended. ADR appeared not to be their first choice method for dispute resolution.

It was not surprising that in most cases, disputes took long to be resolved as most parties were unaware of the benefits of ADR.

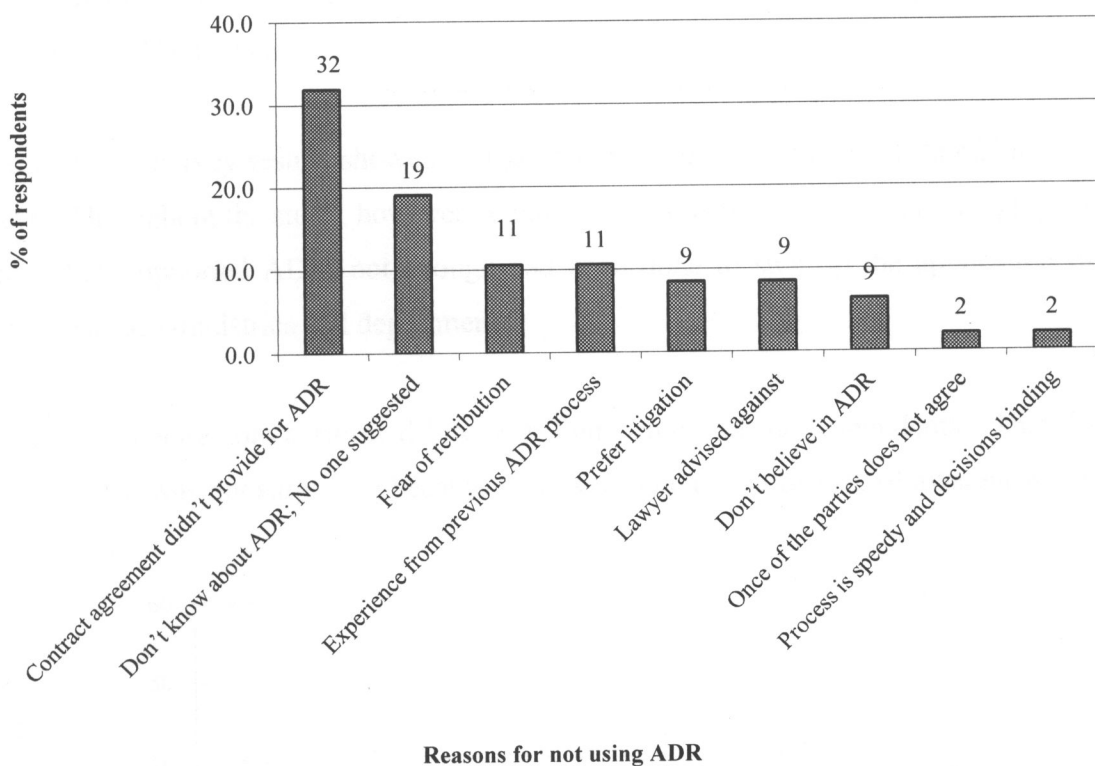


Figure 4.26: Reasons for not using ADR in contracts

(r) Acceptance level of ADR by stakeholders

Figure 4.27 derived data designed to draw comparisons of acceptability of application of ADR among the stakeholders.

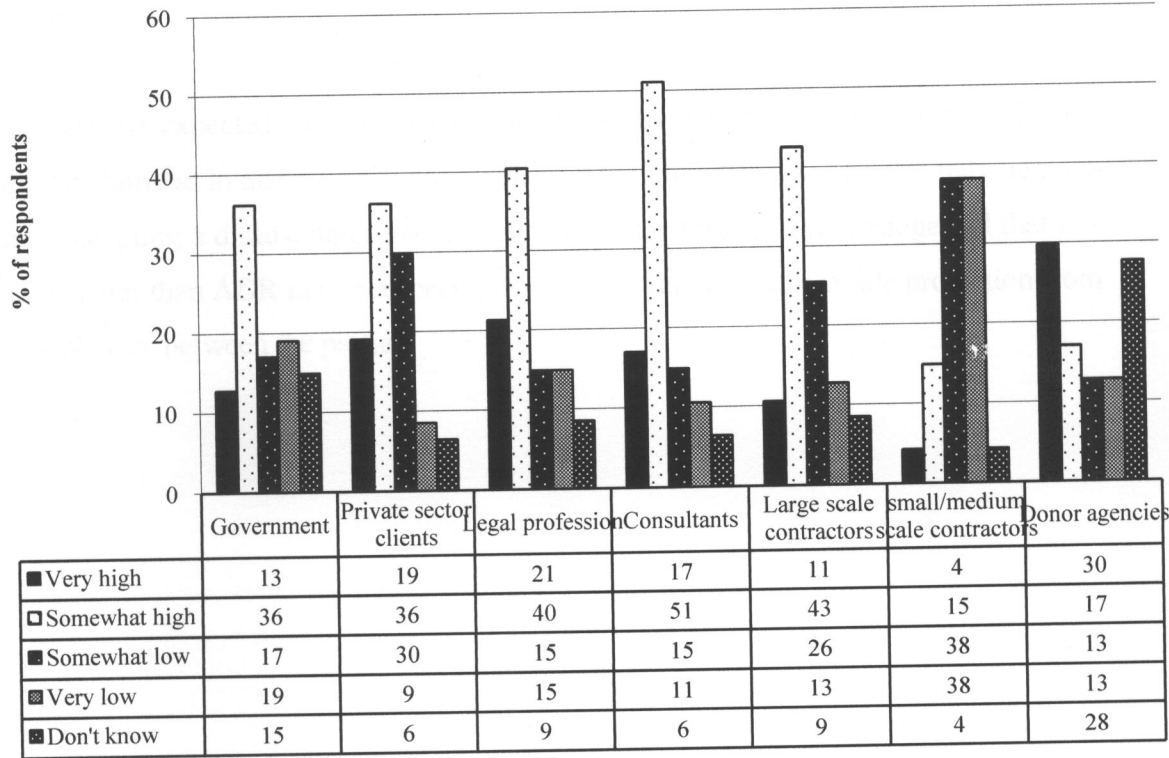
In general terms, construction consultants were the most accepting of ADR at 68 percent with 17 percent of them accepting it very highly. Following more general acceptance levels of ADR were the respondents in the legal profession with 61 percent, a third or 21 percent of who present very high acceptance. Donor agencies however, had particularly very high acceptance of ADR at 30 percent with the small/medium contractors having the lowest percent of 'very high' acceptance of ADR at four percent.

Construction consultants and lawyers performed better than other stakeholders. This, most likely, reflected their greater exposure and greater participation in the resolution of disputes in their respective professions, sectors or classes of business. Private clients and large con-

tractors showed encouraging levels of acceptability and were possibly encouraged by a wide range of perceived benefits of ADR.

The questionnaire survey results showed that government agencies had a substantial acceptance level. Throughout the study, however, a number of indications were that although government policy supported ADR, not enough had been done to step up the application of ADR in the various ministries and departments.

The small scale contractors performed lowest at four percent of the respondents. Their limited knowledge was not surprising because there was an element of lack of awareness and access to ADR.



Construction stakeholders by questionnaire respondents

Figure 4.27: Acceptance level of ADR by stakeholders

4.3.3.3 Challenges in the development of ADR methods

The study showed that the development and usage of ADR methods in Zambia had met a number of challenges.

(a) Challenges for use of ADR

From Figure 4.28, the biggest reported challenge faced by contractors who used ADR was power imbalance and this accounted for 21 percent of the responses. Contractors who referred disputes to ADR were often those faced with cash flow problems due to withholding of funds, by financially strong clients, and could not afford legal advice or representation. The second challenge identified was unwillingness of one party to participate in the ADR proceedings and recorded 19 percent of the total respondents. Other challenges like fear of retribution, high fees for practitioners were each ranked third at 17 percent, incompetent practitioners was forth highest at 6 percent. Some of the least ranked challenges were resistance from the legal practitioners, delays in proceedings, non regulation which recorded 2 percent each.

Most respondents expected equality in bargaining powers between the parties as an important aspect of fairness in dispute resolution without which the distressed parties may be pressured into accepting a disadvantaged settlement. The literature reviewed suggested that litigation was better than ADR in this respect as the courts were able to provide protection from power imbalances between the parties.

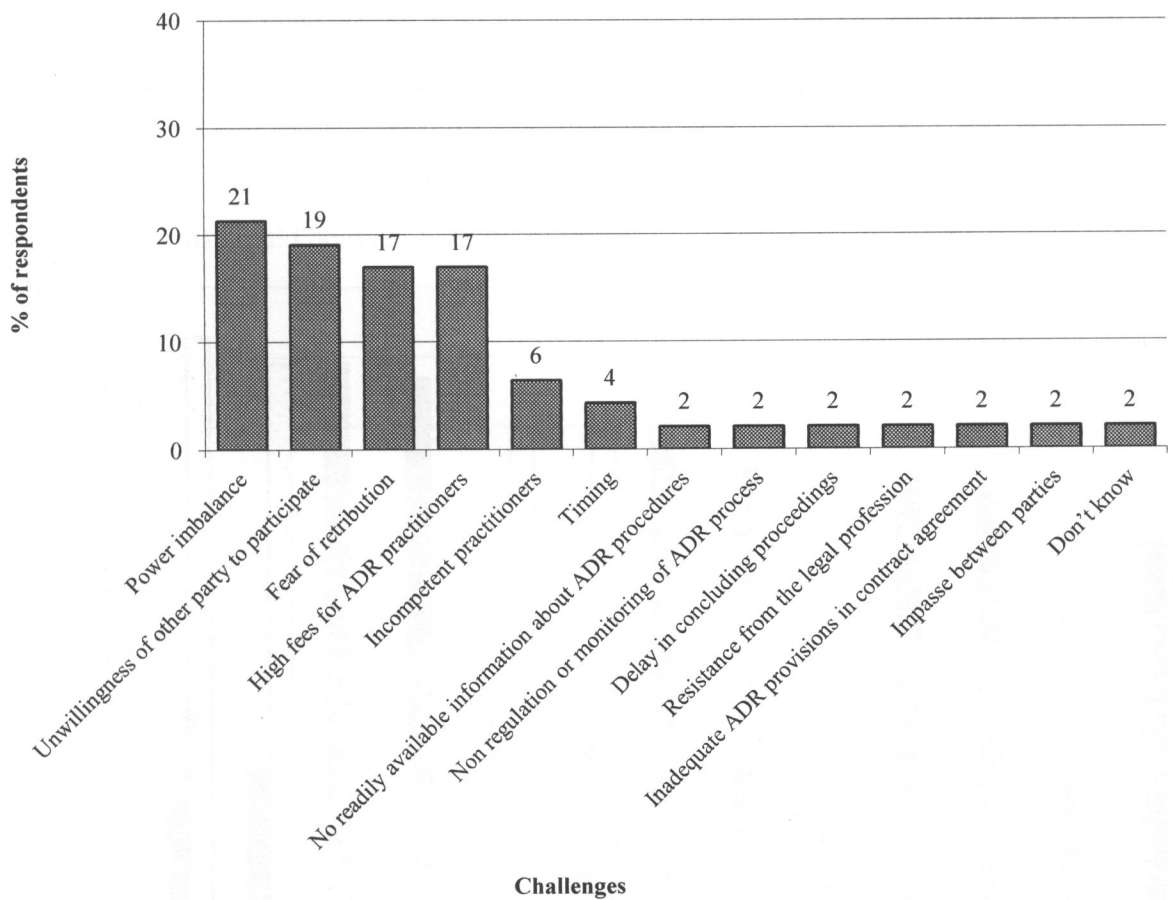


Figure 4.28: Challenges for use of ADR

(b) Ways to improve application of ADR methods in Zambia

Respondents were asked to provide ways that could be used to improve the application of ADR methods in the Zambian construction industry. Almost 80 percent of the respondents perceived training of construction participants in ADR as the most important way of improving ADR standards in the industry. This was followed by the need to develop a framework for regulating and monitoring ADR procedures and practice and, to setup an ADR advisory centre, each accounting for over 70 percent. Both partnering of parties and the sequential application of certain ADR methods, an approach in which some ADR options preceded others, were the least preferred solutions. The respondents showed little support for:

- statutory provisions for mandatory reference to ADR;
- application of different ADR methods for different dispute amounts;
- establishment of a construction small claims court; and
- use of site records as evidence for all ADR methods except arbitration.



Figure 4.30: Statutory provisions for mandatory reference to ADR

(d) Establish standard ADR clauses in construction contracts by level of familiarity with ADR

Establishment of standard ADR clauses in construction contracts was progressively associated with the level of familiarity in ADR matters. Of the 47 respondents, a majority of 55 percent of those who were familiar with ADR supported the establishment of standard ADR clauses in construction contracts, while 38 percent respondents did not support the position. The remaining 7 percent were not aware of ADR matters.

(e) Stakeholder best description about security for costs

Respondents were asked about the ‘loser pays’ concept in which the losing party bears the total costs of ADR. In Figure 4.31, 38 percent of the respondents felt that an order for security for costs represented an important safeguard for defendants. Only 17 percent thought it would be an unfair burden on the claimants. Those who were against argued that ADR costs should be assessed on the merits of the claim and therefore security for costs would limit the scope for unmeritorious applications. It was felt that it would force parties with less funds, especially small to medium or distressed contractors, to withdraw claims and fail to secure access to justice.

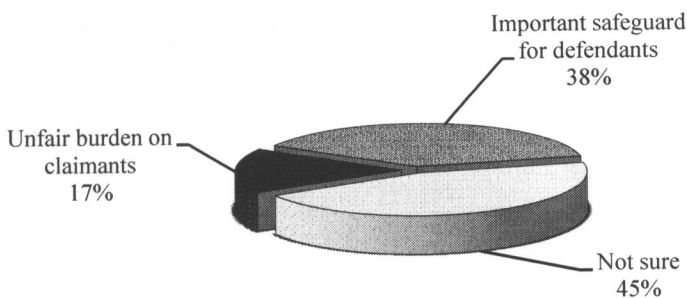


Figure 4.31: Stakeholder best description about security for costs

(f) ADR sector priority issues for the construction sector

The study further investigated priority issues for the construction sector. Figure 4.32 shows that increased awareness and promotion of ADR were identified as the highest priorities for the sector recording 96 percent support among respondents. The need for a framework for ADR procedures was second at 75 percent. The development of an accreditation scheme for practitioners was also outstanding at 72 percent. The need for increased resources to ADR was lowest at 55 percent.

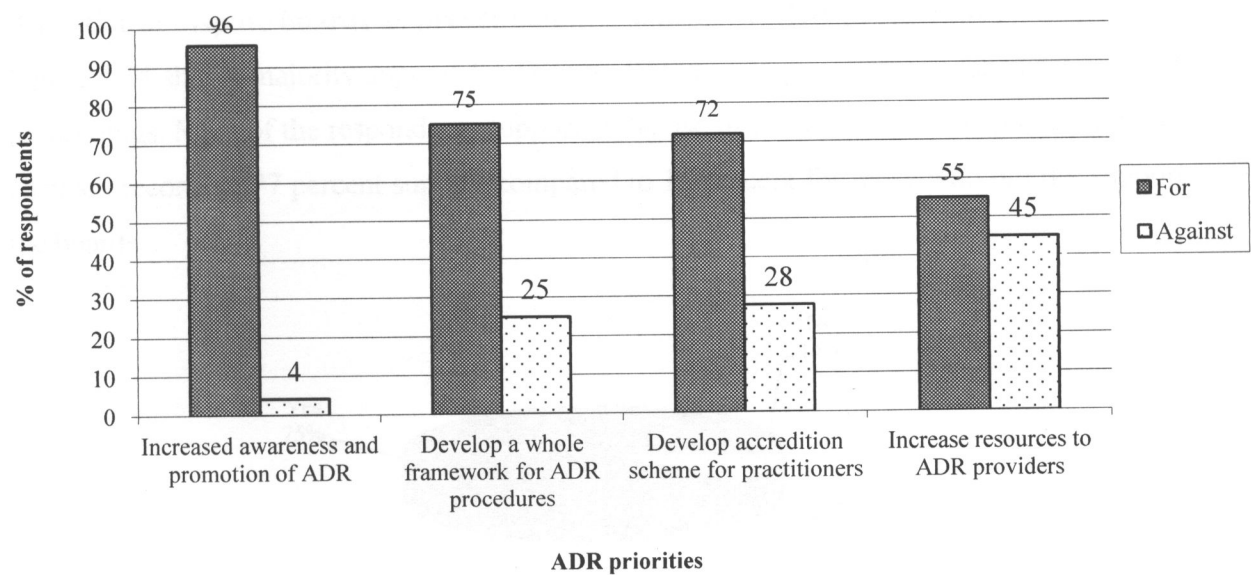


Figure 4.32: ADR sector priority issues for the construction sector

(g) Support for regulation and monitoring of ADR practice in Zambia

The study investigated the need to support, regulate and monitor ADR practice in Zambia. Figure 4.33 shows that of the 47 respondents, 86 percent agreed with the assertion that ADR required support and regulation. This was against only 14 percent who were either not sure or completely disagreed.

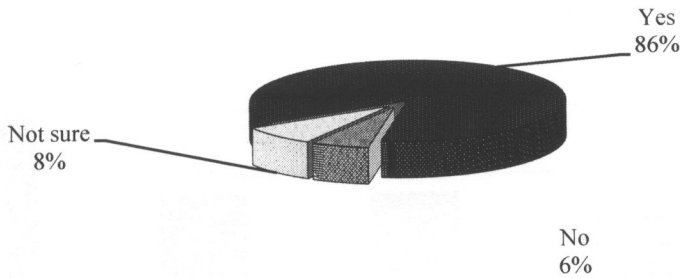


Figure 4.33: Support regulation and monitoring of ADR practice in Zambia

(h) Use of dispute boards as prevention mechanism in ADR proceedings

Figure 4.34 shows majority support for Dispute Boards as a prevention mechanism in ADR proceedings. Most of the respondents supported the use of Dispute Boards as prevention mechanism recording 77 percent support compared to 15 percent for those who did not support the boards.

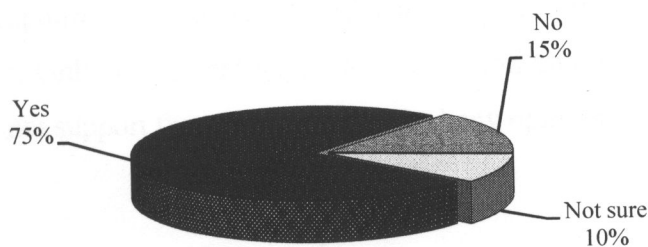


Figure 4.34: Use of dispute boards as prevention mechanism in ADR proceedings

(i) Type of projects most suited for Dispute Boards

Figure 4.35 shows that there was considerably acceptance for use of Dispute Boards. It also shows the type of projects that dispute boards should preside over or be best applied. Results indicated that 30 percent of the respondents supported the use of Dispute Boards, on projects in excess of US\$ 10 m with 17 percent supporting their use on donor funded projects or those involving international contractors. A lower percentage, 13 percent, supported the use of Dispute Boards for complex projects like bridges or dams.

