A CRITICAL ANALYSIS OF PROCUREMENT MANAGEMENT PRACTICES AND THEIR IMPACT ON THE SUCCESS OF CONSTRUCTION PROJECTS – A CASE STUDY OF ROAD DEVELOPMENT AGENCY (ZAMBIA)

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Award of the Degree in Purchasing and Supply Management of Cavendish University Zambia
DECLARATION

I, Abigail Tracy Zulu do here declare that this research project is my own and that the work of other persons utilized in this dissertation has been duly acknowledged. The work findings and delivery in this paper has never been previously performed and submitted to any other Learning Institution to merit a degree apart from that of which I am a candidate.

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Signature ........................................

15/07/2020

Date ........................................

This project has been submitted with my approval

SUPERVISOR:

Signature ........................................

Date ........................................

DEDICATION

I dedicate this dissertation project to The Almighty God Jehovah and His loving Son Emmanuel for supplying me with the strength, life, wisdom and understanding throughout my entire programme. I also dedicate this work to my Family especially my loving Husband Mr. Ernest Kapumpe who has supported me in every way possible up to my completion. I also extend my dedication to the faculty of business at Cavendish University for the guidance and the support through my entire programme, as well as Road development Agency for availing me with all the required information that I needed for my research.
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LIST OF ABBREVIATIONS AND ACRONYMS

RDA: Road Development Agency in Zambia

ZPPA: Zambia Public Procurement Regulatory Authority

SCM: Supply Chain Management

SP: Sustainable Procurement

CM: Construction Management

DEFRA: Department of Environment, Food and Rural Affairs

e-GP: Electronic Government Procurement

SPSS: Statistical Package for Social Sciences

EU: European Union

OJEU: Official Journal of the European Union
ABSTRACT

There are many challenges faced by business community in their operations either private or public. The challenges can be manifested and detected if proper operational systems are structured and implemented. To obtain value for money, many organizations utilize a collection of procurement methods to acquire materials and services. While the method used will depend on various rationale (spend or commodity for example), tendering is a key tool, typically used to foster competition and deliver business benefits both to public and private sector. The Road Development Agency (RDA) being a public sector is not left out of Procurement Management Practices such as tendering and other procurement challenges. Love, P., Skitmore, M. and Earl, G (1998)

This study employed both qualitative and quantitative methods and a case study design was chosen in order to get detailed information about The Road Development Agency (RDA). Primary data was collected through questionnaire, Government agencies’ websites and unstructured interview. Data collected was mainly qualitative in nature hence content analysis was the best method of analysis as it does not limit the respondents on answers and has the potential of generating more detailed information. Quantitative data was analyzed using the statistical package for social sciences (SPSS).

The findings of the study revealed the respondents’ similar views based on feasible various Procurement Management Practices that were being undertaken by RDA with some activities having had a high positive impact on the respondents indicating high levels of success of construction Projects. The results also included respondents’ insights as to what areas needed to be addressed to make the Agency more effective in achieving its objectives. From the study it was found that the E-Procurement system was not incorporated for construction projects by RDA and also to some extent it could be taken to be a challenge in the procurement practices.

It was concluded that, Procurement Management practices currently in operation contribute to operational efficiency despite challenges of delay in project completion period. The study revealed also that Procurement Management Practices has potential to effectively contribute to the success of construction projects despite some challenges in designing procurement strategies such as E-procurement, evaluation and monitoring programs to meet the overall operational objectives and efficiency.

It was recommended that for Procurement Management Practices to contribute to successful project development, it must be tailored to meet the expected project completion time frame, costs and benefits of both the public and private sectors. The study also identified areas for further research suggesting that another research could be done on the assessment of the role of central Government in E-procurement and extent of its involvement in the Agency’s Procurement Management Practices. Naoum, S., (2011b)
CHAPTER ONE: INTRODUCTION

1.0 Background

The Road Development Agency is a statutory Institution established through the Public Roads Act No. 12 of 2002 to provide for the care, maintenance and construction of public roads in Zambia. The Agency’s strategic mission is to provide sustainable road infrastructure for connectivity and accessibility to spur social-economic growth. As such, the institution facilitates the construction industry in the country in the maintenance, development and rehabilitation of roads and other related sustainable civil works such as bridge constructions. (RDA, 2019)

Public procurement management is a vital tool to consider when there is an undertaking of any capital project in a country. Often accounting for between 7-10 percent of the Gross Domestic Product (GDP) (Winch, 1996), meaning a country’s procurement system should be one that is effective and efficient in order to bring money back to that particular economy of a country. Therefore it is essential that every country has a procurement managed system to enhance accountability, transparency, fairness and value for money. Despite having a stable procurement management system in place, there are challenges related to procurement management practices that affect the success of construction projects. On the local front, the challenges affect the success of construction projects in terms of the performance within the construction sector in Zambia. The Road Development Agency (RDA), being a public enterprise is no exception to these challenges.