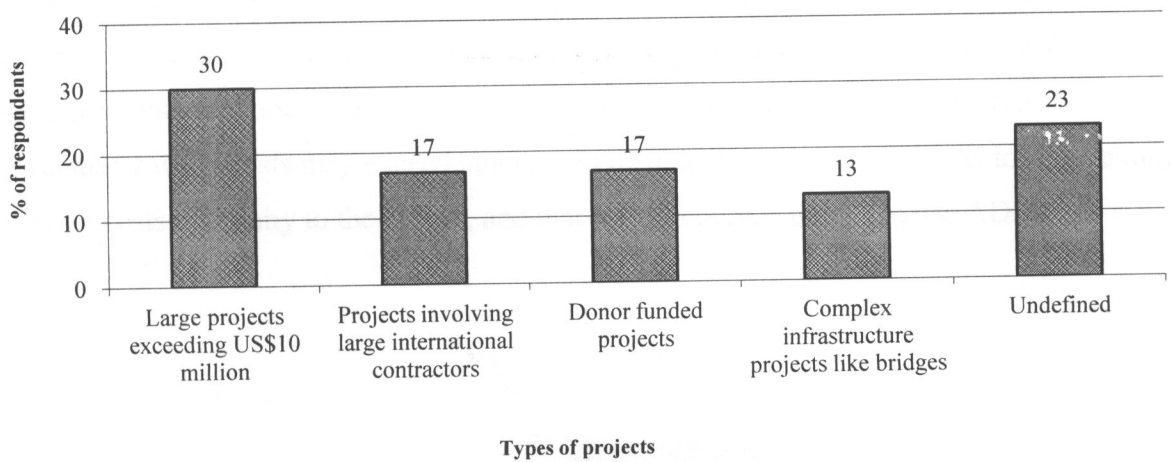


Figure 4.35: Type of project suitable for use of dispute boards

(j) Support for mandatory reference of disputes to Mediation applying either Adjudication or Arbitration

Figure 4.36 shows responses for and against the mandatory use of mediation before adjudication and arbitration. Only 47 percent supported the notion and 34 percent were not sure while 15 percent did not support the notion. Two lacked any opinion.

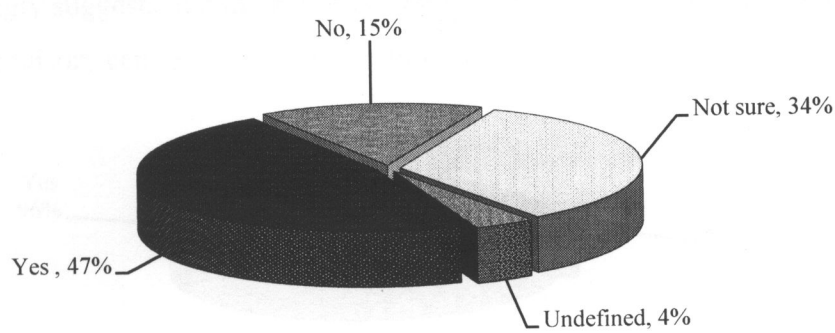


Figure 4.36: Support for mediation being precedent to both adjudication and arbitration

(k) Support for contractor's all risk insurance to include costs for resolution of disputes

Figure 4.37 shows the percentage distribution of respondents who agreed that contractors' all risk insurance should include costs for resolution of disputes. Those who agreed accounted for 77 percent, while 6 percent did not support the position. A further 15 percent were not sure whether the risk insurance should include costs for disputes.

In most contract agreements, ADR costs were generally perceived as an expense as some contract agreements provided for each party to settle its own costs. The fact that 77 percent of respondents supported the idea of insurance in the future reflected the potential advantage, particularly when costs may exceed amounts in dispute or in case of a loss as insurance may provide costs immunity to the parties, and that way encourage parties to use ADR.

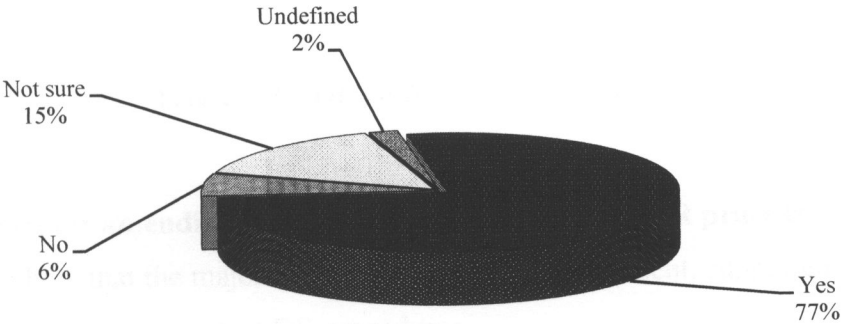


Figure 4.37: Support for contractor's all risk insurance to include costs for resolution of disputes

(l) Introduction of an ADR advisory centre

Figure 4.38 strongly suggests that the majority (98%) of respondents supported the introduction of an ADR advisory centre for the construction industry.

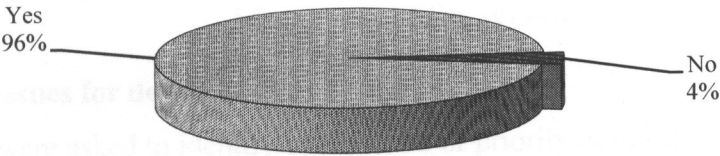


Figure 4.38: Introduction of an ADR advisory centre

(m) Introduction of a small claims court

Of the survey respondents, 47 percent recommended the introduction of small claims courts that would handle small claims and or disputes involving small scale contractors. The other 30 percent were not for the idea, while 23 percent were not sure.

The study also investigated the possibility of amendment of the NCC Act No. 13 of 2003, incorporating provisions for supervision of ADR practice in the construction industry. Of the survey respondents, majority 79 percent supported the incorporation ADR practice into the NCC Act; whilst 11 percent objected.

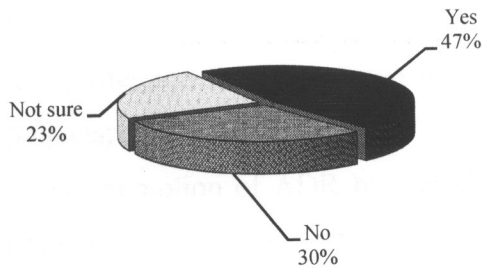


Figure 4.39: Introduction of a small claims court

(n) Support for amending the NCC Act to incorporate ADR practice

Figure 4.40 show that the majority of the respondents, 79 percent, supported the amendment of the NCC Act to incorporate ADR procedures.

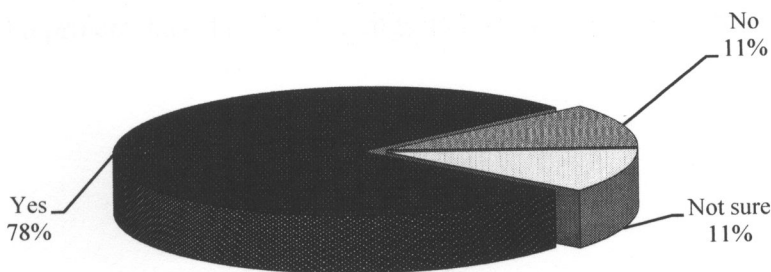


Figure 4.40: Support for amending the NCC Act to incorporate ADR services

4.3.4 Priority issues for development of ADR in Zambia

The respondents were asked to identify other views or priority issues that were important for the development of ADR in the Zambian construction industry. The following were highlighted:

- i) lack of awareness and promotion of ADR methods like conciliation, mediation, expert determination and dispute boards which were more cost effective methods; there was general lack of monitoring and regulation of ADR practice and procedures which eroded stakeholder confidence;
- ii) lack of training for contractors and public contracting officers contributed to lack of awareness of ADR;
- iii) lack of a dedicated ADR institution impacted negatively on the development of ADR in the construction industry;

- iv) lack of standard ADR clauses for use in construction contracts was responsible for some of the delays in proceedings;
- v) resistance of the legal profession to ADR caused disputes to end up in court and had negative impact on projects; and
- vi) government's role in the promotion of ADR by participation, funding ADR processes especially the Attorney General's chambers was key to its development.

4.3.5 Summary

This chapter examined stakeholders' responses to questions regarding the use of ADR as it related to the Zambian construction industry. Chapter Five presents a practical relationship between the factors highlighted in the survey results and how ADR is applied in practice in Zambia. Chapter Six presents the framework or model for ADR as well as other recommendations for an effective dispute management system and application of ADR during the construction cycle of a project, based on the findings and recommendations from this study.

Chapter Five: Case studies

5.1 Introduction

In the previous chapter, data collected using structured interviews and questionnaire surveys was presented, analyzed and discussed.

This chapter presents information gathered from two case studies undertaken to examine the actual experiences and practices involving the application of ADR by contractors in Zambia. The data was collected through interviews with construction executives and information documented in their project records for selected disputes was examined. The case studies were also intended to elicit or verify the results of structured interviews and questionnaire surveys so as to examine the application of ADR in the Zambian construction industry in general, as part of the data triangulation.

5.2 Selection of cases studies

Confidentiality is fundamental to the ADR process. Consequently, willingness of the parties to participate in the research was a crucial aspect of the selection. In the end, it was agreed to preserve the identity of the parties and use letters of the alphabet as identities of the parties who participated in the two case studies.

Interviews were conducted in private and confidentiality was assured. Hence the views presented in this chapter are not attributed to particular individuals or contractors. While attribution or revealing the identities of contractors may have further increased the validity of the findings, it would probably have made them less willing to contribute. The information gathered was compared to the data collected from the interviews and surveys and was found to be a fairly accurate reflection of views of those directly involved in ADR practice in the Zambian Construction industry.

In general, there are at least three major parties involved in the construction industry (Murdoch and Hughes, 2000):

- a) employer/developer;
- b) advisor/consultants; and
- c) contractors.

According to Lian (2005), employers and contractors are the most common disputants or parties most frequently in dispute.

Since employers and contractors are the main disputants in most construction disputes, the focus group was two contractors. Efforts to get at least one employer institution to participate in the study failed. After several attempts with the mining companies, two private companies and three government agencies and some follow up visits to explain the purpose of the study, the Chief Executive Officer of the Road Development Agency (RDA) agreed to give a validation interview, a general discussion to help clarify issues which arose from the contractor case studies. RDA insisted on the protection of the identities of the contractors involved and certain project information and only preferred to address common problems experienced in the application of ADR from the employer’s perspective. For the purpose of the survey, the interview with RDA was considered adequate.

Contractors were selected from those who participated in interview and questionnaire surveys and had indicated some unique experiences which were considered beneficial to the understanding and appreciation of current practices in the application of ADR in Zambia.

Table 5.1 below gives details about the size of the contractors involved in the case studies. The findings of the case studies are included in Appendix C.

Table 5.1: Contractors Interviewed

Contractor identity	Size of Contractor	No. of Employees	Financial Turnover US\$ million (per annum)	Case Study Contractor
A	Grade V Category, Civil Works & Roads	2000+	250	Contractor A
B	Grade IV Category - Civil Works & Mining	500+	10.0	Contractor B

The case study contractors were selected for the following reasons:

- (i) Contractor A was registered in the Grade 5 category of the National Council for Construction (NCC) and has had several disputes resolved via ADR; and

- (ii) Contractor B was in Grade 4 category with fewer disputes. One of its most recent disputes took more than one year to resolve.

The other selection criteria for the two contractors were: the availability of information; and willingness to participate in the study. In each case, a limited set of dispute records were reviewed and this allowed the identification of problems encountered in the application of ADR procedures. As the review progressed, it also became important to consider in-depth interviews.

5.3 Case study focus

Application of ADR in Zambia was the main focus of this research. This part of the study was structured to explore and probe data gathered from interviewees and questionnaires in order to gain an understanding of contractor views about the implementation and application of ADR in relation to the following:

- amount in dispute and choice of ADR method;
- delays in ADR proceedings;
- lack of awareness and understanding of ADR;
- lack of standard ADR procedures;
- the role of the legal professionals;
- fairness of ADR proceedings and decisions; and
- role of key stakeholders.

In addition, the study was expected to determine why ADR was not widely used and to look for means and measures to increase the application of ADR in the Zambian construction industry.

5.4 Data collection

The two case studies were employed in order to broaden the understanding of application of ADR in the Zambian Construction Industry. Multiple sources of data were considered for this study. For each case study contractor:

- a) an open ended interview was conducted with the Chief Executive Officer of the participating contractor and considered facts, opinions and insights into previous or ongoing disputes or experiences. The interviewee was first contacted by telephone to intro-

duce and explain the format of the interview and the data collection exercise. Then a list of key ADR issues, listed under Section 5.3, was sent by email for the interviewee to be acquainted with the subject matter. After access was granted the interview was arranged. During the interview, the interviewee was requested to indicate how each of the factors affected the dispute resolution process in general and in particular, the selected disputes. Qualitative answers to the interview questions were written down on the spot, and were later entered into a comparative table and then evaluated systematically to look for common factors and any unusual innovative opinions; and

- b) relevant project records and documents which included correspondence and minutes of meetings submitted by the contractor were examined and reviewed to try and identify and highlight any relationships between the problems encountered in the disputes in question, in relation to key ADR issues identified.

Each respondent was asked about their involvement in ADR proceedings and their views on its application in the industry. The information gathered from the project case files and interviews was used to identify inhabiting factors to the application and development of ADR. Some enabling factors also emerged from the discussions. Identification of enabling factors was supplemented by an extensive review of the role of key stakeholders to improve the application of ADR.

Adopting measures to obtain cooperation to undertake review of documents, conduct interviews and obtain responses to the interview questions was an important part of conducting the case studies. It was also time consuming to correlate some project records. The prospect of incurring huge costs when conducting case studies outside station was a reality and to reduce on accommodation, travel and other incidental costs, follow up interviews were conducted by phone.

5.5 Data evaluation and analysis

Many methods can be used for data analysis. The two methods used to analyze data in this study were recommended by Yin (1984) and were:

- within-case analysis; followed by
- cross-case analysis

5.5.1 Within-case analysis

This is the first analysis technique used with each organization under study. The investigator studies each organization's written documentation and survey response data as a separate case to identify unique patterns within the data for that single organization.

In this study, individual detailed reports were written, categorizing interview questions and answers and examining the data from the various project records and documents for within-group similarities and differences or errors.

5.5.2 Cross-case analysis

This is the next step in the case study analysis. The investigator examines the pair of cases, categorizing similarities and differences in each case. As patterns emerge, certain evidence may stand out as being in conflict with the patterns. In such cases, the investigator conducts follow-up focused interviews to confirm or correct the initial data in order to tie the evidence to the findings and to state relationships in answer to the research questions.

In this study, notes taken highlighted developing relationships between enabling and inhibiting factors relating to the application of ADR as experienced by the case study contractors. In addition, the process included confirming or triangulating some of the emerging results and any conflicting findings with the only participating but major employer and active participant in ADR in the Zambian construction industry, RDA.

5.6 Case study findings

After the data collected from interviews and review of dispute records was analysed, it was possible to identify common findings. Each of the attributes was explored with respect to its contribution to the application and development of ADR in the Zambian construction sector.

5.6.1 Background of the respondents and construction organizations

In terms of management level, the two respondents were shareholders/directors, therefore in the top management and familiar with the disputed cases and the application of ADR in their organizations. They were both involved with decision making and determination and settlement of disputes and the application of ADR.

5.6.2 Years of establishment

Both contractors had been establishment for more than 30 years. This was considered sufficient experience of having carried out many projects to sustain their operations for such a long time. Based on the years of establishment, however, there was no relationship with the awareness and knowledge of application of ADR in Zambia. Contractor B applied ADR only twice since establishment compared to the Contractor A who had more than five disputes referred to or resolved by ADR. This was of no surprise as the utilization of ADR was very low due to it being very new to the Zambian construction industry.

5.6.3 Choice of ADR methods

The amount in dispute influenced the application of ADR, especially arbitration. The choice of the ADR method was determined by the value of claims. For huge amounts, arbitration was more preferred to adjudication or negotiation. Both contractors identified the need for an ADR system which dealt with disputes in ways which were proportionate to the:

- a) amount of money involved;
- b) importance of the dispute;
- c) complexity of the issues; and the
- d) financial position of each party.

(i) Amount of money involved

The respondents argued that the amount of money that a disputant was expected to pay to pursue or defend a dispute should be proportionate to the importance and complexity of the dispute. In this context the respondents argued that mediation was more suited to low value disputes and arbitration to high value disputes.

The above mentioned relationship between the choice of ADR method and cost of proceedings involved, was considered significant if the dispute was between a contractor and a government department or agency. They complained that the tendency by government agencies to insist on arbitration in all disputes even when the amount of money involved was lower than the cost of adjudication or arbitration. They acknowledged that in an era of perceived rampant corruption in the public service, public officers were more comfortable with an arbitrator’s binding decision rather than a negotiated or mediated decision involving huge sums

of money, for fear of being accused of corrupt practices if the decision was against government.

(ii) Most preferred ADR methods

The case study contractors indicated that, arbitration was a more preferred ADR method in the Zambian construction industry, followed by adjudication. The views of the contractors were sought as to the reasons why arbitration was more preferred? The perception was similar to those in the interview sample. The main reasons were that costs were recoverable and that there was finality of process as no appeal was allowed and the awards were enforceable locally and internationally.

Although Arbitration was not new to the Zambian Construction industry as it existed in all major standard forms of construction, it was not until the Arbitration Act No. 19 of 2000 was enacted that the old Act was repealed which allowed both arbitration and litigation as methods of dispute resolution. Until the year 2000, any arbitration awards could be set aside by application to the high court of Zambia for any reason and was subject to a fresh review in court regardless of the reasons for the application. Therefore, most disputants preferred litigation to ADR to avoid unnecessary delays. In the Act No. 19 of 2000, no appeal was allowed against an Arbitral award unless in exceptional circumstances provided for under the Act.

5.6.4 Delays in ADR proceedings

Delays in submitting statements of claim and defence, appointment of neutrals, conducting hearings and writing awards, featured highly in the records reviewed and the interviews conducted. The respondents perceived ADR to be less costly than litigation. The respondents argued that ADR was promoted on the basis of deficiencies of the traditional court system. To this end, improved access and efficiency of proceedings was crucial to the promotion and acceptance of ADR in the sector.

The respondents perceived that the major benefit of ADR to litigation was the reduced cost of reference adding that ADR was only cheaper than litigation if the dispute resolution was faster and at less cost. They recognized that delays of referrals increased the cost of the dispute by creating additional layers to the dispute resolution process. As a result, in some cas-

es, the ADR process did not appear to produce significant cost savings. What it achieved was early and appropriate resolution of disputes only. It was observed that the current problems arose largely, due to lack of awareness and knowledge, non-regulation and lack of an effective ADR monitoring authority in the country.

Government support of ADR suppliers and proceedings was identified as key to ensuring an effective ADR process. The respondents felt that government was a beneficiary of ADR, therefore, it would save a lot of resources if proceedings were cost effective and done properly. In the past, disputes on government funded projects were not resolved early and tended to escalate leading to increased losses and project abandonment.