Studies undertaken in the construction sector (Colmak Associates, 2010) reflected a number of challenges in procurement procedures and practices. These challenges included: Problems in having incomplete and missing procurement files. This was attributed to the procurement department not having procedures or instructions on how to structure an official procurement filing system and to maintain individual files. Problems in the Bidding Statistics -for the works contract sampled there were no invitations for expression of interest undertaken, Problems in the duration- from all the sampled projects only one was delivered within the original contract period. All the other sampled projects experienced contract overruns, representing the experiences of most projects in Zambia. On average the sampled projects experienced contract schedule overruns of 137%, Procurement planning was inadequate and in certain instances was not in existence, a component that is essential for an efficient and economic procurement system.
According to reports of procurement audit for public procurement entities conducted by the Zambia Public Procurement Regulatory Authority (ZPPA) in financial year 2016/2017, on the overall performance of audited projects found out that RDA’s appropriateness of preparation and implementation of annual procurement plan scored 6.43% out of 10%, appropriateness of tender processing scored 16.13% out of 20% and appropriateness of contract implementation scored 24.71% out of 40% (ZPPA, 2018). This clearly pointed to poor project planning, procurement procedures in contract management and a challenged financial system and hence, the genesis of this research.

1.1 Statement of the Problem.

The problem being addressed in the study is the lack of compliance in applying public procurement regulations, lack of transparency, misapplication of funds, corruption, inefficiency and loss of confidence by the population in government programmes as well as the failure to implement procurement management practices that can aid the success of construction projects in the public operations. The government spends huge sums of financial resources in rehabilitating the roads and other related civil works due to the prevailing challenges. According to the Third report of the public accounts committee on the report of the auditor-General on the Road Development Agency (RDA) for the period January 2006 to September 2009, there was a challenge of over procurement. A provision of ZMW 1,200 billion was provided in the 2008 budget comprising ZMW 685 billion from local sources and ZMW 515 billion from external sources. A total of ZMW 670.4 billion was released from the Treasury while the Cooperating Partners funded a total of ZMW 264.199 billion bringing total releases to ZMW 934.59. A total sum of ZMW 842.42 billion was spent in 2008 and a sum of ZMW 92.17 billion was carried forward to 2009. In 2009, a provision of ZMW 1,356.84 billion comprising of ZMW 715.45 billion local resources and ZMW 641.396 billion external resources was provided in the annual work plan. As of September 2009, the Government had released a sum of ZMW 693.34 billion whilst the Cooperating Partners had released a total of ZMW 88.06 billion.

According to the Public Finance Act of 2004 7(3), every controlling officer is charged with the duty of planning and controlling the expenditure of public funds under the controlling officers control thereby not committing the Government to expenditures in excess of money appropriated by Parliament.. This state of the Zambian procurement system has been attributed to a large extent, on the lack of disclosure of information which could make it possible for stakeholders, including civil society, to monitor and oversee effectively the system. This study therefore fills the gap by critically assessing the procurement management practices and their impact on the success of construction projects, using the Road Development Agency (RDA) as a case for the study.
1.2 Purpose of the Study

The purpose of the study is to add to the existing body of knowledge by finding solutions to the procurement management practices impacting service delivery in the road construction sector. Also, the study will be of great relevance to the developing countries and other public sectors that deal with road construction projects. The findings and recommendations from the study will be used as a guide to help policy makers and procurement professionals make sound procurement decisions in order to achieve value for money and regulatory compliance.

1.3 Objective of the Study

The objective of the study is to critically assess the procurement management practices and their impact on the success of construction projects. Generally, the study will seek to assess the procurement planning, contract monitoring and influence on performance of construction projects in order help Road Development Agency (RDA) minimize the costs of capital expenditure by complying to the Public procurement regulations.

1.3.1 Specific Objectives

1. To assess the influence of procurement policy on service delivery at RDA.
2. To evaluate how procurement planning influences service delivery at RDA.
3. To evaluate sustainable procurement practice influence on service delivery at RDA.
4. Ascertain whether all public sector organizations; procurement policies and practices are in compliance with the Public Procurement Act of Zambia.

1.4 Research Questions

1. What procurement practices are responsible for performance of construction projects in Zambia?
2. To what extent do procurement management practices influence the success of construction projects?
3. What role does procurement planning play in the achievement of effective and efficient construction projects?
4. Does sustainable procurement practice influence the success of construction projects?
1.5 Scope of the Study

The study investigates procurement practices influencing service delivery with respect to road construction. The study focuses on the procurement operations of the Road Development Agency of Zambia. The research focuses on factors such as; procurement policy, procurement planning and sustainable procurement practice adopted and implementation by the agency in order to get outputs which will help in achieving their corporate and national objectives. The road construction sector is chosen on the basis of the importance of roads to other service provision. The research will cover the agency’s headquarters which is located at Fairly Road in Lusaka, Zambia.

1.6 Significance

The information will enable the government, players in the construction industry and general business firms including Road Development Agency (RDA) to assess and evaluate potential and viable development projects and the impact of procurement Management practices in the process of business operations.