The respondents recognized that ADR proceedings could be improved through a monitoring and regulation system to provide checks and balances to ensure a timelier and cost effective outcome. They complained that delayed proceedings affected contractors' cash flows, and if the defendant was a government agency, the proceedings would go on for months. Enforcement of any AWARD against government agencies, they argued, took several months rendering the ADR's cost saving benefit, meaningless. Contractor A elaborated further: *"We have learnt many lessons from our participation in ADR proceedings. We have faced delays, and at times, paid very high fees but we do not think that ADR is not a useful and valuable dispute resolution tool. The lesson being that, it is important to evaluate the benefits and problems of ADR before adopting any of the methods. So far, the benefits of reduced cost and time of ADR outweigh any procedural problems of the ADR services delivered"*.

Another important dimension identified, which contributed to the delay in ADR proceedings was the variance in the competence of ADR practitioners which created inconsistency in the way ADR proceedings are managed or handled as Contractor A pointed out: *"The competence levels among ADR practitioners and institutions vary enormously. I think there is need for improvement. ADR is good for contractors to resolve their disputes. It is supposed to be cheap and fast but it does not feel that way in situations where the practitioner is not in control of the process"*.

5.6.5 Lack of awareness and understanding of ADR

One prominent problem that emerged during the interviews was that most construction participants – employers, contractors and consultants had little awareness of ADR, generally, let alone the differences between the various ADR processes.

The interviewed contractors highlighted the lack of usage and acceptance of ADR, inadequate setups within the professional institutions and lack of funding for operations at the ZCDR as some of the contributing factors.

The respondents supported a centralized ADR access point for the construction industry for efficiency and effectiveness. It was illustrated that the current centre (ZCDR) covers for a mix of many ADR users, therefore, it was not possible to provide a service that would meet specific needs of the construction industry. This appeared to be legitimate. For example, regulation of ADR practitioners and procedures for different industries (insurance banking, accountancy, trade etc) would require a whole multiple checklists and levels of monitoring but with a specific ADR centre for the construction sector, it would be possible to regulate acceptance and enforcement of ADR decisions among contractors as sanctions such as de-registration if say, an NCC registered contractor failed or refused to implement an ADR decision or award would be part of the NCC statutes and made mandatory.

5.6.6 Lack of standard ADR procedures

According to the respondents, the absence of standard procedures for other ADR methods other than arbitration and mediations meant that there was no strict enforcement of ADR ethics and procedures. Prevailing practice was that the practitioners were free to choose which standards or procedures to apply or observe. The respondents observed that this allowed the government agencies, strong private employers and large foreign consulting firms to manipulate or dictate the ADR processes thereby rendering the dispute management process ineffective and unfair in some cases. The emerging theme was that there was need to develop an effective dispute management system, increased promotion and training of construction participants in order to increase awareness, competence and benefits of ADR.

5.6.7 ADR and the construction and legal professionals

As the use of ADR in the construction sector was increasing, so too, was the acceptance and the use of ADR among construction and the legal professionals. The respondents indicated that whilst there were general acceptance and encouragement for ADR methods by the construction professionals e.g. engineers, quantity surveyors and architects, they experienced situations when some members of the legal profession tended to encourage litigation procedures in total disregard of the contractual provisions for ADR thereby creating unnecessary delays and costs.

The respondents appealed for increased training and ADR post graduate courses as a way to promote ADR within the legal profession: *“Lawyers must develop a culture for promotion of ADR. With a dedicated ADR institution for the construction sector, it would be possible to accredit lawyers who support ADR. At the moment we always assume that any lawyer supports ADR but it’s not the case”*.

5.6.8 Fairness of ADR proceedings and decisions

Case contractor A criticized the lack of formal checks and balances in the ADR process as applied in the Zambian construction industry, compared to litigation. Contractor B complained of lack or absence of an appeals body which would intervene in situations where one party disregarded the ADR provisions in the contract rather than applying to the courts as it was costly and time consuming. The respondents indicated that where disputes involved huge financial claims, there was always the worry of unfairness and suspicion of corruption in the ADR process. They observed that fairness was a key principle of ADR and must be seen by both parties to a dispute.

The respondents supported a suitable ADR framework to include procedural rules, accreditation of practitioners who would be well qualified, respected neutrals and would make decisions based on established principles. According to Case Contractor A, *there was need for an appropriate complaints and disciplinary mechanism for ADR practitioners to increase their reputation and confidence in ADR in the construction sector*.

The respondents also highlighted the problem of having different layers of ADR and argued that in practice, construction sector disputants took definite positions as regards issues in

dispute. Therefore, having a dispute go through conciliation, adjudication made the cost of ADR higher than litigation by creating more layers to the dispute resolution process as it increased the cost and length of time taken to resolve a dispute. They indicated that application of appropriate ADR methods to different types of disputes would be a more practical approach.

5.6.9 Role of stakeholders

Some of the inhibiting and enabling factors that cut across the development of ADR were discussed in relation to the stakeholders who were mainly responsible for the particular factor. It was seen that a very large degree of influence rested with the government agencies (as major employers) and contractors. Consultants acting as designers and supervisors as well as employer's representatives had some influence but ultimately they were responsible to the employers it was pointed out. The respondents discussed various concerns relating to the roles played by the stakeholders identified below.

a) The National Council for Construction

The case study contractors complained that despite being the regulator for the construction industry in Zambia, the NCC had no rules or guidelines or training programs for ADR to assist contractors involved in or those affected by the process.

An ADR advice centre set up by the NCC emerged as a solution to the promotion and raising awareness among all categories of contractors. They suggested that the NCC could also play the role of an independent auditor of ADR processes in the construction sector.

b) The government

The case study contractors recognized government agencies as major participants in the ADR process both as a party to many contracts and disputes and as a facilitator. The government was, however, criticized for failing to promote ADR by not:

- ensuring the incorporation of ADR provisions in the public procurement procedures, infrastructure projects and service contracts; and by
- not raising awareness among the contracting and controlling officers, and the project teams in the various government departments and agencies.

The contractors highlighted the fact that government would benefit greatly if ADR in the construction sector was administered properly. They pointed out that the government would save huge sums of money as well complete some projects on time if disputes on many government funded projects were resolved timely using a structured process. They urged that the government needed to create the environment for achieving objectives of ADR in the construction industry by facilitating and promoting its development in the public service.

Contractor A mentioned the importance of government participation in ADR: *“Much of the construction work is carried out for government agencies and much of the infrastructure is built as part of its duties. Whilst most professions can prosper without much interference of government, the construction cannot. Therefore, if government takes little interest in the development of ADR a bad environment for resolution of construction disputes will be accompanied by poor quality infrastructure as many problems will not be resolved”*.

c) Implementing agencies and the private sector employers

Both contractors interviewed were unanimous in the view that it was the employer who should create the enabling environment and culture for dispute free project implementation. It was recognized that employers were often unfamiliar with ADR and tended to disregard contract provisions for dispute resolution. It was felt employers do have the authority to promote ADR and the achievement of its objectives should they so wish.

d) Consultants

Respondents recognized that consultants were employed by and responsible to the employer. However, they felt that consultants were in a good position to juggle the demands of both the employers and the contractors in times of a dispute as some tended to be weak on issues against the employer. The respondents urged that consultants must recognize the importance of fair decisions and they can exert some influence over the employer to amicably resolve disputes or use cost effective ADR methods appropriately and timely rather than frustrate the process as observed in one of the cases reviewed.

e) Contractors

The respondents identified the contractors' price cutting and subsequent failure to comply with the conditions of contract in order to cut costs as largely responsible for most disputes. The lack of ADR knowledge and awareness was identified as being responsible for delays in

proceedings and high expectations of ADR outcomes. The respondents agreed that improved managerial capacity of contractors would help reduce disputes on sites. In addition, increased promotion and training of contractor's staff would also help improve participation, appreciation of proceedings and development of ADR among local contractors.

f) National Road Fund Agency and private financiers or developers

NRFA traditionally had not supported ADR objectives especially if decisions or awards caused funding to exceed allocated budgets. For example, it was identified that by not providing for reimbursement of costs for project consultants in a dispute resolution process, there was reluctance by the consultants to participate in the ADR or litigation process. The respondents requested the funding agencies and private developers to agree to abide by the ADR objectives and provisions in the contract agreement whether decisions were for or against the government implementing agencies or other private financiers or developers as part of the funding framework so that they get involved in monitoring the ADR proceedings and outcomes. According to Case Contractor A, *"NRFA or indeed any private financiers or developers must abide by the contract conditions in terms of financial risks relating to dispute resolution which are inherent in the construction process as part of the funding arrangement"*.

The respondents also observed that, where a consultant was involved, most employers tended to think that the dispute was between the contractor and the consultant and do not feel obliged to pay for such services. The end result was that consultants tended to hand down unfair decisions and blocked any efforts for an ADR process for fear of financial liabilities should a decision be against the employer.

g) Donors

The respondents perceived many donors to be results oriented and more concerned with the asset to be delivered than with the delivery process itself: *"Donors seem focused on financial than technical aspects and measure performance by quantity of funds released and yet they set the conditions and standards of projects"*.

They urged donors to promote the achievement of a good ADR environment and allocate funds for dispute prevention and resolution on projects as well as encourage the establish-

ment of Dispute Boards (DBs) on all funded projects and allocate funds for training of construction participants and DB monitoring activities. They indicated that DBs were a new concept of dispute prevention and resolution and was therefore, not appreciated by most local participants including the government.

5.6.10 Summary

The case studies were a useful method to understand the large number of factors that seemed to be inhibiting the application and development of ADR in the Zambian construction industry. In the two cases studied, contract provisions were adequate to ensure compliance to an ADR process but lacked the safeguards in cases of non-compliance by one party. It was clear that lack of awareness and knowledge of ADR by some of the parties allowed delays in proceedings and additional costs to appear in a variety of forms. Some of the parties, especially government agencies, applied procedures that are nonexistent in ADR. For example, sending different persons including juniors to represent the government contracting officers at the various meetings and hearings in ongoing dispute resolution proceedings demonstrated extreme lack of knowledge of ADR procedures.

Another manifestation of lack of ADR knowledge was the rush to use the court system for the appointment of neutrals in a conciliation process – something which was not provided for in methods like conciliation and mediation except in arbitration – according to the Zambian laws.

In the two cases reviewed, the use of the court system appeared to be a way to delay ADR proceedings by lawyers. It was recognized that an ADR advisory centre for the construction industry with clear guidelines and procedures would assist correct or address some of the problems mentioned above and experienced by the case study contractors. This would create a positive effect on the perception of ADR.

The case studies revealed that the benefits of ADR were not fully realized in the Zambian construction industry because of a lack of awareness, promotion and standard procedures.

The problems experienced by the two case study contractors were similar, thus, the ADR model developed in Chapter 6 should address the factors that inhibit ADR application and

development. The respondents were in support of any efforts that would enhance the potential and effectiveness of ADR methods as consistent and predictable options for resolving construction disputes.

In the next chapter, a model for the management and application of ADR processes to construction disputes is presented. The model is based on the reviewed literature, structured interviews, questionnaire surveys and the contractor case studies.

Chapter Six: Alternative Dispute Resolution Model

6.1 Introduction

Analysis of findings from Chapters four and five revealed the need for an effective dispute management system so that disputes can be managed and resolved timely at any stage of the construction cycle of a project.

In this chapter, a model which incorporates all relevant aspects of a project dispute management process and procedures for: reference; appointment of practitioners; and application of mediation, adjudication, expert determination or dispute boards was developed. The first part of the chapter discusses the general principles on application of ADR and a description of essential elements and steps of the model. The chapter concludes by presenting validation results of the model.

6.2 The ADR management model

The main aim of the research reported in this dissertation was to develop a structured procedure for the application of ADR during the life cycle of a construction project in Zambia. Findings from the study highlighted the lack of understanding of ADR methods and procedures, and the non regulation of practitioners as the main reason for delays in ADR proceedings and non-compliance by parties.

Another important factor identified, which contributes to the delay in ADR proceedings was the variance in the competence of practitioners which created inconsistency in the way procedures were managed or handled. Delays in submitting statements of claim and defence, appointment of neutrals, conducting hearings and writing awards, featured highly as some of the problems encountered by stakeholders in the interviews and questionnaire surveys conducted. Respondents perceived ADR to be less costly than litigation and they argued that it was promoted on the basis of deficiencies of the traditional court system. They recognized that delays of referrals increased the cost of disputes by creating additional layers to the dispute resolution process. Findings indicated that improved access and efficiency of proceedings was crucial to the promotion and acceptance of ADR in the Zambian construction sector.

Respondents were asked to suggest ways that could improve or increase the application of ADR methods in the Zambian construction industry. Respondents indicated that ADR proceedings could be improved through a structured procedure which was monitored and regulated to provide checks and balances to ensure a timelier and cost effective dispute management process. They pointed out that this would not only improve the quality of services, but also increase the acceptance level and confidence in ADR methods.

Findings favoured arbitration, adjudication, mediation, Expert Determination and Dispute Boards for the resolution of disputes in the Zambian construction industry. Results indicated that a structured management process for reference of disputes, appointment of practitioners and resolution of disputes using adjudication, expert determination and dispute boards would lead to strict enforcement of ADR ethics and practice. The majority of questionnaire respondents in chapter 4 or 5, 36 out of 47, supported the existing statutory procedures for arbitration under the Arbitration Act No.19 of 2000 and made no new recommendations. Respondents further stated that qualifications of ADR practitioners required adequate practical experience and approved training. They suggested a minimum of 15 years of professional experience with at least 5 years of ADR practice and approved ADR training.

6.3 Explanation of the model

The model outlines a dispute management process through a series of steps which are general enough to apply to all construction disputes and sets out how the parties and the project manager should respond to a dispute. The model encompasses the following stages:

- (a) identification and diagnosis of an issue that has the potential to escalate into a dispute;
- (b) negotiation;
- (c) declaration of a dispute if negotiation fails;
- (d) initiation of the ADR process using preferred method;
- (e) reference of a dispute to a neutral practitioner;
- (f) appointment of the neutral practitioner;
- (g) application of the chosen ADR method and management of proceedings by the neutral; and
- (h) decision making by the neutral and closure.

The proposed model is presented in form of a flow chart in Figure 6.1 above. The essential steps of the model are described below.

6.3.1 Identify the problem

This is the first step of the dispute resolution process and involves identifying the nature, scope and impact of the problem or claim on the project and the parties. At this stage, a preliminary assessment should be made as to the appropriate dispute resolution process provided for in the contract agreement. For example, there are certain disputes which may be resolved quickly by negotiation, conciliation or mediation but others may require adjudication, expert determination or arbitration.

i) Gather information

The project manager should gather relevant information from site records, and discuss the problem or claim with the parties involved. All information gathered should be recorded and compiled for reporting and evaluation. The views and evidence of the site and project personnel may be crucial to establishing the facts.

ii) Evaluate the problem

The dispute should be reviewed and evaluated in light of the information gathered via reporting and consultation, options for resolving the problem and impact for failure to resolve it should be identified and presented to the parties or their representatives.

iii) Consultation

It is also necessary to review contract provisions and consult the parties to attempt negotiation as the most appropriate course for resolving the problem.

6.3.2 Negotiation

The following is considered to be the general or basic approach to the negotiation process:

- i) relevant parties should discuss and attempt to negotiate a solution to the problem or issue. It is common for a dispute to be resolved at this stage, particularly if it is identified early and if the parties are open and receptive to maintaining business relationships and

want to see an outcome which ensures that the implementation of the project is achieved;

- ii) negotiation to resolve construction problems involves cooperative effort among the parties and is relatively cost-free because problems are addressed informally and while facts are still fresh; and
- iii) according to Carbonneau and McConnaughay (2007), negotiation is a time-honored method of resolving disputes that arise during construction. The most successful direct negotiation techniques are those in which the negotiators conduct their discussions on the basis of the respective interests of the parties, rather than the traditional approach of focusing on the positions of the parties. Carbonneau and McConnaughay (2007) suggested two types of contract clauses to commit parties to good faith negotiation during the project cycle

a) Sample clause for ‘Good Faith Negotiation ’

“The parties will attempt in good faith to resolve promptly any controversy or claim arising out of or relating to this agreement by negotiation between representatives of the parties who have authority to settle the controversy”.

Under this provision, if the project site representatives of the employer and contractor are not able to resolve a problem at their level, their immediate superiors, who are not as closely identified with the problem, are asked to confer and try to resolve the problem. If they fail, the problem will be passed on to higher management of the disputing parties.

b) Sample clause for ‘Step Negotiation’

“If a claim or dispute should arise, the parties will attempt in good faith to resolve any dispute arising out of or relating to this agreement promptly by step negotiations between managers and executives of the parties who have authority to settle it”.

If the dispute cannot be resolved promptly by the most senior project site representatives of the parties, then the representatives for each party will meet at least once and will attempt to resolve the dispute.

If the matter has not been resolved within say, ten days of their first meeting, the representatives shall promptly prepare and exchange memoranda stating the issues in dispute and their position(s), summarizing the negotiations which have taken place and attaching relevant documents, and shall refer the matter to senior executives, who shall have authority to settle the dispute. The senior executives will promptly meet for negotiations to attempt to settle the dispute. If the matter has not been resolved within say, 14 days from the date of referral of the dispute to senior executives, either party may refer the dispute to another dispute resolution procedure in accordance with the provisions of the contract.

iv) Reporting

If negotiations succeed and a settlement is reached, then there is need to document and communicate as necessary, to the parties involved in the dispute and to the parties consulted during the negotiation process. If negotiations fail, the parties need to be assisted by a third party or a specialized person or panel for a binding decision in accordance with the provisions of the contract. Similarly, parties to the dispute have to be informed accordingly.

6.3.3 Dispute declared

After failure of negotiations, one of the parties declares a dispute and makes a referral to a neutral practitioner.

6.3.4 Parties initiate ADR process using identified method

To initiate a dispute resolution process, parties examine, carefully, the provisions of the contract to decide their true meaning and effect. Parties have to follow the provisions of the contract, then decide an appropriate ADR method and then apply the relevant section of the flow chart in line with the chosen method.

- i) Where there is no provision for ADR in the contract agreement, parties are free to enter into an agreement referring an existing dispute to a preferred ADR method.
- ii) Next, parties need to inform the ADR practitioner named in the contract about the dispute. The practitioner should in turn issue guidelines for proceedings for the selected method of dispute resolution. If not already named in the contract, parties then appoint the neutral practitioner in accordance with the procedure outlined in the flow chart.

6.3.5 Reference of a dispute to ADR - with or without a provision in the contract

According to Carbonneau and McConnaughay (2007), the employer should choose and list in the Contract Data the most preferred method for dispute resolution to be used during the project cycle. And if in any doubt as to whether or not the contract has adequate provisions, the employer should take further advice from a consultant or seek a legal opinion. In the case where there is no provision for reference of a dispute to ADR, Carbonneau and McConnaughay (2007) suggested a typical sub agreement, after a dispute has arisen:

“We the undersigned parties, hereby submit the following dispute or any dispute arising out of the contract [*describe contract*] to [*Arbitration/Adjudication/Dispute Boards/Expert Determination or Mediation*] under the rules [*describe applicable rules*]. We further agree the dispute be submitted to a one/two/three member panel of [*adjudicator/arbitrator/expert/mediator/Dispute Board*] and agree to fully observe the rules and procedures.”

The clause should also highlight any time frames, review by the arbitration tribunal, if required or where applicable, if one party is dissatisfied with the decision.