1.7 Methodology

The study took a case study strategy approach based on the procurement management practices in the procurement department of Road Development Agency (RDA). The research work options composed of qualitative method. Primary data was obtained through a questionnaire comprising unstructured and structured questions. The findings were presented based on sampling techniques collected from journals, government procurement reports, ZPPA reports and RDA operational reports.

1.8 Organization of the Study

The first chapter of this study looked into the background of procurement management practices, the problem statement, the purpose of the study, the objectives of the study, research questions, Chapter Two critically analyzed literature on the procurement management practices of a number of organizations starting at the global level and ending with the prevailing state of affairs at the Road Development Agency (RDA). Chapter Three covers the research methodology, which includes the sample size and procedures, and the methods of data collection and analysis. Chapter Four covers the analysis of data collected and the presentation of results. Chapter Five provides a summary of the research findings and recommendations for future research.
CHAPTER TWO: REVIEW OF LITERATURE

2.0 Introduction

Public Procurement in Zambia and the world over is increasingly emerging as an important agenda. In Zambia, it is estimated that about 15 per cent of the Gross Domestic Product is on procurement related activities. For instance, public sector expenditure on procurement for the year 2014 was projected at ZMW 25.5 billion. In 2015, it rose to ZMW 43 billion. The projected expenditure for 2016 stood at ZMW 53 billion and the figure keeps increasing. It is important therefore, that this high cash flow is utilized prudently in order to deliver goods, works and services to the Zambian people effectively. Due to the huge amounts involved in public procurement, regulation and monitoring of all processes, there is need for stakeholders to be effective in order to realize the intended results. Effective regulation and monitoring of public procurement processes guarantee accountability, transparency and ultimately lead to development. Public procurement, if managed prudently and in accordance with the Public Procurement Act No. 12 of 2008 has great potential to expedite the delivery of development in the country.

2.1 Critical review of issues related to procurement methods

2.1.1 Supply Chain Management (SCM)

Supply chain management (SCM) is defined as the network management of interconnecting businesses ramified in the overall arrangement of goods and service packages demanded by end customers (Harland, 1996). Therefore it is obvious that SCM encloses all the significant movement and depository of raw materials, work-in-process inventory, as well as finished goods from the origin point to the consumption point. According to (Khalfan, McDermott and Cooper, 2004), “(SCM) is directed toward the minimization of transaction cost and the “enhancement and transfer of expertise between all parties”. Modern procurement methods do not make a hierarchical structure to manage the social issue and discontinuity of the building procedure. Researchers recommended that clustering by a technology group approach as a method for handling reconciliation issue. It was contended that SCM is a management theory and that its philosophy is applicable to any procurement techniques; in spite of the fact that management types of procurement contributes a better framework.
2.1.2 Sustainability

Sustainable Procurement (SP) is a procedure whereby associations address their issues and demand for goods, services, administrations, works and utilities in a way that accomplishes the value of money on an entire life premise in order to create genuine long haul benefits, to the association, as well as to society and the economy, while reducing the damage to the environment (Berry and McCarthy, 2011). Currently, there is an obligatory introduced in Europe which is all new built and refurbished building structures are sought to show consistence with 'Target Carbon Emissions Rates' and in addition with the Building Energy Model (Part L) of the Building Regulations 2006. Researchers agree that the generation of such models demands a few cycles at the design and plan stage and invites close integration between the various experts (Masterman, 2005). Breakthrough in terms of innovation has been thwarted by numerous hindrances, for instance, the industry's divided nature, absence of long haul perspective, customers' unwillingness to share load, lack of clear definition and advantages of sustainable construction, constraint related to regulations and conflict in government policies and insufficient fiscal incentives (Adetunji, Fleming and Kemp, 2003). The research done indicates that there is a huge conflict between Sustainable Procurement (SP) and cost reduction mainly in central government. Thus, in this manner, this would provoke the inquiry regarding the balance of the design and build contractor will consider among sustainability for presenting a more focused and competitive offer for the works. In addition, it is supported that sustainable construction demands change to the method of construction, the utilization of resources yet more and most importantly in the building procedure (Bullen and Davis, 2003). Therefore, to accomplish this, critical change to the organisation, structure and communication channels of the business should be made. It was also highlighted that the usage of traditional procurement techniques creates a professional obstruction to innovative change that is required by sustainability. Besides, (Hamza and Greenwood, 2007) explained that the usage of traditional procurement involving design and build is proven to be an extremely difficult task to outline environmentally sensitive buildings as the emphases required are inconsistent with the contractor motivating force to stay away from postponements and additional cost. By following the guideline of sustainable construction, from the government's point of view, it will encourage a genuine social change in the Construction Management (CM) towards the selection of collaborating as a procurement process (Ball and Fortune, 2000).