6.3.6 Appointment of a neutral ADR practitioner

From the study findings, responses on the process for appointment of neutral practitioners such as mediators, adjudicators, arbitrators, experts or Dispute Board(DB) members, were mixed. Some of the respondents indicated that the neutral practitioner could be named by the employer in the contract data and appointed before the starting date. Others preferred a mutually acceptable practitioner appointed by the disputing parties. Some respondents agreed with the employer naming a nominating body in the contract data so that if the parties were unable to agree a choice, then either party would ask the named institution to nominate the neutral practitioner. The nominee would become the adjudicator or arbitrator or expert or member of the DB. The identified nominating body in the contract data would normally be a professional institution or organization with the ability to appoint a suitable person to act as a neutral ADR practitioner within timescales set out in the contract (Yu 2007).

According to Carbonneau and McConnaughay (2007), unless in the case of DBs, the neutral does not take part in the project unless one of the parties declares a dispute and makes a referral. Checks should be made for any conflicts of interest before naming the ADR practitioner or proposing a replacement. The neutral practitioner should always be a named person and not an organization or firm.

i) Definition of an ADR practitioner

According to Yu (2007), the ‘adjudicator’, ‘arbitrator’, ‘expert’ or ‘dispute board member’ is someone widely recognized as a reliable source of technical skill, by virtue of training, education, profession, publications or experience, whose faculty for judging or deciding rightly, justly, or wisely is accorded authority and status by the public or peers.

An ‘expert’, more generally, is a person with extensive knowledge or ability in a particular field. An expert can be, by virtue of training, education, profession, publications or experience, believed to have special knowledge of a subject beyond that of the average person, sufficient that others may officially and legally rely upon the individual’s opinion (Yu 2007). An expert can also be appointed to give expert evidence in any dispute resolution process to express their independent expert opinion as an expert witness.

The parties appoint the neutral practitioner based on a contract. This sets out matters such as the terms of payment for his or her services and duties, liabilities. In mediation, adjudication, expert determination or dispute boards, the fees are shared equally between the parties to the dispute regardless of the decision, unless otherwise agreed. In the case of arbitration, the arbitrator awards costs.

The contract with the neutral practitioner should be entered into before or immediately after the project starting date. This allows any dispute to be referred quickly, thereby avoid delays of going through the procedure of appointing the practitioner. One of the problems highlighted in the study as the main reason for delays of ADR proceedings was the time it took parties to appoint a neutral. Where the neutral named in the contract data has not been appointed, or is unable, for whatever reason, to deal with the dispute, the contract should

set out the procedure for appointing a replacement, who can then decide any existing disputes which the predecessor had not dealt with.

ii) Qualifications and experience of a neutral practitioner

The majority of the respondents, 8 of the 10, indicated that the relevant experience, qualifications and general ability of any prospective neutral must be carefully considered. They preferred an accreditation scheme for ADR practitioners and identified the following qualities as a minimum requirement:

- appropriate training in ADR;
- qualification in the area of the dispute;
- knowledge of the procedures in the form of contract applicable to the project and dispute;
- available for the ADR process; and
- impartial and having no conflict of interest in the dispute or with the parties.

6.3.7 Management of ADR proceedings by the neutral practitioner

After parties select an ADR method and appoint the neutral practitioner, the proposed ADR model sets out when and how a dispute resolution process should be managed by the neutral practitioner in terms of the period to reach the decision, except for arbitration whose proceedings are guided by the Act. The neutral should only decide the dispute referred by a party and cannot, without the agreement of the parties, decide other disputes that he or she may be aware of but which have not yet been referred by the parties. The model gives steps for mediation, adjudication, expert determination and dispute boards.

(i) Mediation

All the respondents agreed that within two weeks of appointment, the mediator should arrange a meeting of the parties and ensure completion of the mediation process. Each party should provide a brief, setting out the relevant facts and issues in dispute and their position on the questions raised the other party. The mediator circulates the memorandum to both parties. With agreement and in the presence of both parties, the mediator visits the site. The parties bring to the meeting all documents relied upon. The mediator is master of his or

her own procedures. Mediation proceedings are not recorded. Once agreement is reached, settlement is reduced to writing. Settlement is enforceable in the courts of Zambia and no appeal is allowed.

(ii) Procedure for adjudication, expert determination and dispute boards

In these three methods, the neutral has wide powers to ensure that he or she can properly manage the process and be able to resolve the dispute within the period stated in the contract or agreed with the parties. The neutral practitioner is also free to carry out whatever investigations are considered necessary to assist in decision-making. However, the neutral is obliged to tell the parties the results of those investigations and invite them to comment before making the decision.

The neutral may review any action or inaction of the project manager or supervisor and decide what action should have been taken in accordance with the contract. In a case in which he decides that the project manager or supervisor acted or did not act in accordance with the contract, the neutral practitioner assesses both financial and time effects.

The neutral is required to give the parties reasons for his or her decision. The essential requirement is that the parties can understand why the neutral has reached his or her decision and can implement it immediately. The decision may also be subject to careful scrutiny, particularly by a party who may be dissatisfied with it. Other matters which, for completeness, should be included in the neutral's decision are:

- details of the contract;
- details of the appointment of the neutral;
- circumstances leading to the reference;
- the procedures followed by the neutral; and
- information upon which the decision is based.

Submission of a dispute to ADR does not entitle any party to cease activities. The neutral's decision is binding and must be implemented. It can only be changed by agreement between the parties or by a subsequent decision of an arbitration tribunal.

iii) Review by the arbitration tribunal

Once the adjudicator, expert or dispute board has reached a decision, the parties put it into effect. If both parties are satisfied with the decision, that is the end of the matter. If either party is not satisfied with the decision, they have a short period to notify the other of their dissatisfaction, in which case the matter can be dealt with, at any time in future, by an arbitration tribunal. Most of the respondents preferred a reference within a period of 28 days to avoid unnecessary delays.

In Zambia, the Arbitration Act No. 19 of 2000 prescribes procedures for reference of any dispute to an arbitration tribunal. The tribunal makes a final and binding decision on the dispute, subject only to any appeals procedure allowed under the Act.

6.4 Validation of the model

After development of the model, validation was undertaken to verify its appropriateness to the Zambian construction industry. The concept of validation is an accepted form of critique (Muya, 1999). The ADR model was validated by assessing its functionality, usability and usefulness. This was achieved by sending a validation questionnaire to key ADR and construction stakeholders, most of whom participated in the interview survey. The validation questionnaire with its' accompanying cover letter are shown in Appendix D.2 and D.1 respectively. The responses of the ten respondents are discussed below.

6.4.1 Respondents profile

Figure 6.2 indicates the distribution of the professions of the ten respondents to the validation questionnaire. Two participants were lawyers with experience in international construction disputes. Five were construction professionals made up of two contractors and three construction consultants, the other two were representatives of government agencies and one was an ADR practitioner. All respondents were from senior management in their organizations with individual working experience in ADR and construction disputes ranging from 10 years and above. Three of the respondents experienced in all methods of ADR were further invited to an interview for obtaining more information and suggestions for improvements to the model.

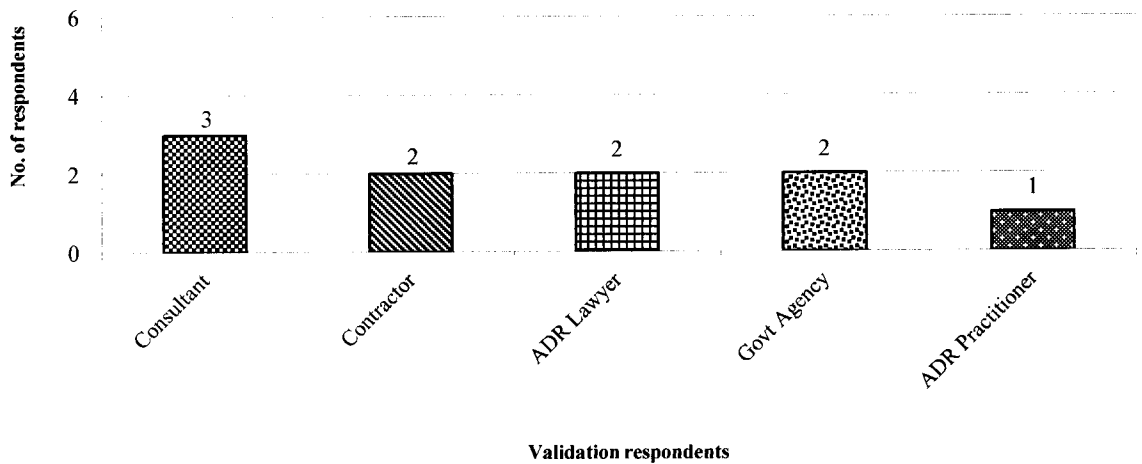


Figure 6.2: Breakdown by type of respondents’ sub-sector representation

6.4.2 Functionality

Functionality is the degree to which the model is generic such that it is applicable to different types of disputes. The respondents were asked whether the proposed model could easily be adopted for resolving disputes at any stage during the construction phase of any project. All respondents confirmed the adaptability of the model to the disputes regardless of type, complexity and amount and stage of construction.

6.4.3 Usability

Usability focused on the degree to which users were able to use the model without assistance from consultants. The respondents were asked whether the steps for the proposed model were simple to follow and implement. Although 7 out the 10 respondents agreed that the model was easy to use and implement, they also indicated the need for an advisory framework to be in place to provide support and guidelines to users. They proposed that the framework should include:

- procedures for enforcement of ADR decisions for methods such as adjudication and Dispute Boards which were not catered for under current statutory provisions;
- an approved training program and accreditation system for practitioners; and

- procedures to deal with problems that may arise prior to commencement or during the ADR processes such as practitioners' jurisdiction, appointment, fees and expenses, immunity and enforceability.

All the respondents were in agreement that the model was usable and could increase application of ADR methods in the process of resolving construction disputes in the Zambian construction industry.

6.4.4 Usefulness

For the model to be used it should provide value to the user. Therefore, usefulness was assessed in terms of the respondents' perception of whether they found the model useful in resolving construction disputes. The respondents were asked whether the proposed model would be useful and if it would add value to the management and resolution of disputes in the Zambian construction industry. All the respondents agreed that the model was comprehensive and provided good information to assist parties resolve disputes timely by prescribing procedures for referral of disputes, appointment of neutral practitioners, and the process of resolution of disputes for various methods. This, they pointed out, would add value to the construction process by improving efficiency of ADR proceedings at any stage of the project cycle thereby reducing the delays experienced in the process of resolution of disputes. A contractor respondent elaborated further: *"We tend to tackle disputes emotionally by standing our own positions and perception rather than evaluating the merits of our claims and the benefits of timely settlement of disputes. For every dispute, it is important to attempt resolution by negotiation or other good methods like mediation or expert determination because, there are technical matters in dispute. And it should be emphasized at contract signing stage to appoint the neutral practitioner(s) as key to resolving disputes speedily"*.

From the validation undertaken it was deduced that the proposed model would improve the application of ADR during the life cycle of a construction project in Zambia.

6.4.5 Summary

The ADR model presented in this chapter was developed based on best practices from literature and recommendations from interview, questionnaire and case study respondents. The model was validated by ten ADR stakeholders and professionals from the construction industry. The ADR model incorporated responses from the checklist included in the questionnaire survey which ensured that all relevant aspects of ADR at every stage of dispute resolution were taken care of.

Although it was difficult to readily identify the weaknesses that may rise during the application of the model, suggestions from respondents during the validation process provided valuable feedback. Most of the suggestions require statutory safeguards or provisions as a remedy. For example, setting up of an advisory centre at the National Council for Construction (NCC), development of an ADR framework and the amending of the current Act for the NCC were some of the remedies considered.

After validation, the model was perceived by the respondents as user friendly and a useful tool for the efficient delivery of ADR services in the Zambian construction industry.

The next chapter considers the conclusion and recommendations of the research taking into account the findings, case studies and the ADR model developed.

Chapter Seven: Discussion of Results

7.1 Introduction

The preceding chapter described essential elements of an effective process for managing disputes and outlined a model developed to guide the application of ADR in the Zambian construction industry. Following the results obtained from: literature review in Chapter two; structured interviews and questionnaire surveys of the stakeholders in the construction industry in Chapter four; the contractor case study in Chapter five; and the development and validation of the ADR model in Chapter six, a number of key issues were identified that affected the application and development of ADR in the Zambian construction industry. This chapter summarizes the main factors identified as inhibiting the application and achievement of ADR development in the construction industry.

7.2 Research findings

Respondents to interviews, the questionnaire survey and case studies consistently identified many factors which were considered important to the development of ADR in the Zambian construction industry:

(i) Interviews

Thirteen interviewees, who were among key stakeholders in the Zambian construction industry, identified the following issues as significant challenges:

- a) lack of awareness and non-promotion of ADR methods, among contractors and government agencies, as more cost effective means of resolving disputes compared to arbitration;
- b) lack of local training in dispute resolution methods;
- c) insufficient numbers of ADR practitioners;
- d) lack of adequate ADR provisions in contract agreements; and
- e) lengthy proceedings due to lack of regulation and monitoring of ADR practice.

(ii) Questionnaire survey

The 47 questionnaire survey respondents identified the following as the main factors affecting the application of ADR in the Zambian construction industry:

- a) lack of awareness and understanding of ADR methods and their benefits by stakeholders;
- b) preference of arbitration to other less cost effective ADR methods;
- c) lack of a dedicated advisory institution for the construction industry to promote the development and application of ADR; and
- d) urgent need to train and educate not only contractors and consultants but also government procurement and contracting officers on the application and benefits of ADR.

(iii) Case study results

The case studies involving two contractors and one government agency supplemented the interviews and questionnaire results and highlighted three important issues:

- a) need for application of different ADR methods to cater for different sizes of contractors and amounts of claims in dispute;
- b) arbitration was more preferred ADR method in the Zambian construction industry, followed by adjudication; and
- c) delays in ADR proceedings reduced access and acceptance of ADR by stakeholders.

The Road Development Agency, a government implementing agency, attributed the lack of application and development of ADR in the Zambian construction industry to the following:

- a) lack of acceptable ADR procedural setups within the local professional institutions and inadequate funding for operations at the ZCDR;
- b) need for a complaints and disciplinary mechanism for ADR practitioners to increase the reputation and confidence of stakeholders; and
- c) need for increased participation and support of ADR by government implementing agencies and other stakeholders.

The study canvassed respondents' views on these and other issues relevant to the current application and future development of ADR within the Zambian construction industry. Commonly held perceptions in this respect are summarized below:

- there was an urgent need to develop a structured dispute resolution management system;
- barriers to application of ADR in the Zambian construction industry included lack of awareness and availability;
- the most frequently used ADR method in the Zambian construction industry was arbitration;
- there was need to increase the acceptance, through promotion and application, of other consensual dispute resolution mechanisms such as mediation, adjudication and expert determination; and that
- there were many challenges affecting the development of ADR in Zambian construction industry and the key stakeholders had overlapping roles to play in order to increase the application and acceptance.

7.2.1 Development of a structured dispute resolution management system

In the Zambian construction industry, there are many stakeholders – such as government departments, implementing and funding agencies, small and medium to large contractors, financiers. With all these different participants, there are many types of contract agreements. It was, therefore, not easy to get a uniform approach as to the application of ADR. Most respondents were concerned with the failure by the industry, especially NCC, to set up an ADR advisory centre or a central access point for contractors, especially small scale contractors, and other stakeholders. They indicated that the absence of an administrative institution dedicated to the construction industry to appropriately coordinate the application of ADR made it difficult for most contractors to access ADR. This often resulted in most contractors dropping the idea of ADR when faced with disputes as it was more convenient to pass on the task to lawyers. Where contractors opted for ADR, the lack of knowledge about the different techniques, and differences in competences of the practitioners and processes resulted in breaches of procedures, unfair and in some cases questionable deci-

sions. The respondents indicated that in the long term, this undermined the development of ADR in the construction industry.

Interviewees, questionnaire and case study respondents were all in agreement that an ADR advisory centre at the NCC and a structured ADR management system were the answers to provision of an efficient ADR service in the Zambian construction industry. They pointed out that when establishing an ADR advisory centre, there would be need to develop a checklist of issues to be considered so that the services to be provided would meet the expectations of all stakeholders, especially labour-based and small to medium size contractors.

Questionnaire respondents supported the establishment of an ADR advisory centre together with a structured dispute management system as a priority for the industry in order to develop:

- guidelines for reference of disputes to ADR and appointment of practitioners;
- standards for training, qualification and accreditation of practitioners;
- standard procedures for resolution of disputes; and
- standard contract clauses which would apply to all construction project agreements and members of NCC.

They argued that the attraction would be that all registered members of NCC would be bound by the provisions and defaulters would face sanctions. One respondent pointed out: *“All construction contracts must have ADR clauses to ensure disputes are resolved by practitioners. If necessary NCC must have default statutes to ensure all members are covered by such provisions whether their contract agreement had ADR clauses or not”*.

With respect to lack of standard ADR procedures, case study respondents considered this to be a weakness of the current ADR practice as practitioners were free to choose which procedures to apply or observe. They argued that this allowed stronger parties to influence proceedings, rendering ADR unfair and ineffective in some cases. They also pointed out

that an effective ADR institution would increase promotion and training of construction participants thereby increasing awareness, competence and benefits of ADR.

7.2.2 Awareness and trends in the application of ADR in the Zambian construction industry

The questionnaire survey revealed little knowledge and low application of ADR in the Zambian construction industry, especially methods such as mediation, conciliation and other generally consensual dispute resolution mechanisms. Interviewees, especially among contractors and government implementing agencies, highlighted lack of clear understanding of differences between ADR methods, concepts and the terminologies. Most questionnaire respondents attributed the lack of awareness and understanding to lack of easily accessible and available ADR services and pointed out that this was partly the reason for some of the delays experienced in ADR proceedings.

Case study respondents' views on lack of awareness and promotion of ADR indicated that service providers like Zambia Centre for Dispute Resolution (ZCDR), professional institutions such as the Engineering Institution of Zambia (EIZ), the Association of Consulting Engineers of Zambia (ACEZ), the Zambia Institute of Architects (ZIA) and the Surveyors Institute of Zambia (SIZ) did not have adequate administrative setups or sources of funds to fully activate ADR in the construction industry.

Although questionnaire respondents supported the promoting of the ZCDR which also catered for other practitioners from insurance, banking, accountancy, trade and legal sectors, they expressed strong preference for a separate ADR institution to cater for the construction industry. They argued that a dedicated institution for the construction industry would provide more efficient and effective ADR services.