2.1.3 Lean Construction

The previous researchers looked for radical changes to enhance production in the construction industry and they identified that the usage of lean techniques are the best practice. According to (Forgues and Koskela, 2009), there was a forward case that researchers in lean construction contended that traditional design practices are
outdated and have performed ineffectively in dealing with the stream or meeting customers' prerequisites. Therefore, it can be contended that, for the standards of lean construction to be adequately connected, there should be a collaboration associated with all parties which is eventually cultivated through integration. The previous researcher recorded six main components of lean construction which are:

i. Waste minimization in material procurement and logistics during construction of projects. At this stage when planning is not well implemented from on set, there will be materials that will be purchased in excess and once construction is completed, the construction materials will remain as wastage.

ii. Procedure which highlights production, planning and control of construction projects

iii. End of customer's focus on service delivery on construction projects in terms of customer's satisfaction.

iv. Continuous developments in the procurement systems and management practices.

v. Strong collaborative relationships between the supplier and buyer derived from consistent of delivery of projects works.

vi. Systems point of view of lean construction as indicated by the writer (Eriksson, 2009).

Lean construction in terms of procurement can be contended that a high emphasis can be done upon the significance of cultivating a powerful collaborative relationship from the initial stage such as partnering and also recognizing continuous improvement. Methodical experimentation, continuous improvement, and as well as constant learning over all technical and organizational levels are significant factors of the lean theory, especially as a method of endeavor to improve the value of customer while minimizing waste (Jorgensen and Emmitt, 2007). Nevertheless, there was some evidence available which demonstrates that executing lean practices in the collaborating consortium is not really straightforward as been frequently suggested. A basic change ought to be in the practices and behaviors of the included participants or parties.

2.1.4 Innovation and Technology Development

The term innovation directly shows that it is about practicing latest sciences and solutions for construction and it has turned out to be fundamental for development of construction organizations due to the high pressure from customers and the government to enhance quality, minimize cost and accelerate construction processes. These scopes were discussed in the early year of 1960s' (Bowley, 1966) who arranged the four different sort of innovation with the logic that they are executed and created. They are;
i. *Time or cost*: An advancement or innovation which is cost-efficient and time-saving in comparison of the current strategies or techniques;

ii. *Performance development*: an innovation which has the best performance in execution;

iii. *Aesthetic*: a development of innovation that has different and latest appearance;

iv. *Ersatz*: an elective method for doing things that is constrained by particular circumstances (i.e. lack of particular materials or manpower).

Subsequently, innovation is considered as one of the element of competitive advantage and can be seen as pre-imperative for an organisation achievement and survival. Egbu (2004) contended that the capacity to improve or innovate highly depends on how an organization manage and exploit their own available resources. In spite of a few hindrances towards innovation in construction, there has been a change currently to settle the divided structure of the Construction Management (CM) in industries with critical endeavors to collaborate the design and construction. This is especially obvious in the increments in design and builds ventures, administration contracting and project management (Shafik and Martin, 2006).

### 2.1.5 Constructability

First and foremost, a design plan which can be built would prompt to time and cost-saving. The term "constructability" was introduced in the 1960s and 1970s but confronted negative feedbacks for its restriction in scope as it limits to the design procedure (Wong, Lam, Chan and Shen, 2007). After that, various researches have been carried out with a specific end goal to a better task execution and improvement of constructability. For instance, research in procurement methods embraced the idea that “the continual use of traditional lump sum may stifle technological innovation, particularly the design and constructability of public sector buildings” (Love, Davis, Edwards and Baccarini, 2008). Since the year of 2000, the connection among constructability and procurement technique has been broadly discussed, with most researchers in assentation that fully coordinated procurement techniques, for example, Design and Build and venture administration are most suitable for customers setting a high need on the constructability of their project.

### 2.1.6 Value Management

Value management is a standardized way to deal in delivering a project with the needed functions at optimum whole life cost without affecting negatively to quality, execution and reliability. Thus, it will be the group of team which is systematically used to distinguish and wipe out superfluous expenses of the goods. Superfluous cost is the one which contributes neither the qualities, utilization, life cycle, appearance nor client required
demands. The requirement of the clients are normally: Aesthetics (magnificence, colour, design), ergonomics (shape, measurements, ease), Economics (cost of operation, maintenance cost), and Technical (performance). Through the help of workshops of the ventures, value management can guarantee a dynamic support from all stakeholders of the project and hence energize integration, innovation enhanced constructability, improved communications through the network of supply chain and the incorporation of sustainability practices (Egan, 1998).

2.1.7 E-Procurement

It has been discussed by researchers that the need for information frameworks, for example, e-procurement to encourage the coordination of the supply chain is getting more attention and consideration from the construction industries (Presutti Jr, 2003). The utilization of e-procurement innovated technology decidedly influences administrators' point of view on both procurement practices and procurement performance. There are arrangements at present occurring over the proposed modification of the EU acquisition orders (OJEU) that, once concurred, should be embraced by the law. This amendment is aimed to rearrange and accelerating current procurement practices. One of the key changes to this requirement is the need for mandatory e-procurement with complete electronic procurement, including the online submission of tenders, being required by certain date and year. However, there is a drawback in this new initiative which is, the utilization of e-procurement stages requires noteworthy interest and investments in both specialist software and staff training. It can be contended that the time and speculation required by providers or organizations may produce a "two-tier" framework, with huge numbers of powerful suppliers investing into e-procurement in accordance with the mandates and leaving aside the individuals who are less capable of meeting the required speculation.