It was argued by case study respondents that ZCDR covered a mix of many ADR users; therefore, it was not possible to provide a service that would meet specific needs of the construction industry. One case study respondent pointed out that, "*regulation of ADR practitioners and procedures for different industries like insurance, banking, accountancy,*

trade and others would require a number of checklists and different levels of monitoring. But with a dedicated centre for the construction industry, it would be possible to regulate the enforcement of ADR decisions among contractors. Sanctions such as de-registration if, say, an NCC registered contractor failed or refused to implement an ADR decision or award would be part of the NCC statutes and made mandatory”.

i) Trends in the application of ADR in the Zambian construction industry

Trends in the application of ADR in the Zambian construction industry were measured by drawing comparisons among stakeholders. The survey results disclosed that construction professionals and lawyers were more familiar than other stakeholders in the application of ADR. This, most likely, reflected their greater exposure and greater participation in the resolution of disputes in their respective professions, or classes of business. Private clients and large contractors showed high levels of application and were possibly encouraged by a wide range of perceived benefits of ADR. Throughout the study, however, a number of indications were that although government policy supported ADR, not enough had been done to encourage the application of ADR in various ministries and departments of government.

a) Reasons influencing the use of ADR

The questionnaire survey investigated possible factors that influenced parties to use ADR services. The responses indicated a range of answers. Contractors preferred to use ADR because they did not want litigation, and this accounted for 21 percent of the total number of respondents. Questionnaire respondents who used ADR because confidentiality was guaranteed and also because there was an ADR clause in the contract accounted for 19 percent each. Of the remaining respondents, 13 percent indicated they were influenced by a court order, 9 percent were influenced by the speedy process, and 4 percent were ‘just trying’. A further eight percent indicated factors such as: contract provided for a mandatory reference to ADR; to minimize costs; an acquaintance suggested; and fairness of the process as some of the reasons for using ADR services. Those who were undecided accounted for 6 percent.

b) Reasons for not using ADR

The study also investigated reasons for which parties would not use ADR methods for resolving disputes. Most frequent reasons given by the questionnaire respondents for not using ADR were that available contract agreements did not provide for ADR. This accounted for 32 percent, followed by 19 percent of respondents who reported that ADR was not suggested by their legal counsels when a dispute was declared. The least reason for not using ADR was the binding nature of the process. Preference for litigation, resistance to ADR by legal practitioners and fear of retribution from clients by contractors accounted for approximately 11 percent each for avoidance of ADR. This indicated that ADR application in the construction industry was not fully understood and appreciated. Case study respondents indicated that they still preferred to resolve their disputes using litigation, unless the contract agreement or legal counsel suggested or recommended otherwise. ADR appeared not to be the first choice method for dispute resolution.

7.2.3 Most frequently used ADR methods in the Zambian construction industry

The study also investigated the most frequently used ADR methods in the Zambian construction industry. Results showed that the majority of questionnaire respondents, at 87 percent, cited arbitration as the most commonly used method for resolving construction disputes in Zambia. The survey results also showed that other ADR methods like negotiation, adjudication, expert determination and mediation were also used but to a lesser extent. Many of the interviewees indicated that they used arbitration because it was well established in the industry as most construction contracts provided for arbitration as the only method for dispute resolution.

The case studies undertaken also revealed that arbitration was suitable for all disputes, especially on large scale complex projects such as those involving foreign contractors or government agencies. Respondents pointed out that the laws of Zambia provided for arbitration starting with the 1933 Act which was later replaced by the Arbitration Act No. 19 of 2000. They argued that the Act provided a formal mechanism for parties to use arbitration and court annexed mediation unlike the other ADR methods which had no statutory recognition and made it difficult to enforce decisions or settlements. Contractors also indicated that ar-

bitration was a most preferred method by government agencies and by public contracting officers who feared public scrutiny of settlements involving large sums of money using mediation, negotiation or conciliation.

Interviewees pointed out that decision to use arbitration also come down to quality outcomes. There was a backlog of cases and delays in the judiciary system where timely resolution of disputes could not be assured. Arbitration offered parties the option to select their own tribunal, a neutral venue guarantying a certain quality of service expected by the parties. Another reason for using arbitration was that, the Act gave no right of recourse for the unsuccessful party.

Questionnaire respondents, however, expressed concern with the slow, legalistic and expensive procedures for arbitration and called for parties to introduce supplementary rules within contract agreements to increase efficiency. This correlated with the literature reviewed, which indicated declining use or preference for arbitration as an alternative to litigation due to its increasing costs and delays in proceedings (Chapman, 2003; and CIBD, 2003). This was another reason given by small scale to medium size contractors for not opting for arbitration. This underscored the need to identify and employ additional techniques as a means to develop mutually acceptable methods to capture true benefits associated with ADR.

7.2.4 Acceptance, promotion and application of other ADR methods

The study sought respondent's views on the trends of application of ADR methods other than arbitration. The questionnaire respondents revealed strong support for adjudication at 68 percent, mediation at 66 percent, conciliation at 37 percent and expert determination at 36 percent. Respondents embraced these methods as the most appropriate and cost effective approaches for resolving construction disputes especially the ones involving small scale contractors.

i) Adjudication and mediation

Both adjudication and mediation were identified, by the majority of questionnaire respondents, as appropriate methods for settling construction disputes in the Zambian construction industry. They attributed their preference of the two methods to the control of the dispute process that was retained by the parties and the wide range of remedies both methods offered. Questionnaire respondents reported that adjudication and mediation were a good platform for informal dispute resolution and that both methods provided a basis for promoting good business relationships. Interviewees advanced two more reasons for preference of adjudication and mediation:

- a) adjudication was preferred for timely delivery of an imposed decision as in most construction disputes parties needed such intervention; and
- b) mediation was favoured because parties retained overall control of the process and any agreement reached and also offered many optional remedies.

Interviewees indicated that mediation was beneficial, in that parties gained better understanding of the issues before continuing to arbitration or litigation. This was in agreement with the case study contractors' views who indicated that mediation and adjudication narrowed the issues in dispute, and therefore made the arbitration hearing more efficient.

The study also investigated mandatory application of mediation precedent to both adjudication and arbitration among the interviewees and questionnaire respondents. Only 47 percent of the questionnaire respondents supported the idea, 15 percent were against and 36 percent were not sure. When asked to explain, interviewees who did not support the idea said that, "by the time parties declared disputes, they would have tried to negotiate or mediate with the project manager acting as a mediator. Most likely, their positions were already entrenched. Any mandatory reference to mediation prior to adjudication or arbitration would be a waste of time". Overall, responses suggested that the great majority of respondents did not embrace the idea of mandatory application of mediation and looked upon it as an unwelcome distraction.

ii) Acceptance of other ADR methods

The study revealed that there was growing support and acceptance of expert determination and Dispute Boards as suitable ADR techniques for resolution of disputes in the Zambian construction industry. Expert determination was favoured for technical disputes and was considered less cumbersome and a more fast track method.

Dispute Boards were favoured for monitoring and as a dispute avoidance method for large and complex projects or those exceeding US\$ 10 million. Disputes or problems were more likely to occur on large value projects and the presence of experts throughout the project was beneficial to both the employer and contractor. However, the additional cost of Dispute Boards throughout the duration of the project was considered prohibitive.

Partnering as a dispute avoidance method was rejected by the majority of respondents, 68 percent, largely on the basis of lack of knowledge and understanding of the process. However, in interview with the RDA Chief Executive, it was revealed that the institution was already applying the method of partnering on some infrastructure projects like culverts, bridges and selected roads like the Makeni road in Lusaka and had achieved good results in terms of cost control and zero disputes encountered so far. Case study contractors, however, were also not in support of the idea.

7.2.5 Challenges affecting development of ADR in Zambia and the role of key stakeholders

Respondents were asked to identify challenges and priority issues that were affecting the application and development of ADR in the Zambian construction industry. The major issues identified included:

- i) power imbalance between parties was the biggest reported challenge from the questionnaire survey cited by 21 percent of the contractors who used ADR. Respondents pointed out that contractors who referred disputes to ADR were often those with cash flow problems due to withholding of funds by clients and government agencies, and could not afford legal advice or representation. They argued that this allowed financially stronger parties to dictate the proceedings rendering ADR unfair and ineffective in

- some cases. The respondents, therefore, expected ADR to guarantee equality in bargaining powers between the parties as an important aspect of fairness in dispute resolution without which the parties increased the risk that one party may be pressured into accepting a disadvantaged settlement. The literature reviewed suggested that litigation was better than ADR in this respect as the courts were able to provide protection from power imbalances between the parties;
- ii) unwillingness of one party to participate in ADR proceedings was identified as another major challenge and was cited by 19 percent of the total questionnaire respondents;
 - iii) the need for ADR practice and procedures to be monitored to increase confidence. Lengthy or delayed ADR proceedings hindered the development and promotion of ADR. Case study respondents argued that ADR was promoted on the basis of deficiencies of the court system. To this end, improved access and efficiency of proceedings was crucial to the promotion and acceptance of ADR in the industry. Enforcement of any award against government agencies, they argued, took several months rendering the ADR cost saving benefit meaningless;
 - iv) regulation of competence and integrity of practitioners is key to ADR development. Questionnaire respondents pointed out that low competences of practitioners and poorly structured processes often resulted in breaches of procedures, unfair and in some cases questionable decisions. Case study respondents suggested that the variance in the competence of ADR practitioners was responsible for inconsistencies in the way ADR proceedings were managed and at times this contributed to delays in some cases. Interviewees supported highly trained practitioners with an accreditation system to regulate ADR training and practice. One case study respondent stated that, *“competence levels among ADR practitioners and institutions vary enormously. ADR is good for contractors to resolve their disputes. It is supposed to be cost-effective and fast but it does not feel that way in situations where the practitioner is not in control of the process. There is need for improvement through training”*;
 - v) lack of training for contractors and public contracting officers contributed to lack of awareness of ADR methods. Universities and colleges need to incorporate ADR training in their curricula. The majority of respondents identified training as an important

- aspect of ensuring quality in the development of best ADR practices, consistent standards and increased awareness among stakeholders;
- vi) lack of standard ADR clauses or procedures for use in construction contracts was responsible for most delays at different stages of the proceedings. According to some interviewees, the absence of standard procedures for other methods other than arbitration and mediations meant that there was no strict enforcement of ADR ethics and procedures. One interviewee observed that *“Practitioners were free to choose which standards or procedures to apply or observe. This allows government agencies, strong private employers and large foreign consulting firms to easily dictate ADR processes, thereby rendering the dispute management process ineffective and unfair in some cases”*. Case study respondents argued that standard clauses for referrals, appointment of neutrals and applicable ADR methods would eliminate problems encountered in the enforcement of ADR provisions in a contract;
- vii) resistance of the legal profession to ADR and option for litigation even in situations where contract agreements provided for ADR methods. While supporting legal skills and knowledge in such instances, case study respondents expressed concern about many lawyers’ indifference to ADR and highlighted the need for the legal profession to be flexible to ensure promotion of ADR instead of rushing to litigation. The Judge in charge of ADR development in Zambia, Supreme Court Judge Peter Chitengi stated that, *“ADR succeeds where parties agree to put aside certain rights or positions. For example, mediation and conciliation or negotiation is not focused on justice but on the parties’ interests and aims at obtaining a mutual beneficial outcome. The image of lawyers will be enhanced because it need no longer be seen to be beyond the financial reach of the small scale contractor in a rural area to achieve settlement in a dispute in his or her small business”*. He added that, *“The legal profession needs to make positive adjustments in its work that other professionals and society have felt to be essential. Lawyers must acquire skills to counsel a client about litigation and ADR and have the ability to take part effectively in a range of dispute resolution mechanisms. In the commercial world, the attention now is being paid to non-judicial dispute resolution processes”*.

Another view of value to the legal profession was stated by a survey respondent who observed that, *“The construction industry needs to identify legal practitioners who can be sensitized on the needs of the construction industry so that legal arguments do not overshadow the construction process. The application of ADR in the construction industry needs lawyers to succeed”*. The mediation officer at the Lusaka High Court also stated that: *“Lawyers must generally help or advise their clients to participate in mediation or conciliation proceedings with open minds and let them know that they are putting aside their contractual rights to attempt to resolve a dispute, otherwise ADR cannot work”*.

Case study contractors *appealed to the legal profession for flexibility to ensure promotion of ADR instead of rushing to litigation even in situations where contracts provided for ADR methods*.

In general, there was both criticism and praise for the legal professions’ support of ADR and the non legal ADR practitioners from different professional backgrounds. In particular, the Law Association of Zambia was recognized for its role in pioneering ADR in Zambia and for hosting the ZCDR.

- viii) failure by various stakeholders like government, consultants, contractors, donors, and funding agencies to play their role in providing an enabling environment for the application and development of ADR. Case study respondents also observed that:
- both public and private clients tended to disregard ADR contract provisions and yet had the authority and means to achieve and promote its objectives if they so wished;
 - consultants tended to unfairly protect employers’ interests when faced with disputes and yet they were in a position to apply fair decisions and exert influence over their clients to amicably resolve issues or recommend cost effective ADR methods;
 - managerial capacity was lacking in most local construction companies and were in the habit of under pricing tenders, and as a result failed to fulfill contractual requirements. This was largely responsible for most contractor claims which resulted into disputes; and

- donors seemed more focused on technical performance aspects of projects. They appear not to want to ensure the achievement of a good ADR environment and left the funding for dispute prevention or resolution to the local funding agencies who did not appreciate the concept.

The lack of understanding of ADR processes and procedures, therefore, emerged as the main reason for delays in ADR proceedings and non-compliance by the parties. Another important factor identified was the variance in the competences of practitioners which created inconsistencies in the way proceedings were managed or handled. Research results indicated that improved access and efficiency of proceedings was crucial to the promotion and acceptance of ADR in the sector. Overall, the study revealed the need for an effective dispute management system so that disputes can be managed and resolved timely at any point of the construction cycle of a project.

Supreme Court Judge Peter Chitengi further elaborated that *“ADR procedures are more informal and less intimidating and can accommodate many non-legal principles. Decisions can be based on good construction industry practice and what is fair and reasonable in a given dispute. In certain instances, the decision is not bound by the strict rules of evidence or by previous decisions”*.

7.3 Summary

This chapter examined the industry’s responses to questions of the concept and application of ADR in the Zambian construction industry. The respondents identified the benefits of using ADR and pointed out many reasons why ADR was suited to the resolution of construction disputes in Zambia.

Chapter Eight presents the conclusions and recommendations stemming from this study, and answers the primary and secondary objectives of the study.

Chapter Eight: Conclusion and Recommendations

8.1 Introduction

The previous chapter discussed the results and findings of the interview and questionnaire surveys, and the contractor case study presented in Chapters four and five. This chapter presents the conclusions and recommendations and suggests further areas of research.

The main aim of the study was to develop a structured dispute resolution management model in terms of the application of ADR during the life cycle of a construction project in Zambia. Such a model would benefit the construction industry by mapping the process of managing disputes in the construction industry. The specific objectives of the study were to:

- investigate the awareness and challenges affecting the application and development of ADR in the Zambian construction industry;
- determine the most frequently used ADR methods in the Zambian construction industry and why;
- investigate whether adjudication and mediation were appropriate methods for resolving construction disputes; and
- determine whether the Zambian construction industry was ready to accept other ADR methods like mediation, adjudication, Dispute Boards promoted by FIDIC and expert determination as means of preventing or settling construction disputes.

8.2 Conclusion

Modern Alternative Dispute Resolution (ADR) processes have their roots in the USA where they have been under development since the early 1970s. Although there was an Arbitration Act since 1933, in relation to the resolution of construction and other civil dispute areas, it is only within the last decade or so that developments in ADR have begun to make an impact in Zambia. This was after the USA government funded the promotion of ADR activities and training of practitioners in Zambia.

The development of ADR in the Zambian construction industry, therefore, occurred over a period of ten years, and coincided with the enactment of the Arbitration Act in 2000. During this period, the practice of ADR also developed on different fronts in the country. The findings in this study present a unique opportunity to better understand the past, present and possible future of ADR in the construction industry in Zambia.

The research findings facilitated an assessment of the profile of ADR processes in the Zambian construction industry. Based on this information, the following conclusions were drawn:

- overall, the study showed that stakeholders' awareness, knowledge and utilization of ADR methods and skills were limited;
- power imbalance, unwillingness of one party to participate in proceedings, need for monitoring practice and procedures were identified as factors that inhibited the application and development of ADR in the construction industry;
- arbitration was the most frequently used form of dispute resolution by contractors and government implementing agencies
- ADR methods like negotiation, adjudication, expert determination, and mediation were more preferred by the majority of respondents as speedier and more cost effective methods; and
- it was established that without an effective dispute management system, a dedicated ADR advisory centre, competent and experienced practitioners, there would be no substantial improvement in the application or development of ADR in the Zambian construction industry in the foreseeable future.

In conclusion, an ADR model presented in Chapter 6 was developed. The model indicates the procedure for application of ADR to resolving construction disputes whether or not there is a clause in the contract or subsequent agreement between the disputing parties after the dispute has arisen. The model can be applied for resolving all disputes arising out of a contract in order to obtain a final and binding decision.

The model has procedures for the selection of an appropriate ADR method, appointment of practitioners, challenges to the decision, and final binding decision by a tribunal.

The person appointed as a neutral is named in the contract or jointly appointed by the parties using the process in the model. It is important that the contract should have a sub-clause describing the procedure for appointing one. If parties do not agree to the choice, a suitable person is appointed by the nominating body named in the contract.

It is recommended that disputes should be dealt with by negotiation in the first instance. If negotiations fail, then the disputes should be referred to and resolved by either mediation or adjudication (or expert determination). If either party is dissatisfied with the decision and wishes to pursue the matter further, they are free to refer it to arbitration. The contract should have a sub clause to indicate the reference of the dispute through the various stages of the model.

The key periods affecting dispute resolution procedures are illustrated in Figure 6.1. The time periods are meant to ensure that the resolution process is timely and practical and that no delay caused by one party is permitted to frustrate or stop the ADR process.

A valid decision by mediation, adjudication or expert decision once accepted by both parties is final and binding unless within four weeks the dissatisfied party has notified his intention to refer the matter to arbitration.

The arbitration tribunal has wide powers to settle the dispute and would rely on the arbitration Act for standard procedures and time limits.

8.3 Recommendations

Construction is an industry with a lot of potential for disputes. Analysis of the findings indicated levels of dissatisfaction of current dispute resolution practices in construction. An ideal dispute resolution system should balance all relevant factors such as speed, cost effec-

tiveness, flexibility, confidentiality, binding and enforceable decisions. This study established that ADR has the elements to balance all these factors.

Findings from this study led to a number of recommendations, some of which could be implemented in the short term and others in the long term, in order to improve the understanding and the application of ADR in the Zambian construction industry. The recommendations arising from the study are as follows:

In the short to medium term:

- the NCC and construction industry professional bodies should conduct workshops, radio and television sensitization programmes and develop brief practical application brochures or pamphlets for a campaign to ensure that government agencies, construction professionals and all categories of contractors, are properly informed of how ADR works and the benefits that it can bring;
- secondly, a comprehensive model and standard ADR clauses for construction agreements should be developed. The clauses should be flexible and adaptable enough for use by stakeholders;
- thirdly, a method for monitoring and enforcing compliance to ADR contractual obligations of its' members should be agreed; and
- finally, ADR committees or units should be set up within the NCC and construction industry professional bodies which could work with ZCDR, other stakeholders and the judiciary to provide common training programs and accreditation of ADR practitioners.