2.2 Best Practice Principles in Procurement

The procurement activities of public institutions should be governed by a set of general principles. These are founded on the legislative requirements placed by ZPPA on these institutions obtaining optimum outcomes through their procurement processes. In this context, regulators are bound by their statutory objectives to ‘ensure that resources are used efficiently and effectively and services are provided in accordance with Best Value principles to best meet the needs of the local community and to improve the overall quality of life of people in the local community’ (Doloi, 2013).

Optimum outcomes are achieved by applying several fundamental best practice principles. The fundamental best practice principles that should be applied to every procurement, irrespective of the value and complexity of that procurement, are:
i. Value for money- a desired procurement will be achieved at the best possible price which is based on a balanced judgment of both financial and non-financial factors relevant to procurement

ii. Open and fair competition-this includes procurement policies that include all contracting policies that qualify any organization to openly bid for a contract and procure with all fairness and openness.

iii. Accountability-all public funds should be accounted for and used for the intended request and purpose.

iv. Risk management-ensuring that there is straight and effective run of the purchasing and supply operations throughout the construction project.

v. Probity and transparency-the evidence of ethical behavior which is associated with procurement practices and availability of information regarding the procurement process for public funds should be openly availed to the public.

2.3 Role of Sustainability in Procurement

Berry and McCarthy (2011) define sustainable procurement as ‘...a process whereby organizations meet their needs for goods, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to society and the economy, whilst minimizing damage to the environment.’

The use of sustainable procurement practices helps agencies and other public institutions meet their needs for goods, services, and works. Best practice principles in procurement are more widely concerned by maximizing long-term net benefits for the communities. These wider benefits are directly compatible with the primary objective of the government endeavour to achieve the best outcomes for the local community having regard to the long-term and cumulative effects of decisions.

Companies that embrace sustainable procurement incorporate extrinsic cost considerations into decisions alongside the conventional procurement criteria of price and quality, although in practice the sustainable impacts of a potential supplier’s approach are often assessed as a form of quality consideration. These considerations are typically divided into environmental, economic and social. (DEFRA, 2006).

2.4 Compliance Monitoring Department

Compliance monitoring is one of the key functions of the Authority in regulating public procurement especially following the decentralization of the public procurement function to procuring entities. This ensures that the procuring entities are following the laid down procedures as detailed in the Public Procurement Act No. 12 2008 and the Public Procurement Regulations, 2011. Thus, a number of strategic activities are undertaken by
the Authority that include compliance and capacity assessments, procurement audits, contract monitoring, capacity building and training of staff in the procuring entities, training of bidders and review of various reports in line with its mandate as prescribed by the Public Procurement Act No. 12 of 2008.

2.5 Procurement Audit at the Road Development Agency
To focus on the study, a brief summary of the latest audit of the procurement system at RDA is included herein. The audit of the Road Development Agency (RDA) for the years 2006 and 2009 was conducted in accordance with the provisions of Article 121 of the Constitution of Zambia, Cap 378 of the Laws of Zambia and Public Finance Act No. 15 of 2004.

The objectives of the audit were among others to ascertain whether:

- Procurement procedures were followed in the award of contracts;
- Roads projects were administered in accordance with contract agreements; and
- Expenditure was in conformity with the Laws of Zambia.

The following were observed:

**Annual Plan and Budget**

**Over commitment**

The Agency committed Government to expenditure in excess of money appropriated by Parliament contrary to section 7(3) of the Public Finance Act No.15 of 2004. The over commitment amounted to K1,015,817,097,718 in 2008. This resulted in serious cash flow problems in 2009.

**Inadequate Provisions for Contracts**

Adequate funds were not provided in the budget to cover the contracts. This resulted in delayed payments and completion of works.

**Procurement Stage**

**Lack of Drawings and Condition Survey**

Drawings for the contracts were in most cases either delayed or not prepared and condition surveys were not conducted leading to inadequate interventions and unnecessary variations.

**Engineers’ Estimates**

Contrary to common practice the engineer’s estimates were not used when carrying out evaluations. It was therefore difficult to ascertain the reasonableness of the bid sums.
Late Engagement of Supervising Consultants
Consultants were mostly engaged later than the starting date of the works contract. In this regard part of the contract period were running without supervision.

Negotiation Meetings
RDA did not usually hold contract negotiation meetings despite the inconsistencies in the evaluation and poor contract documents.

Poor Quality Contract Documents
- Forms of agreement in the contract are at times not signed and have no date.
- Sections indicated as forming part of the contract such as drawings were missing in some cases.
- Contracts for unpaved roads would have drawings for a paved road.

Execution Stage
Poor contract Administration
There were considerable delays in decision making relating to issues raised by consultants/contractors which in some cases led to extension of time and additional costs.