In the long term:

- the NCC Act No. 13 of 2003 should be amended to incorporate administration of ADR as part of NCC's mandate. This would possibly have the biggest potential impact on the application and development of ADR in the construction industry as NCC is the regulator for all contractors in Zambia, has a well established institutional setup, with access to funding from government and development partners;

- the NCC should set up a task-force to evaluate the feasibility of a national ADR advisory centre for the construction industry;
- thirdly, the NCC should sponsor the preparation and publication of a handbook for ADR based on the ADR model developed in Chapter six, which should incorporate procedures for reference, appointment of practitioners and resolution of disputes using different ADR methods;
- Lastly the NCC should, within its training school, develop a training and accreditation programme for ADR practitioners;

Application of ADR using the model must be the future trend in resolving disputes in Zambia as it can provide a fast, inexpensive, flexible mechanism for decision-making by practitioners who are experienced and have expertise in construction disputes. It is recommended that ADR should be the first attempt to resolve all kinds of construction disputes before parties consider litigation.

The suggestion to promote the use of the model in resolving all construction disputes would probably involve substantial changes to the existing legal frameworks and participation of the relevant institutions and stakeholders for the actual implementation. Therefore, more consultation and investigation should be carried out aimed at providing the starting and a practical platform for the application of the ADR model to resolving construction disputes in Zambia.

8.4 Limitation of the study

The research reported in this paper was conducted to profile ADR activities in the Zambian construction industry. It was also the first time that such an investigation was conducted in Zambia. Naturally, the results are somewhat mixed due to the fact that respondents represent unique experiences across a variety of stakeholders. This and the modest scale of the sample size, limited time and budget, inevitably meant that there were some gaps in the coverage. The conclusions of this research related only to ADR practice in the Zambian

construction industry. The research offered no opinion whatsoever about the meaning, if any, of the findings of the study in other construction markets of the world.

8.5 Additional areas of research

Further research is needed to explore the impact of ADR on reducing the backlog of cases or the time lags of trials of construction related disputes within the Zambian courts and the cost benefits achieved as a result of applying the various ADR methods to Government funded projects. Partnering as a viable dispute prevention method was rejected by the respondents. Further studies would be necessary to establish how partnering may have benefited the Zambian construction industry.

REFERENCES

Blumenfeld, A. (2005) "Equitable Risk Allocation." CII Annual Conference - Leadership of Tomorrow: Bridging the Gap, Grapevine, pp. 68-88

Carbonneau and McConnaughay (2007) Handbook on Construction Arbitration and ADR, American Arbitration Association, JurisNet, LLC, New York 11743, USA

Carmichael, D G. (2002) "Disputes and International Projects". Lisse, Netherlands: AA Balkema

Chapman, P. H. (2003) Resolving Disputes in On Going Projects. London: King's College London

Chapman, P.H. (2006) "Dispute Boards on Major Infrastructure Projects," A paper presented to the Dispute Resolution Board Foundation (DRBF) Conference, Budapest, Romania

Construction Industry Development Board (CIDB), (2003), Procurement Practice Guide #C3:Adjudication, Pretoria, South Africa.

Concise Oxford Dictionary (1990)

Cook, T.D, and Campbell, D.T. (1979). Quasi-Experimentation: Design and Analysis for Field Settings. Rand McNally, Chicago, Illinois.

Donald C and Pamela S (2003) Business Research Methods. New Delhi: Tata McGraw-Hill Publishing Company Limited. p. 342,365, 390

Creswell, J. W. (1994) Research Design Qualitative and Quantitative Approaches, United States of America, Sage Publications, Inc

Dalland, P. (2008) Proposed Amendments to the FIDIC Yellow, Silver and DBO

conditions of contract affecting Dispute Boards provisions ,” A paper presented to the Dispute Resolution Board Foundation (DRBF) Conference, Cape Town, South Africa

D Chappel (2002) Parris Standard Form of Building Contract. Blackwell,
UK Chapel 2002

Denizen and Lincoln (1998). In collecting and interpreting qualitative materials, Thousand Oaks (CA).

Diekmann, J. E., and Girard, M. J. (1995) "Are Contract Disputes Predictable?" Journal of Construction Engineering and Management, 121(4), pp 355-363.

Diekmann, J. E., and Nelson, M. C. (1985) "Construction Claims: Frequency and Severity." Journal of Construction Engineering and Management, 111(1), pp 74-81

Dillon, W.R., Madden, T.J., and Firtle, N.H. (1994) Marketing Research in a Marketing Environment, 3rd edition, Irwin

Fédération Internationale des Ingénieurs-Conseils (FIDIC) (1987, 1999, 2000, 2005) Conditions of contract for construction for building and engineering works designed by the employer. 1st ed. Lausanne: FIDIC.

Fenn, P., Lowe, D., and Speck, C. (1997) "Conflict and dispute in construction." Construction Management and Economics, 15(6), pp 513-518

Fiadjoe, A. (2004) Alternative Dispute Resolution: A Developing Work Perspective,. London: Cavendish Publishing

General Conditions of Contract (GCC) for Works of Civil Engineering Construction (1982) ICE, UK,

Gordon, J. (2006) "Dispute Boards – Good News and Bad News", International Construction Law Review, U.S.A

Greene J. C. and Caracelli V.J. (1997) "Crafting mixed method evaluation design." CA Jossey-Bass, pp. 19-32

Groton, J. P. (2005) "How to Keep Your Project Out of Litigation, Arbitration, and Even Mediation." CII Annual Conference - Leadership of Tomorrow: Bridging the Gap

GRZ (2000) Arbitration Act No.19 of 2000, regulates the conduct of Arbitration in Zambia, Government printers, Lusaka, Zambia.

GRZ (2003) National Council for Construction (NCC) Act No. 13 of 2003. Government printers, Lusaka, Zambia.

GRZ (1997) Statutory Instrument No. 71 of 1997 aspects of the High Court rules were amended to make provisions for rules of procedure for mediation as part of the legal reforms, Government printers, Lusaka, Zambia.

Hibberd P. and Newman P. (1999) ADR and adjudication in construction disputes. London: Blackwell Science

Holmes, R., Hazadiah, M. D. and Habibah, A. (2005) A Guide to Research in the Social Sciences, Kuala Lumpur, Prentice Hall

Howard, W. E., Bell, L. C., and McCormick, R. E. (1997) "Economic principles of contractor compensation." Journal of Management in Engineering, 13(5), pp 81-89.

Joint Building Contracts Committee (JBCC) (1991) Principal conditions of contract for construction for building works, UK

Latham, M (1994) Constructing the Team: Joint Review of Procurement and Contractual Arrangements in the United Kingdom Construction Industry. The Latham Report, London: HMSO

Lian O. S. (2005) Avoidance and Management of Construction Disputes. QS National Convention 2005 Sustaining the Profession towards Diversification. Hilton, Kuala Lumpur

Murdoch, J. and Hughes, W. (2000) Construction Contract Law and Management. 3rd Edition. London, Spon Press Taylor & Francis Group

Muya Mundia (1999) A Systematic Approach for Improving Construction Material Logistics Unpublished Ph.D thesis, Loughborough University

NADRAC, Dispute Resolution Terms: The use of Terms in (Alternative) Dispute Resolution, 2003

Naoum 1998 Dissertation research and writing for construction students. Oxford: Elsevier Butterworth Heinemann

Puri, Bassant K.(1996) “Statistics in Practice: An Illustrated Guide to SPSS”, London: Arnold.

Peninsula Research & Development Unit (RDSU) (2003) Help Sheet 14- Enhancing Questionnaire Response Rates available online: <http://www.projects.ex.ac.uk/prdsu/helpsheets/Helpsheet14-Feb03-Unlocked.pdf>

Rajasekar and Philominathan (2006), Research methodology paper of Master of Philosophy (M.Phil.) course and Doctor of Philosophy (Ph.D.) course. School of Physics, Bharathidasan University, Tiruchirapalli – 620 024, Tamilnadu, India, available online: <http://www.arXiv:physics/0601009> v2 25 Jan 2006.

Rozlinda F. & Mohd Haris A. R. (2002) Negotiations, Mediation, Litigation, Arbitration: Significance of Arbitration; Arbitration Agreement; Governing Law; Conduct of Proceedings. Malayan Law Journal, 18

Steen, Richard H. (1994) "Five Steps to Resolving Construction Disputes Without Litigation " J. Mgmt. in Engrg., ASCE, 10 (4), pp 19-31

Teoh, C H. (1992) "Arbitration in Construction Disputes". Malaysia: Longman (M) Sdn.Bhd

Texas Performance Review CG 14: *Improve Alternative Dispute Resolution* and Texas Legislative Council, *Survey of Other States Treatment of Claims Against the State*, presented to the House Committee on Civil Practices, May 20, 1996.

The Housing Grants, Construction and Regeneration Act (1996) UK- came into effect on 1

May 1998. The Act requires all construction contracts made from that date to provide for compulsory adjudication as a first instance formal dispute resolution method. If not provided for in the contract, then the terms are implied statutorily

Trochim William M.K. (2006) Research Methods Knowledge Base available online at <http://www.socialresearchmethods.net/kb/index.php>

Webster, M. (1985) Webster's ninth new collegiate dictionary. Meriam - Webster Inc.

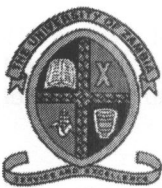
Whitfield, J. (1994) "Conflict in Construction: Avoiding, Managing, Resolving". London: MacMillan Press Ltd

Yin, R. K. (1984) Case Study Research Design and Methods. 2nd Edition. London: Sage Publications.

Yu R. K. T. (2007) Expert Determination as a means of resolving surveying disputes – Hong Kong Perspective, Surveyors Times, pp 43-51.

APPENDICES

**Appendix A: Questionnaire survey on ADR application
and practice in Zambia**



School of Engineering
Department of Civil & Environmental Engineering,
University of Zambia, Lusaka

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.....
.....

Dear Sir/Madam,

Questionnaire Survey – Construction Dispute Management and Resolution in Zambia

I am following a Master of Engineering Study to investigate issues surrounding dispute resolution practices in the construction industry in Zambia.

I am writing to request your participation in a study of attitudes and practices related to dispute resolution in the construction industry. I hope you can assist the study by completing and returning the attached questionnaire. Even though you may not engage in dispute resolution in your own organization, your responses may provide valuable information.

Dispute resolution is regarded as one of the primary functions of our legal system, but there are other ways of settling disputes besides civil litigation which has come under criticism from some quarters. The relationship between litigation and other dispute resolution processes is, however, still poorly understood.

This questionnaire is part of a survey in Zambia concerning the subject of management and resolution of construction disputes. It consists of five sections of 48 questions and should take no more than 20 minutes to complete.

You are under no obligation to participate in this survey, but if you do so, you will be contributing to increased knowledge of dispute resolution which will influence future policy decisions. The value of this survey depends directly on obtaining responses from a high proportion of recipients. Anonymity and confidentiality of the respondents will be preserved. The data to be collected is purely for research purposes.

When deciding on your responses please use the definitions on the last page of the questionnaire.

Thank you for considering this request. A return envelope is enclosed for your convenience in posting the questionnaire back to me upon completion. I would be grateful if the completed questionnaires could be returned by 30th November 2009. You may also scan and email to me the questionnaire.

Yours sincerely,

Henry M Musonda
MEng Research Student
P.O Box 70944, Ndola

Appendix A.2 – Questionnaire

This survey is intended to elicit information regarding the use of **ADR in the construction industry in Zambia**. Further, it is to gain insight into ideas and concerns about the use of ADR as an effective and viable tool for resolution of construction disputes.

Please spare a few moments to give your responses. **Where necessary use the definitions provided at the back of the questionnaire.** Anonymity and confidentiality of the responses will be preserved.

TICK THE RESPONSE WHICH REFLECTS YOUR POSITION REGARDING THE FOLLOWING STATEMENTS AND ENTER THE APPROPRIATE CODE IN THE BOX(ES) PROVIDED.

1.0 Background Information

1.1 Your name: _____ Mobile number: _____

1.2 Name of organisation: _____

1.3 Position in Organisation: _____

1.4 Professional background:

1=Civil Engineer2=Quantity Surveyor 3=Architect 4=Designer
5=Legal Practitioner 6=Consultant7=Other (specify).....

1.5 Are you an ADR Practitioner?

1=Yes 2= No

1.6 Years of Experience:

1=1-4 2= 5-10 3= 11-15 4=15-20 5= +20 years

1.7 Which of the following best describes your organization?

1=Consultant 2=Government agency 3=Small scale contractor 4= Legal practitioner
6=Medium size contractor 7= Funding agency / donor
8=Sub-contractor/supplier 9=Other (specify).....

1.8 How long has your organisation been in operation?

1=1-4 2= 5-10 3= 11-15 4=15-20 5= +20 years

1.9 What type of projects does your company/institution tend to work on?

1=Building 2=Civil engineering 3=Building + Civil 4=other (specify).....

A.2 – Questionnaire Cont/d

2.5 What would you anticipate to be the reason for such a timescale as specified in item 2.7?

ADR Methods	Complex procedures	Delay or non-compliance by one party	Delay or non-compliance by both parties	Presentation of complex evidence	Simple and effective procedures	Full compliance by the parties	Lack of understanding of process by parties
	1	2	3	4	5	6	7
Arbitration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conciliation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mediation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjudication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dispute Boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mini-Trial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.6 How would you describe the majority of ADR outcomes?

1= Fair and just 2= Unfair and unjust 3= Legally unacceptable 4=Biased 5= Don't know

☐

2.7 From your experience, how would you describe the conduct of those involved in the ADR process?

	Strongly disagree	Disagree	Agree	Strongly agree	Don't Know
	1	2	3	4	5
a) <u>Action of ADR Practitioners s are:</u>					
Professional & effective	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unprofessional & ineffective	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) <u>Action of expert/legal representatives</u>					
Professional & effective	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unprofessional & ineffective	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indifferent to process	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) <u>Action of parties:</u>					
Professional & effective	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unprofessional & ineffective	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A.2 – Questionnaire Cont/d

Lack understanding of ADR process
Defendants indifferent to process ☐ ☐ ☐ ☐ ☐

2.8 Which of the following do you believe BEST describes your perception of ADR?

- 1= ADR provides resolution of disputes which is quick but favours employers ☐
- 2=ADR provides resolution of disputes which is quick and fair to all parties
- 3= ADR provides resolution of disputes which is quick but favours contractors
- 4=ADR provides resolution of disputes which is quick but favours the complainant
- 5=Other - Please specify.....

2.9 When referring a dispute to ADR, do you believe that you are in any way acting unfairly to the other party?

- 1=strongly disagree 2=Disagree 3= Agree 4= strongly agree 5=Don't know ☐

2.10 As a consequence of using ADR, on the whole has there been a tangible effect to the working relationship with the employers and contractor?

- 1=Yes 2= No If response is 'NO' skip to Q2.12 ☐

2.11 If answer is yes, to what degree have working relationships been affected? Tick ALL that applies.

- | | |
|--|--------------------------------|
| 1= At project level (i.e. day to day dealings) | 2=At senior management level |
| 3=Across all levels of the organization | 4= Subsequent tenders affected |
| 5=Removed from tender lists entirely | 6= Don't know |
- ☐ ☐ ☐ ☐ ☐

2.12 Has your organization been in a position where you have a dispute with the other party but decided not use the ADR provisions in your contract agreement?

- 1=Yes 2= No If response is 'NO' skip to Q2.14 ☐

2.13 If answer is yes, what were your reasons for your decision NOT to proceed with the ADR option (Tick all that apply)?

- | | |
|--|--|
| 1 <input type="checkbox"/> ADR contract provisions inadequate | 8 <input type="checkbox"/> Project has been profitable despite the dispute |
| 2 <input type="checkbox"/> Uneconomical due to small value of dispute | 9 <input type="checkbox"/> Insufficient resources to prepare case for ADR |
| 3 <input type="checkbox"/> Uncertainty as to strength of case | 10 <input type="checkbox"/> Look to recover disputed value by other means |
| 4 <input type="checkbox"/> Accepting client position releases immediate cashflow | 11 <input type="checkbox"/> Uncertainty of neutrality of ADR practitioners |
| 5 <input type="checkbox"/> To avoid delays | 12 <input type="checkbox"/> Have other ongoing projects with same party |
| 6 <input type="checkbox"/> Used informal negotiation to resolve dispute | 13 <input type="checkbox"/> Ensure maintenance of good working relationship with other party |
| 7 <input type="checkbox"/> Lack of knowledge of ADR procedures/ outcome | 14 <input type="checkbox"/> Uncertain as to the benefits of ADR |
| | 15 <input type="checkbox"/> Fear of retribution |
| | 16 <input type="checkbox"/> Other – please specify..... |

A.2 – Questionnaire Cont/d

2.14 In your opinion, which is the most frequently used ADR method in the Zambia Construction Industry?

- 1=Arbitration
- 2=Conciliation
- 3=Mediation
- 4=Adjudication
- 5= Expert Determination
- 6= Dispute Boards
- 7= Mini-Trial

☐

2.15 How would you describe your experience in Adjudication and Mediation?

	Very good 1	Good 2	Poor 3	Very poor 4	Not sure 5
a) Adjudication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Mediation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.16 Do you think Adjudication and Mediation are appropriate methods for resolving construction dispute(s) in the Zambian construction industry? (Consultant to verify if 2.17 and 2.18 are related)

- a) Mediation

1=Yes

2= No

3=Not sure

☐ If response is 2 or 3 skip to 2.
- b) Adjudication

1=Yes

2=No

3=Not sure

☐ If response is 2 or 3 skip to 2

2.17 Select TWO (2) main reasons why you consider Adjudication or Mediation or both are suitable for the Zambian Construction Industry?

- 1=Parties retain more control of dispute
- 2=Training for ADR practitioners readily available
- 3=Offers wide range of remedies
- 4=Help narrow the issues in dispute in case parties proceed to Arbitration
- 5=Government departments prefer them to Arbitration
- 6=Cost effective

☐☐

A.2 – Questionnaire Cont/d

2.18 From experience, what is the acceptance level of ADR by the various stakeholders?

	Very high	Somewhat High	Somewhat low	Very low	Don't Know
	1	2	3	4	5
a) Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Private sector clients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Legal profession	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Large scale contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Medium/small scale contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Donor agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.19 Rate your perception of the cost of ADR services compared to the disputed amounts?

1=Very high 2= Somewhat high 3=Fair 4=Very low 5= Don't know

☐

2.20 When faced with a dispute. Select FIVE (5) factors that would increase your likelihood of using ADR services

- 1= Just trying
- 2=Do not want litigation
- 3=Court order
- 4=Acquaintance suggests
- 5= Maintain confidentiality
- 6=Experience from previous ADR
- 7= ADR clause in contract
- 8= Speedy process
- 9= Mandatory reference within specified period
- 10= Freedom to choose the ADR Practitioner
- 11=Enforceable contract agreement provisions
- 12=Default provisions for non-participation by one party
- 13=Minimize costs
- 14=Legal Counsel suggests
- 15= Parties agree
- 16=Flexible procedures
- 17=Want to continue business relationships
- 18=Believe in fairness of ADR
- 19= Other (please specify).....

☐

☐

☐

☐

☐

2.21 In your opinion, what are THREE (3) main reasons why some parties do not use ADR methods for resolving disputes?

- 1= Do not believe in ADR
- 2= One of the parties does not agree
- 3= Prefer litigation
- 4= Fear of retribution
- 5=Do not know about ADR. No one suggested
- 6=Lawyer advised against
- 7=Acquaintance suggested
- 8= Contract agreement did not provide for ADR
- 9= Experience from previous ADR process
- 10=Process is speedy and decisions binding
- 11=Other (please specify)

A.2 – Questionnaire Cont/d

3.0 Developments and Challenges of Application of ADR

☐

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3.1 Select FIVE (5) main challenges you would encounter when using ADR services?