Non Submission of Performance Bonds
The clause on performance bond was not always respected thereby failing to penalize the contractor in case of none performance.

Delayed Payments to Contractors and Consultants
Some Payments to contractors were delayed resulting in interest charges and standing time.

Irregular Payments on works not done
There were some cases where no construction works were done and yet payments were made for works not done without proper explanation why the payment was made in the first place.

Irregular Instructions to the Contractors by RDA
In some cases the Agency issued instructions directly to the contractors disregarding the consultants. The instructions were mostly related to payments to RDA staff and service of RDA motor vehicles.

Delayed Works
There were very few projects which were completed on time. In most cases the contracts had to be extended and in some cases more than once. There were also cases were RDA instructed the contractors to slow down or stop works because of lack of funds.
Progress Reports

Progress reports were in a number of cases not prepared by the supervisors.

Variations

Decisions on variations were in some cases not justified by the contractor and therefore unreasonable.

Supervision Funds

In cases where the supervision of the contracts was done by RDA, supervision funds were paid through the contractor thereby raising issues of objectivity.

Poor Quality Works

Poor quality works were observed on most of the contracts reviewed.

Analysis and Comments on the Test Results

Analysis of results for road test samples that were collected from eighteen (18) projects as part of the audit for Road Work carried out by the RDA in 2007/2008 revealed the following results;

- 44% of samples tested did not meet gradating requirements as soil/aggregate particles were either too large or too small than required by specifications. The consequence is the poor bondage, compaction and washing away of particles.
- 75% of samples tested were too plastic in that the samples had too much clay than required. This would lead to rapid expansion and cracking of the road.
- 67% of aggregates did not meet the requirements of crushing strength. Poor aggregates easily get crushed by moving loads and leads to fast deterioration of roads.
- 81% of base thicknesses were thinner than what was specified.
- 39% of surface dressing samples stripped off from the base course.
- 82% of Surface dressing layers were thinner than specified.
- 100% of stabilized samples taken had cement content less than specified.
- 50% of concrete samples tested were weaker than what was specified.
Procurement of Contracts

Adequacy of Bid Period

The Public Procurement Regulations of 2005, require that the bidding period must be between four (4) and eight (8) weeks. It was observed that the majority of bidding periods had been twenty five (25) days irrespective of project size.

Appointment of Evaluation Committee

There were no criteria for the appointment/composition of the evaluation committee. In this regard, it was observed that the members of the committee were mainly appointed from the planning and design department. In most cases, the evaluation committee comprised three (3) engineers from planning and design department namely, the principal engineer and two (2) engineers, thereby casting doubt on the objectivity and effectiveness of the committee.

It was further observed that the procedure for appointment and approval of the evaluation committee was not formalized as only handwritten notes were used to nominate the members of the evaluation committee.

Bids Responsiveness

There were a high percentage of submissions which were judged to be non-responsive at the administrative stage and thus eliminated from further evaluation. An analysis of fourteen (14) small contracts, where the bidders tended to be more inexperienced revealed that the average rejection rate was 41%. In some cases the rejection rate was as high as 65%.

This high percentage indicated that either the bidders had not understood the bidding documents or that the evaluators were being too restrictive in their judgment, especially for the smaller bidders.

Consistency in Application of the Evaluation Criteria

The evaluation committees were on a number of occasions inconsistent in their application of the evaluation criteria. For instance during the evaluation of the Nakatindi Road M10 project, a bidder was eliminated because his wages were lower than the legal minimum, while another committee for the construction of Muombe culverts project, a bidder who stated that his wages were lower than the legal minimum, was allowed to proceed, on the basis that he would be forced to obey the law if he won the contract.

Over Procurement
A provision of K1.2 trillion was provided in the 2008 budget comprising K685 billion from local sources and K515 billion from external sources. A total of K670.4 billion was released from the treasury while the Cooperating Partners funded a total of K264.199 billion bringing total releases to K934.59. A total sum of K842.42 billion was spent in 2008 and a sum of K92.17 billion was carried forward to 2009.

In 2009, a provision of K1,356.84 billion comprising of K715.45 billion local resources and K641.396 billion external resources was provided in the annual work plan. As of September 2009, Government had released a sum of K693.34 billion whilst the cooperating partners had released a total of K88.06 billion.