- 1=Power imbalance

2= Timing

3= High Fees for ADR practitioners
- 4= Fear of retribution
- 6=Unwillingness of other party to participate

7= No readily available information about ADR procedures
- 8= Non regulation or monitoring of ADR process

9= Delays in concluding proceedings
- 10=Resistance from the legal profession

11=Outcome of ADR does not much expectations
- 12= Inadequate ADR provisions in contract agreement

13=Delays in preparing for ADR proceedings
- 14=Impasse between parties

15=Lack of jurisdiction
- 16 =Lack of ADR practitioners

17= Other (Please specify).....

☐

☐

☐

☐

☐

3.2 How can the application of ADR methods be improved in Zambia? (Select all that apply and tick appropriately)

- 1☐ Statutory provisions for mandatory reference to ADR

2☐ Establish standard ADR clauses in construction contracts

3☐ Set time limit for all ADR processes?

4☐ Apply different ADR methods for different dispute amounts?

5☐ Improved Training of Practitioners?

6☐ Establish a construction small claims court

7☐ Sequential application of ADR methods where some ADR options precede others?

8☐ Partnering of parties

9☐ Use of site existing records as evidence for ADR except Arbitration

10☐ Use of dispute boards for large projects

11☐ Set up an ADR advisory centre at NCC to provide advise to contracting parties

12☐ To develop a framework for regulating and monitoring ADR procedures and practice

13☐ Increased promotion and training of public contracting officers

14☐ Training of construction participants in ADR

3.3 Do you support regulation and monitoring of ADR practice in Zambia?

1= Yes 2= No If no skip to 3.5 3=Not sure If not sure skip to 3.5

☐

3.4 If yes, select TWO (2) reasons why it is important to regulate the practice of ADR in Zambia?

- 1=Current practice lacks coordination and safeguards against injustice for disputing parties

2= Anyone regardless of qualifications can practice ADR

3=To ensure uniformity of approach and quality of ADR services

4=To guard against arbitrary progress and reduced scope for future development

☐

☐

A.2 – Questionnaire Cont/d

3.5 If answer to Question 3.3 is ‘No’, and then give TWO (2) reasons why regulation of ADR is unsuitable?

- 1= Regulation is contrary to ADR creativity and flexibility
- 2=Difficult to standardise procedures across the sector
- 3= Too soon to regulate ADR in the sector, must be allowed to develop

4.0 Best Practices and Recommendations

4.1 What do you consider as ADR sector priority issues for the construction sector (Select all that apply and tick appropriately)?

- 1= Increased awareness/promotion of ADR
- 2=Develop a whole framework for ADR procedures
- 3=Increase resources to ADR providers
- 4= Develop accreditation scheme for practitioners

4.2 Do you consider the ‘loser pays’ concept to be:

1= A drawback to ADR

2=Significant advantage to ADR

3=Not sure

4.3 Which of the following BEST describes your view about security for costs?

1= Unfair burden on claimants

2=Important safeguard for defendants

3=Not sure

4.4 Would you support the use of Dispute Boards as a dispute prevention mechanism?

1=Yes

2= No If no skip to 4.6

3=Not sure If not sure skip to Q 4.6

4.5 If yes, in which situation would Dispute Boards be best applied (tick ONE only)?

1= Large projects exceeding US\$ 10.0 million?

2= Donor funded projects?

3=Complex infrastructure projects like bridges?

4=Projects involving large International Contractors?

4.6 Would you support Mediation being precedent to both Adjudication or Arbitration?

1=Yes

2=No

3=Not sure

4.7 Do you support Contractor’s all Risk Insurance to include costs for resolution of disputes?

1=Yes

2=No

3= Not sure

A.2 – Questionnaire Cont/d

4.8 Indicate your preference of ADR methods for the **Zambian Construction Industry** (Select all that apply)?

	Strongly disagree	Disagree	Agree	Strongly agree	Don't know
	1	2	3	4	5
Arbitration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conciliation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mediation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adjudication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expert Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dispute Boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mini-Trial	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.9 Would you recommend introduction of an ADR Advisory Centre, say hosted by the National Construction Council, or/and any of the professional institutions to provide information as well monitor ADR practice in the **Zambian Construction Industry**?

1=Yes 2=No 3=Not sure ☐

4.10 Would you recommend introduction of a small claims court, hosted by the National Construction Council, to handle disputes involving small amounts or no monetary value, or disputes involving small scale contractors?

1=Yes 2=No 3=Not sure ☐

4.11 Do you support amendment of the NCC Act to incorporate ADR proceedings for construction disputes?

1=Yes 2=No 3= Not sure ☐

A.2 – Questionnaire Cont/d

5.0Please indicate factors that are important to the development of an ADR framework for the construction in
Zambian Industry:

ADR Framework or Methods	Recommendations – Key Factors (Tick all that apply) or amend as preferred
5.1 Appointment of ADR Practitioner or Neutral	<div><input type="checkbox"/> Standard clause to be used</div> <div><input type="checkbox"/> Appointed by ADR institution</div> <div><input type="checkbox"/> Within 1 – 4 weeks of notice of dispute</div> <div><input type="checkbox"/> One member Tribunal panel up to certain amount</div> <div><input type="checkbox"/> Three member panel for large value disputes</div> <div><input type="checkbox"/> Any other (specify)</div> <div><input type="checkbox"/> To be named in contract document</div> <div><input type="checkbox"/> Mutual appointment</div> <div><input type="checkbox"/> Appointed by Nat Constr Council (NCC)</div>

6.0 What other issues do you have about ADR in the construction industry in Zambia?

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.....

.....

Please return the completed questionnaire to:

H M Musonda (musondahm@zamtel.zm), Cell: 0955 889 767
MEng Research student

Thank you very much for your cooperation!

A.3 List of Questionnaire respondents

Item No.	Name	Position	Organization	Contact
PRIVATE & PUBLIC COMPANIES/CLIENTS				
1	Mr Kriel Gawie	Project Manager – Capital Projects	Zambia Breweries	097 7 207133
2	CV Sandamuka	Chief Engineer	Railways Systems of Zambia	096 6 861772
3	Ian Banda	Managing Director	Kafubu Water & Sewerage Co.	095 5 885865
4	Kennedy Maila	Head - Capital Projects	Nkokola Copper Mines	097 7 203721
5	Ezekiel Kasaro	Chief Engineer - Projects	ZESCO	095 5 772098/ 01363523
LEGAL/ADR PRACTITIONERS				
6	Abha Patel	Partner & ADR Trainer + Legal Practitioner	Abha Patel & Associates	02 621976
7	E Chulu	Partner	Enias Chulu Legal Practitioner	095 5 787169
8	J Kabuka	Partner/ADR + Legal Practitioner	Kabuka & Co.	02 620594
CONSTRUCTION CONSULTANTS/ADR PRACTITIONERS				
9	E Lungwebungu	Partner/Accountant/ADR Practitioner	EML Chartered Accountants	097 7 485949
10	Neville Ravensdale	Principal Architect	Raven Design	02 621470
11	C Hampande	Director/ ADR Practitioner	BCL Ltd - Consultants	095 5 451365
12	Patrick C Malambo	Assistant Director (Projects)	Bank of Zambia	097 7 777633
13	Dixon Bwalya	Partner/Architect/ ADR Practitioner	Lisulo & Bwalya	095 5 789960/ 02 610142
14	Henry Chalwa	Partner/Quantity Surveyor/ ADR Practitioner	Chalwa & Associates (QS)	097 7 778288/ 01 226534
15	Fred Mtamira	Partner/Quantity Surveyor/ ADR Practitioner	Peter Richards & Partners (QS)	01 236516

A3 List of Questionnaire respondents Cont/d

Item No.	Name	Position	Organization	Contact
16	Patrick Kapengele	Director/ ADR Practitioner	Scott Wilson Zambia	096 6 909480
17	Frank C Chileshe	Principal Consultant	Chazya Chileshe & Associates (Architect)	097 7 773065
18	Fred Simeja	Quantity Surveyor	HB Chalwa Associates	01 226534
GOVERNMENT IMPLEMENTING AGENCIES				
19	J L Wamulume	Buildings Officer (Projects)	Ministry of Education (Projects Units)	097 7 705280
20	Mfune Danny	Chief Engineer	Buildings Department – Ministry of Works & Supply	096 6 740896
21	Stanley Kunda	Principle Environmental Health Officer	Ministry of Health (Projects)	097 7 408777
22	Nkumbu Siame	Principal Engineer	Ministry of Local Government & Housing	095 5 771910
23	Emmanuel Kaunda	Manager – M&E	National Road Fund Agency	097 7 888707
24	Golden Makayi	Registrar	National Council for Construction	097 6 337461
25	Moses Yumba	Planning Officer	Petauke District Council	097 7 493092
26	Edward M Zulu	Deputy Director of Engineering Services	Chipata Municipal Council	097 7 767518
ACADEMICIANS				
27	Charles Chifunda	Lecturer	Copperbelt University (Architectural Dept)	097 7 778985
28	Daniel Phiri	Lecturer/ ADR Practitioner	Copperbelt University	097 7 880964

A3 List of Questionnaire respondents Cont/d

Item No.	Name	Position	Organization	Contact
CONTRACTORS				
29	Julius K Lungu	Director	JKL – Associates	097 8 777126
30	John Simwanza	Director	Mpasim Contractors	097 9 007674
31	Ruth D Mulenga	Director	Ruthen Engineering & Construction Co.	01 232343
32	Stephen Kamuhuza	Director	Time Construction	097 7 718303
33	Bernard Mwibwe	Secretary	Association for Small & Medium Scale Contractor	097 7 585841
34	I V Muwowo	Chief Estimator	Apollo Enterprises	097 9 659800
35	Kelvin Mbwata	Director	Golden Rock Contractors	097 7 298714
36	Miyanda Zimba	Quantity Surveyor	Hua Chang Infrastructure Eng. (Z) Ltd	077 8 17185
37	Ireen Nyembezi Nyirenda	Managing Director	Tawanda Investments Ltd	095 5 771979/ 097 7 932992
38	Chilima Alex	Managing Director	Techpride Services Ltd	095 5 887286
39	Monday Muwowo	Acting Director	Katete District Council	097 7 377004
40	Luca Raimo	Corporate Director	Joes Earthworks & Mining	097 7 695097
41	Saili R Kalaluka	Director & CEO	Muladel Road Works Ltd	095 5 762091
42	Joseph Phiri	Director	JGF Contracts	097 9 163635
43	Michael Kapenda	Director	Nawela General Dealers	097 7 729035
44	Henry Zulu	Managing Director	Mtondo Building Contractors (1971) Ltd	097 7 786411
45	Ntinda Festus	Contracts Manager	Nemerit Enterprises Ltd	097 7 754375
JUDICIARY				
46	Mwamba Njelesani	Mediation Officer	Judiciary – High Court	097 7 753592
47	Judge Chitengi	Supreme Court Judge (Chair ADR)	Judiciary – Supreme Court	01 255041

Appendix B: Structured Interview Guide

Appendix B.1 - Structured interview

Interviewee & company details

(i) Name _____ of _____ organisa-
tion: _____

(ii) Position in orgainsation: _____

(iii) Professional background:

- 1=Civil Engineer
- 2=Quantity Surveyor
- 3=Architect
- 4=Designer
- 5=Legal Practitioner
- 6=Consultant
- 7=Other (specify).....

(iv) Years of Experience in the Construction Industry:

- 1=1-4
- 2= 5-10
- 3= 11-15
- 4=15-20
- 5= +20 years

☐

(v) Which of the following **BEST** describes your organization .*Enter appropriate response code in the box provided*

- 1=Consultant
- 2=Government agency
- 3=Small scale contractor
- 4= Legal practitioner
- 5=Grade IV contractor or above
- 6=Medium size contractor
- 7= Funding agency / donor
- 8=Sub-contractor/supplier
- 9=Other (specify)

☐

(vi) Are you an ADR Practitioner?

- 1=Yes
- 2= No

☐

B.1 - Structured interview Cont/d

1.0 Application of ADR in Zambia

1.1 Do you know what Alternative Dispute Resolution is? If yes, please define ADR.
.....
.....
.....

1.2 Does your institution employ ADR as a tool for the settlement of dispute? If not, why?
.....
.....
.....
.....

1.3 To what extent does your organisation require ADR provisions in contract agreements?
.....
.....
.....
.....

1.4 Which is the most frequently used or preferred method for resolving construction disputes in your organisation and why?
.....
.....
.....
.....

1.5 In your opinion, what is the acceptance levels of ADR in the Zambian Construction Industry by the various stakeholders?

	Very high	High	Low	Very Low	Don't know
	1	2	3	4	5
a) Government Agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Private sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Legal profession	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Construction professionals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.6 What is the current level of application of the following ADR methods?

	Very high	High	Low	Very Low	Don't know
	1	2	3	4	5
a) Arbitration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conciliation/ Negotiation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Mediation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Adjudication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Expert Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Dispute Boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Partnering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B.1 - Structured interview Cont/d

1.7 How do you rate the general performance of the ADR suppliers?

	Very good	Good	Poor	Very Poor	Don't know
	1	2	3	4	5
a) Zambia Centre for Dispute Resolution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Engineering Institution of Zambia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Surveyors Institute of Zambia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Zambia Institute of Architects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Law Association of Zambia, Courts)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Other (specify).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.0 Involvements in ADR

2.1 How do you describe your level of participation in ADR proceedings?

	Never	Sometimes	Not sure	Somewhat frequent	Frequent
	1	2	3	4	5
a) Arbitration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conciliation/ Negotiation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Mediation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Adjudication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Expert Determination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Dispute Boards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Partnering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.2 What is your experience in Adjudication?

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.....

2.3 What is your experience in Mediation?

.....

.....

.....

.....

2.4 Do you think Adjudication and Mediation are more appropriate methods to settle construction dispute(s) in the Zambian construction industry? If yes, why?

.....

.....

.....

.....

B.1 - Structured interview Cont/d

2.5 In your opinion, which ADR methods are most suitable for small value disputes or those involving small scale contractors?

.....

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.....

.....

2.6 What is your comment on the current cost of ADR services?

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.....

.....

3.0 Training and regulation

3.1 What is your overall satisfaction with the quality of ADR practitioners?

.....

.....

.....

.....

3.2 What is the skill base of the ADR practitioner(s) in Zambia?

	Very high	High	Few	Very Few	Don't know
	1	2	3	4	5
Quantity/Building Surveyors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Legal practitioners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engineers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Architects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contractors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Consultants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accountants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3 Who should be the **best** person to be an ADR practitioner for construction disputes and why?

.....

.....

.....

.....

3.4 What is the current provision for regulation of ADR in terms of supervisory controls, monitoring of approved practice? If none, what is your recommendation?

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.....

.....

B.1 - Structured interview Cont/d

3.5 How can the quality of ADR practitioners be improved?
.....
.....
.....
.....

4.0 Current developments and challenges of application of ADR in Zambia

4.1 What are the obstacles in the application of ADR in Zambia?
.....
.....
.....
.....

4.2 How can the obstacles be overcome?
.....
.....
.....
.....

4.3 In the next 1-5 years, do you expect your utilization of ADR to increase?
.....
.....
.....
.....

4.4 Would you recommend statutory provision for ADR procedures?
.....
.....
.....
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5.0 Role of government

5.1 What should the role of the Government be in the provision of ADR services? Circle one and enter code in the box provided

- 1=Funding of ADR suppliers

2=Ensuring ADR provisions in all government contracts

3=Participation in ADR process of decisions)

4= Judicial support (immunity of practitioners & enforcement

5.2 What should be the role of the Zambian construction industry be in the provision of ADR services?
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B.1 - Structured interview Cont/d

5.3 Is there a difference in how ADR is used by the Government agencies compared to how it is used by the private sector? Please explain

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5.4 How does the use of ADR by Government agencies promote or hinder the dispute settlement process?

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6.0 Best practices and recommendations

6.1 What would you like to see as the priority ADR issues in the construction sector? Circle and enter code in the boxes provided

- | | |
|--|---|
| 1=Examining efficiency of referrals | 2=Increasing awareness and promotion of ADR |
| 3= Develop standard accreditation scheme | 4= Increase resources to ADR institutions |
| 5=Develop standards for ADR clauses | 6=Develop a framework for ADR |

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

6.2 What is the level of participation or support provided by the legal practitioners to the ADR process in Zambia?

Very high	High	Low	Very Low	Don't know
1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.3 What other views do you have about ADR in the Zambian construction industry?

.....

.....

.....

.....

H M Musonda (musondahm@zamtel.zm), Cell: 0955 889 767

MEng Research student

Thank you very much for your cooperation!!

B.2 List of interviewees

Structured interviews

Item No.	Name	Position	Organization	Contact
1	Wedex Illunga	Contracts Specialist	World Bank Zambia	095 5 955167/ 01 252811
2	Erasmus Chilundika	Director	Road Development Agency	01 252259
3	Joyce Chipeta	Executive Secretary	Zambia Centre for Dispute Resolution	097 7 756084/ 01 255733
4	Luca Raimo	Corporate Director	Joes Earthworks & Mining	097 7 695097
5	Dr S Mashamba	Executive Director	National Council for Construction	097 6 337450/ 01 244004
6	Justin Silupubwe	Principal Engineer/ ADR Practitioner	Road Development Agency	01 253801/ 253088
7	Mukupu Musonda	Legal Officer	Road Development Agency	01 253801/ 253088
8	J Kabuka	Partner/ADR Practitioner	Kabuka & Company	02 620594
9	Mr Fred Mtamira	Partner/QS/ADR Practitioner	Peter Richards & Partners	01 236516
10	Henry Chalwa	Partner/QS/ADR Practitioner	Chalwa & Associates	097 7 778288/ 01 226534
11	Patrick Kampengele	Director/ADR Practitioner	Scott Wilson	
12	Dixon Bwalya	Partner/ADR Practitioner	Lisulo & Bwalya	095 5 789960/ 02 610142
13	R Mabenga	Executive Director	National Road Fund Agency	01 253145

Appendix C: Record of case study disputes reviewed

Appendix C.1 Dispute for Contractor A

1.0 Case study report

1.1 Dispute between Contractor A and Private Mining Company M.

1.2 Project particulars

1.2.1 Scope of Works:

Bulk earthworks involving excavations, roadworks and stormwater drainage.

1.2.2 Consultants: South African based Consulting Engineers

Tender Sum: **US\$ 3,045,753.76**

1.2.3 Contract Sum: **US\$ 2,331,831.44**

Construction Period (tendered): 8 months

1.2.4 Contract Period: 4 months (expected completion 15th January 2008).

Actual Completion Date: 15th September 2007 to 30th May 2008

1.2.5 Contract Form: FIDIC 1999

1.3 Details of the dispute

- Contractor quoted for US\$ 3,045,753.76 for an 8 months construction period.
- At contract signing, employer reduced scope of works to US\$ 2,331,831.44 and asked for a reduced construction period. A 4 months period was agreed.
- During construction, employer added back omitted works and instructed more works but still expected completion within 4 months. Employer instructed variations throughout the construction period, between 15th September 2007 to April 2008, and after the 4 months contract period expired in January 2008. Despite application, the employer/engineer never issued or granted any extension of time.