2.6 Compliance Monitoring Assessments
Compliance monitoring was one of the main activities undertaken during the period under review and the Zambia Public Procurement Authority (ZPPA) conducted compliance assessments in forty-eight (48) procuring entities compared to fifty-three (53) assessments that were conducted in 2017. The purpose of the assessments was to check the compliance levels of the procuring entities vis-à-vis the requirements of the Public Procurement Act. The assessments covered areas such as procurement procedures, availability of resources, staff adequacy, structure of the procurement unit, Procurement Committee composition, readiness to use the Electronic Government Procurement (e-GP) System, submission of various reports, record-keeping, consistency in the use of procurement documents and other procurement operational areas. This research could not have been scheduled at a more opportune time than this because the most recent audits by ZPPA did not cover the Road Development Agency which is the case for this study.
CHAPTER THREE; RESEARCH METHODOLOGY

3.0 Introduction
Chapter three of the study looks at the research methodology of the study. It explains the methods and procedures that were used in the collection and analysis of data. According to Orodho (2008) defined research methodology as a framework within which the facts are placed so that meaning can be extracted from them. Research methodology is also defined by Leedy & Ormrod (2013:14) as “the general approach the researcher takes in carrying out the research project”. In addition, the research methodology also shows the types and sources of data and various techniques that were employed in collecting it. The chapter also shows the research design, how the sample was selected; sample size and the limitations that the researcher encountered during the study.

3.1 Research design
The research design for this study was both qualitative and quantitative case study. The qualitative and quantitative methods were preferred to other methods because many aspects of procurement management practices could use both methods. Hay (2010) explains a case study as “the study of a single instance of a phenomenon in order to explore in-depth nuances of the phenomenon and the contextual influences on and explanations of that phenomenon.” The qualitative methods were used to collect data. According to Homby and Stake (2010) they explain that, qualitative method as systematic, rigorous investigation of a situation or problem in order to generate new knowledge or validate existing knowledge.

3.2 Target population
The target population of the study consisted of the local employees from other Government Agencies dealing in procurement, construction companies and workers of Road Development Agency (RDA). A population is a group of individuals, objects or items from which samples are taken for measurement. Population may also refer to an entire group of persons or elements that have at least one thing in common. Best and Tuckman (2012) agreed that, a population is any target group of individuals that has common characteristics that are of interest to you the researcher.

3.3 Sample size
For the purpose of this study, a total of 41 respondents (i.e. 12 from other Government Agencies, 20 from various construction companies and 9 workers of RDA constituted the sample size of this study). A sample size is a subject of people, items, or events from a larger population that is collected and analyzed to make inferences. It can also be defined as the group of cases (individuals) selected from all the possible respondents in a population in which the study is being conducted (Best and Tuckman, 2011).

3.4 Sampling procedure
The other respondents and workers of RDA were randomly sampled on the basis of being key stakeholders of the Agency. The term sampling procedure in this context refers to that part of the research plan that indicates how cases are to be selected for observation. Samples are not selected haphazardly but are chosen systematically. The two sampling procedures are probability and non-probability. Anyanwu (2015: 121) defined as “non-random by which the researcher selects his sample on the basis of understanding the universe,
its components and the nature of his research objectives”. Probability sampling is also known as ‘random sampling’ or ‘chance sampling’. Under this sampling design, every item of the universe has an equal chance of inclusion in the sample (Alugbuo, 2012).

3.5 Data collection techniques
Interviews and questionnaires were sources for primary data. The main source of secondary data were books, and online company publications. This research employed qualitative methods. Berg (2014) points out that qualitative technique allow researchers to share in the understandings and perceptions of others and to explore how people structure and give meaning to their daily lives. In essence, qualitative research can give data meaning and context. Given the research questions and approach to privilege the voice of people, affected, qualitative methods were the most appropriate. The data used was collected through individual interviews and questionnaires. Both questionnaires and individual interviews were semi structured. Hay (2010) defines semi-structured interviews as the researcher having content focused or fully worded questions based on the research question. He further explains that the researcher have an ordered but not restricted question sequence.

3.6 Methods of data analysis

3.6.1 Data Analysis
In order to achieve the objective of this study, data collected was analysed using qualitative and quantitative techniques that were made whilst conducting the research at RDA. Data analysis is the examination of data that has been gathered in order to make deductions and inferences in a given phenomenon (Ghosh, 2011). Data analysis also involves discovering important structures by extracting significant variables and identifying any anomalies. Crang and Cook (2014) highlights that it is important to develop codes that allows analysis and notation of the context of remarks and observations. This helps to avoid producing an over rationalized account that does not take into account the richness of the research encounters (Cook& Crang, 2017).

3.6.2 Interpretations of data
For the purpose of this study, the responses to the items directly related to the research questions were presented in tables using frequencies and percentages as well as charts where possible in order to simplify their interpretation and understanding. These were generated by the use of statistical package for social sciences (SPSS).

3.7 Instrument validity and reliability
The interview guides were pre tested to ascertain validity of responses. Validity is concerned with establishing whether the instrument’s content is measuring what it is supposed to measure. It is the extent to which the instruments measure the objectives (Orodho, 2010). Reliability refers to the accuracy of the measurement. It also refers to the extent to which a test is internally consistent. According to Anastasi (2018) states that, “Reliability means consistency of scores obtained by same individual when re-examined with the test on equivalent items or under other variable examining conditions. For the purpose of this study, evaluation on the past RDA’s various project activities was another way of validating data collected through other means such as interviews and questionnaires. This makes the data collected through evaluation of past construction activities. dependable than in other modes of validation.
3.8 Ethical Considerations.
It is important to think about ethical aspects in every stage of preparations to carry out an enquiry. To this end, ethical issues that were considered when carrying out this study are: privacy, confidentiality and sensitivity to cultural differences, gender and anonymity (Kitchin and Kate, 2010). Research does not harm; it gains informed consent from respondents and respects their rights. The researcher disclosed the real purpose of the study and gave all the relevant facts about the research in order to enable subjects to make an informed decision about participating in the study. This means that, it was the researcher’s responsibility to seek permission from the Management of RDA as well as individuals who were the subjects of the study before commencing with data collection.