C.1 Dispute for Contractor A Cont/d

1.4 Contractor's claim

- (i) extension of time to cover period from end of January to May 2008 – 4.5 months with costs.
- (ii) interest on late payments as employer withheld all payments from date of expiry of original contract period (end of January 2008).
- (iii) in total, the contractor claimed **US\$ 696,479.27** plus interest.

1.5 Contract provisions for dispute resolution

- (a) Form of contract, FIDIC 1999, provided for:
 - (i) A Dispute Board (DB) to be appointed within 21 days after date of contract signing.
 - (ii) Arbitration under the rules of the International Chamber of Commerce (ICC) – Inter-court of Arbitration but appointment of the Arbitrator was to be made by FIDIC.
 - (iii) Laws of Zambia applicable to the contract.

1.6 Problems experienced after dispute arose

- (a) **Delay in ADR proceedings - failure to appoint dab/arbitration tribunal:**
 - (i) In September 2008, the contractor declared a dispute and wrote to the consultant and the employer requesting appointment of a DAB. Documents reviewed indicated that the Employer totally ignored the request. No DAB was appointed. At this stage the contractor indicated the items in dispute.
 - (ii) After numerous correspondence to the employer, the contractor wrote to FIDIC, in October 2008, requesting for appointment of an Arbitration Tribunal. FIDIC responded that it could only appoint adjudicators, not arbitrators. After the response from FIDIC, the contractor nominated one arbitrator but the employer rejected the nominee citing conflict of interest without elaborating. The contractor then made futile attempts by writing to the National Council for Construction for intervention in the appointment of an arbitrator without success.

C.1 Dispute for Contractor A Cont/d

- (iii) In the meantime, numerous correspondence to both the consultant and the employer to appoint an arbitrator were unanswered. The contractor then applied to the High Court for assistance to appoint an arbitrator. The employer's lawyers then responded, and asked for stay of court proceedings and suggested a two - person panel conciliation, although it was not provided for in the contract agreement. However, this option demonstrated the flexibility of the ADR process to the needs of the disputants.

(b) Lack of awareness and understanding of ADR

Conciliation never took off due to the employer's objection to the conciliator nominated by the contractor. The employer's legal counsel prepared a deed of agreement for reference to conciliation in which they expected a reasoned award as the outcome of the conciliation. The employer thought that the conciliators were going to decide the case and, once again, refused the contractor's nominated conciliator to be part of the panel. The process failed to take off.

Comment: *The events surrounding the failure to appoint a DAB on the project was unfortunate as the process would have provided an opportunity for a panel of experts well versed with activities on the project to provide advice on the merits of the dispute. Having opted for a conciliation at a later stage, the parties should have realized the benefit or value of ADR as a process which is facilitative, advisory and determinative and should have allowed the conciliation to be applied or attempted without pre-conditions as the conciliators were not going to decide the case but only to assist the parties reach a settlement. Here again, lack of an advisory centre contributed to the failure of the ADR process as any of the parties would have requested for an opinion against the route taken by the legal counsels for both parties.*

C.1 Dispute for Contractor A Cont/d

After more than ten months without achieving any progress, the contractor applied to the court again, to restore the earlier request for assistance with appointment of arbitrator (s). In reply, the employer suggested another attempt to conciliation and attached a written offer of **US\$ 125,000.00** against US\$ 696,479.27, the amount in dispute. The contractor rejected the offer.

At this stage, the Contractor raised the issue of impartiality of the consultant in the matter as the consultancy agreement was a performance based contract which meant that the consultant was paid based on certain financial benchmarks. The contractor suspected that this was the reason for the consultant's indifference to the ADR process and total rejection of the arbitration option - maybe for fear of financial liabilities.

The Employer did not respond, but through the engineer, made a revised offer of **US\$ 200,000.00** as final settlement of the dispute. The contractor rejected the offer and, again, wrote to the NCC seeking help in bringing the employer to the discussion table to agree to the process of Arbitration but failed as NCC had no such mandate. The contractor then engaged a legal practitioner to demand payment as well as apply to court for assistance to appoint an arbitration panel, as per arbitration act. For almost one year, the contractor avoided resorting to court action for fear of retribution as they had ongoing works with the same employer. But after facing serious cash flow problems due to withholding of payments, the contractor was left with no choice but to engage a lawyer and pursue the matter in court.

The employer again responded with an offer for conciliation. This was rejected by the contractor who insisted on arbitration. After a failed negotiation attempt to agree the way forward, the contractor successfully restored the court application for assistance with the appointment of arbitrators and setting a time line for the process. After several adjournments, time lapsed. In the mean time, the mining company was placed under receivership and in the process shareholders changed.

C.1 Dispute for Contractor A Cont/d

(c) Settlement of the dispute

The new owners offered settlement of the dispute and offered 70 percent of the amount in dispute. The contractor accepted the offer as so much time had passed and the contractor was experiencing financial problems due to the delayed payment.

(d) Examination of the roles played by different parties

(i) Role of employer

The employer appointed a South African based consultant to design and supervise the works based on a performance contract, i.e., paid on achieving cost benchmarks plus a bonus on any funds saved from construction costs. Despite numerous correspondence to the consultant being copied to the employer, there was no response from the employer who left the consultant to take full control of the contract administration and ADR proceedings as part of the terms of the performance contract. The contractor highlighted the issue of impartiality of the consultant but received no response from the employer.

Comment: *It appears that the employer was happy to allow the consultant to deal with the dispute on assurances that they could deal with the matter and as part of the terms of the performance based consultancy agreement. The employer therefore took no serious interest in the proceedings or outcome of the dispute resolution process, possibly on the understanding that the consultant took full liability for any outcome. The employer appeared unfamiliar with ADR and underestimated the resolve of the contractor to exercise their rights under the contract and instead allowed an overly determined consultant to frustrate the application of the contract but paid little attention to the escalation in liability and cost of ADR as a result of the delayed process.*

C.1 Dispute for Contractor A Cont/d

(ii) Role of consultant

In this case study, the consultant played a large role in delaying the dispute resolution process. It would appear that the consultant was worried about taking some liability for certain decisions and instead tried to impose an unfair decision on the contractor. In addition, any contract escalation meant that fees for the consultant would be reduced. As a result, the consultant exhibited weakness and impartiality in exercising their responsibilities. The consultant, a large international firm, tried to pressure the contractor into accepting a reduced settlement.

Comment: *The capacity of ADR processes to provide appropriate protection to the weaker party where an inequality of bargaining power exists between them remains a contentious issue within the literature reviewed.*

(iii) Role of legal counsels

Despite clear provisions for ADR in the contract agreement, legal counsels for both parties resorted to court action which was largely unnecessary if they had seriously sort to review the provisions of the contract and advise their clients appropriately. ADR would have been applied effectively to resolve the dispute. Instead, the legal counsels used the court proceedings to delay the process unnecessarily. From the documents reviewed, it appears that there was no strong protest from the opposite camp about the unnecessary delays in resolving the matter, probably because litigants were used to such time consuming tactics.

(e) Increased cost of ADR

Although the contract was completed and handed over in April 2008, the matter dragged on until November 2009 when new owners made a settlement. In the meantime the contractor maintained, on their payroll, all senior staff until November 2009 in anticipation of an arbitration hearing and participation in the on and off ADR processes, thereby incurring unnecessary costs.

C.1 Dispute for Contractor A Cont/d

(f) Lack of standard ADR clauses and procedures

The contract agreement contained a typical “cut and paste” clause for resolution of disputes arising out the contract and this resulted into somewhat confusing provisions for setting up of the Dispute Board. The DB panel members were referred to as arbitrators in the contract data form of the same contract document who were to be appointed by FIDIC. But FIDIC no longer appoints arbitrators except adjudicators, a condition clearly stated on their website for a number of years now. The contract stated that arbitration was to be conducted under the ICC rules. The contract also stated that the laws of Zambia were applicable.

After FIDIC indicated they could not appoint the arbitrators, as requested by the contractor, the ADR process stalled. The contractor, without much ADR experience, didn't know what step to take next and relied on the goodwill of the consultant to move the process further. For obvious reasons, the consultant took advantage of the confusing provisions in the contract agreement to delay the process. Although at some stage, the consultant advised the contractor to write to ICC for guidance, the charges accompanying the application were prohibitive and the contractor gave up.

Comment: *In this case, it was clear that availability of a central point of administration of ADR together with standard clauses would have helped protect the claimant as standard procedures would have been applied to help resolve the stalemate reached after the named authority for appointment of the arbitration tribunal was not in position to do so. The result was that after more than 12 months, there was no tribunal in place and not much progress had been achieved.*

Appendix C.2. Dispute for Contractor B

1.0 Case study report

1.1 Dispute between Contractor B and Road Development Agency (RDA).

1.2 Project Particulars

1.2.1 Scope of works – performance contract involving rehabilitation and maintenance of two roads ($257.0 + 275.0 = 532\text{km}$) for K 36.0 billion or US\$ 8.0 million. (**Exchange rate 1.0 US\$ = ZMK 4,500.00**).

1.2.2 Contract period: 28th June 2006 to 27th June 2010 (48 months)

1.2.3 Contract Form: European Development Fund OPRC

1.3 Details of the dispute

Under the **Package 1 OPRC** (Output & Performance Based Road Contracts) for two roads, RDA engaged the contractor to rehabilitate 532km of the two roads in the first six months and after completion to continue with provision of agreed levels of maintenance for the next three and half years in order to ensure all year round accessibility at a total cost of **US\$ 8.0 million**.

After the award of contract, a dispute arose on the extra 62km length of road which the contractor claimed they were forced to rehabilitate and maintain without any payment. **Being unable to amicably resolve the matter, they mutually, submitted the dispute to be resolved by arbitration.**

1.3.1 The claim

The contractor claimed **US\$ 1.9 million**, the additional cost for rehabilitation and maintenance for a period of 42 months as follows:

- (i) **US\$ 1,137,454.00** as cost of rehabilitating the 62km section of the road;
- (ii) **US\$ 333,862.00** reimbursement for penalties deducted by the consultant for non-performance;
- (iii) **US\$ 74,000.0** interest for delayed payments;
- (iv) **US\$ 354,666.00** for maintenance for 42 months; and

C.2. Dispute for Contractor B cont/d

- (v) Interest as at 21st August 2008 plus any other costs awarded by the arbitrator.

1.3.2 The defence

The Respondent, RDA, rejected the claim on the basis that the Claimant made errors in measuring as well as errors of judgment as to the scope of works by inserting 532km against an actual of 594km. And RDA further submitted that:

- (i) The instructions to the bidders were very clear as to the requirement to re-measure road lengths and prepare own quantities and prices. Specifications for OPRC contracts clearly instructed the contractor to prepare and design all interventions required.
- (ii) The insertion of 532km in the contract document was a typing error without any consequence on the price of the contract as this was an output based contract in which payment certificates were prepared based on service levels and paid as percentage of a lump sum contract.
- (iii) The contracted roads were both gazetted roads and were clearly marked on the national road map with a total distance of 595km and insisted that use of 532km in the contract document was a typing error.

1.4 Contract provision for dispute resolution

The agreement contained the following provision (reproduced with errors as in original contract agreement):

- (i) Sub-clause “6.3 - Either party may refer a decision of the **Adjudicator** to an Arbitrator within 28 days of the **Arbitrator’s** written decision”; and
- (ii) Sub-clause “6.4 - The **Arbitration** shall be conducted in accordance with the Arbitration procedures published by the institution named Association of Consulting Engineers of Zambia (ACEZ) and in the place shown in the Contract Data”.

C.2. Dispute for Contractor B cont/d

Comment: *The errors in the provisions created a problem from the start of the ADR process. Fortunately, the practitioner was an experienced one and managed to resolve the problem and the parties consented to correcting the arbitration clause. Thereafter, both parties*

agreed to refer the matter to arbitration as the matter had dragged on from November 2006 to July 2008 without settlement. The parties had exhausted all possible options for a negotiated settlement and wanted finality to the dispute hence the preference of arbitration.

1.5 Problems experienced during dispute resolution

(a) Failure to appoint an Arbitration Tribunal and delay in ADR proceedings

As early as November 2006, the contractor declared a dispute and requested for a negotiated settlement. Between November 2006 and April 2007, there were several exchanges of correspondence between the contractor and the consultant to try to resolve the matter but without success. In the meantime the contractor was expected to continue working on the 62km stretch of the road. The contractor didn't and the consultant recommended withholding of funds to the value of US\$ 333,862.00 for non-performance.

In April 2007, the contractor wrote to the Road Development Agency appealing for a round table meeting to resolve the dispute. A further appeal in September 2007 was still not attended to but contractor's claims were still not certified. In November 2007, RDA wrote back stating that they did not see any merit in the contractor's claim.

The contractor again wrote to RDA in January 2008 requesting for a final attempt to resolve the dispute. A meeting held in February 2008 failed to resolve the dispute.

Comment: *It is important to note that despite there being an ADR clause in the contract agreement, neither party requested to refer the dispute to ADR until they reached a deadlock, almost two years later from November 2006 to July 2008.*

C.2. Dispute for Contractor B cont/d

(b) Fear of retribution

At the time the dispute arose, the contractor had several running contracts with RDA and some of the projects were experiencing problems due to the contractor's delays. On another project, there was an ongoing financial audit instituted by the employer regarding excess claims amounting to more than US\$ 9.0 million.

From the interviews, it would appear there was fear of retribution on the other contracts if the contractor had referred the matter to arbitration. The contractor opted to wait until the employer chose to refer the matter to arbitration by unilaterally appointing the arbitrator, to which the contractor agreed.

Comment: *This imbalance in the bargaining power by one party tends to increase the risk of being pressured into accepting a disadvantageous settlement or to accept the delayed decision from the employer.*

(c) Lack of ADR knowledge

It was also interesting to note that despite RDA making the initial reference to arbitration, they still allowed the contractor to retain the position as 'CLAIMANT' and RDA as 'DEFENDANT'. The Arbitration process lasted three months only from 23rd July to 28th October 2008.

Comment: *Here was a clear case of lack of ADR knowledge by one of the big contractors in the country and the consultant as the matter would have been resolved much earlier had the matter been referred to a neutral for evaluation. Most construction participants have little understanding and awareness of benefits of ADR – that if used appropriately and timely it is a cost effective process and a good option for maintaining business relationship. This case was a good example for the need to promote ADR among contractors, consultants and government implementing agencies.*

C.2. Dispute for Contractor B cont/d

(d) Role of employer and consultant

Despite numerous correspondences between the contractor and employer, the dispute could not be resolved. The contractor pointed out the issue of impartiality of the consultant as they had bid for the same job, in a joint venture with another contractor and were slightly higher than the contractor B's price but they included the disputed 62km distance in their bid price. Obviously, it was difficult for the consultant to give the contractor the benefit of doubt and insisted that the contractor was up to no good in asking for additional costs for the 62km shortfall.

The employer however ignored this factor and continuously accepted the consultant's advise not to pay for the additional 62km and instead recommended withholding of funds, by deducting the equivalent to the value of works from the contractor's claim, as a way to force the contractor to undertake the rehabilitation and maintenance of the disputed section.

Comment: *Once again, it should be pointed out that it is the employer who must create the enabling environment and a culture for a problem free project implementation atmosphere.*

(e) Increased cost

The matter was resolved within three months on 28th October 2008. The employer paid interest charges amounting to US\$ 74,000.00, costs which would have been avoided if the decision to refer the matter to arbitration had been made much earlier.

(f) Lack of standard procedures

This was a matter which could have been resolved much earlier if there were guidelines for management of disputes which would have spelt out the procedure to manage a dispute once declared by one or both parties.

(g) Role of the legal profession

C.2. Dispute for Contractor B cont/d

Fortunately or unfortunately, neither party referred the matter to any legal counsel, including during the arbitration process as both parties opted for a documents only reference and prepared their own submission documents.

Comment: It was not known whether appointment of legal counsels would have shortened the process of resolving the dispute. It was most likely that the legal counsels may have helped to bring the parties to roundtable discussions much earlier and possibly an early referral to arbitration.

Appendix D: Model Validation Questionnaire

D.1 Validation Questionnaire Cover Letter



School of Engineering
Department of Civil & Environmental Engineering,
University of Zambia, Lusaka

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Dear Sir/Madam,

Questionnaire Survey - Validation of the proposed model for the management and resolution of disputes during the construction cycle of a project.

In concluding the research study on the “**management and resolution of construction disputes in Zambia**” a proposed model has been developed. I write to seek your participation and assistance in answering the attached questionnaire for the validation of my research findings.

The validation will assess the functionality, usefulness and usability of the proposed model. Your responses will provide valuable information and contribution to the application of the model to the Zambian construction industry and will be held confidential and used purely for academic purposes.

Thank you for considering this request.

Yours faithfully,

Henry M Musonda

MEng Research Student

Email: musondahm@zamtel.zm

Mobile: 0955 889 767

D.2 Validation questionnaire - management and resolution of disputes model

- 1. Name of respondent.....
- 2. Name of organisation.....
- 3. Position in organisation.....

4. Which sub-sector do you belong to (*please tick*)?

Consultancy	Contractor	Legal/ADR	Government Agency	Other(<i>State</i>)...
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Do you think the proposed model can be easily adopted by those tasked to manage and resolve disputes on construction projects (*please tick*)?

Yes	No	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Do you think the steps and stages of the proposed model are simple to follow and implement (*please tick*)?

Yes	No	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Do you think the proposed model will add value to the construction industry (*please tick*)?

Yes	No	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Do you think the proposed model will improve the management and resolution of disputes during the construction cycle of a project (*please tick*)?

Yes	No	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Do you think the proposed model is adaptable to the needs and practices of all categories of employers and contractors (*please tick*)?

Yes	No	Not sure
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**D.2 Validation questionnaire - management and resolution of disputes
model Cont/d**

10. If you wish to provide any comments on the value or appropriateness of the model to the dispute resolution processes please do so in the space provided below and over the page. In particular we would appreciate having your views on omissions or improvements to the proposed model.

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.....

THANK YOU FOR YOUR COOPERATION!

Please return the completed questionnaire to:
H M Musonda; Fax 0212 620 663 or by email to: musondahm@zamtel.zm

D. 3 List of participants for the validation of the ADR Model

S/No.	Position	Institution	Construction Sub-sector
1.	Principal	Lisulo + Bwalya Architects	Consultancy & ADR Practitioner
2.	Executive Secretary	ZCDR	ADR Service provider
3.	Managing Partner	Chalwa Associates	Consultancy/ADR Practitioner
4.	Managing Partner	Kabuka & Co	Legal/ADR Practitioner
5.	Legal Counsel	RDA	Government Implementing Agency
6.	Managing Partner	Abha Patel & Co.	Legal/ADR Practitioner
7.	Director	Sable Transport Ltd	Contractor
8.	ADR Coordinator	Ndola High Court	Judiciary
9.	Executive Director	NCC	Construction Industry Regulator
10.	Chairman	Phoenix contractors	Contractor/ADR Practitioner