3.9 Limitation of data collection
There was a limitation of data gathering especially on the part of physical interviews and questionnaires due to intermittent operations in other construction companies as well other government Agencies which was caused by Covid-19 Pandemic and also central government directives to close other institutions.
CHAPTER FOUR: PRESENTATION AND ANALYSIS OF FINDINGS

4.0 Introduction
The information provided here is based on the data collected through questionnaires and the comparative analysis of other researchers on the related research subject. In order to streamline the reading and understanding of findings, the responses related to the research questions are presented in tables using percentages and frequencies as well as figures. The sample of 41 respondents participated in the generating of data out of the expected 100 respondents. This presents a percentage of 41 out of 100 from the population of about 230 respondents from Construction companies, Government Agencies and Road Development Agency. Statistical package for social sciences (SPSS) was used to produce the required information.

4.1 Demographic Information

Table 4.1 Gender outcome of respondents

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24</td>
<td>58.5</td>
</tr>
<tr>
<td>Female</td>
<td>17</td>
<td>41.5</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Questionnaire (2020)

The outcome of gender of respondents as shown in the Table 4.1 above confirms that the information in the research was collected from both male and female with the frequencies and percentages of 24 (58.5%) and 17 (41.5%) respectively. The outcome shows that there was no biasness in terms of collecting information only from one gender as well as to avoid non-disclosure of certain information as a result of personal interests relating to gender though it can be clearly seen that most of the answered questionnaires were done by male respondents.

4.2 Functional distribution of respondents

Table 4.2 Designation of respondents

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration staff</td>
<td>6</td>
<td>14.6</td>
</tr>
<tr>
<td>Procurement staff</td>
<td>28</td>
<td>68.3</td>
</tr>
<tr>
<td>Technical staff</td>
<td>7</td>
<td>17.1</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Questionnaire (2020)

Table 4.2 reflects that there was a well-balanced data collection and coverage based on the functions of respondents. This could mean that the data collected is valid though the Procurement staff produced a high response percentage rate of 68.3% compared to administration and Technical staff (included staff from
construction companies) ranking at 14.6% and 17.1% respectively. The low ranking could be linked to the limited time given to respond to the questionnaires.

4.3 Response on whether procurement practices are responsible for performance of construction projects in Zambia

Table 4.3 Response on the responsibility of procurement management practices for performance of construction projects

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>36</td>
<td>87.8</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>12.2</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Questionnaire (2020)

From the Table 4.3, it can be concluded that a significant number of stakeholders including RDA in the construction industry are aware that Procurement Management Practices have a pivotal role in ensuring that the objectives of projects are successfully achieved. The response rate of 87.8% agreed that the Procurement Management Practices are responsible despite the 12.2% response which was in the opposite and this could be due to the public procurement management practices and information exposure.

4.4 Procurement Planning and Procurement Policy influence on service delivery

Table 4.4 Response regarding the influence of procurement planning and policy on service delivery

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>19.5</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
<td>80.5</td>
</tr>
<tr>
<td>Total</td>
<td>41</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Questionnaire (2020)

Lack of dedicated funding for research and development in ensuring that public procurement policies and practices are implemented in the construction of projects could be deemed as a benchmark for lack of public procurement sustainability. The observation is revealed with 19.5% representation of 8 responses out of the total of 41 respondents.

From the Table 4.4 above, 80.5% of the respondents revealed that Procurement planning and policies are deemed to provide negative impact on service delivery in the construction of projects. This also presents the fact that Procurement management practices can to some extent influence the success of construction projects if the
practices are not aligned to procurement planning and policies in the organization just as a formality but should be as the correct procedure to guide the procurement team as a whole, therefore it can be safely ascertained that 80.5% of public sector organizations, procurement policies and practices are not fully compliant with the Public Procurement Act of Zambia.

4.5 Respondents views on whether sustainable development can be achieved through access to good Procurement management practices.

Figure 4.5. Respondents’ views on the access to good procurement management practices in order to achieve sustainable development.

Source: Questionnaire (2020)

The figure represents the contribution of 36 respondents with a ‘yes’ response, 2 with a ‘no’ and 3 with a silent answer. From this reflection, it can be said that good procurement management practices can induce sustainable development in the construction of projects in the country. On the hand, the use of e-procurement innovated technology can significantly improve procurement management practices and procurement performance though it was discovered that RDA has not yet embraced the e-procurement technology. This could present a challenge to RDA if the Agency enters into major construction of project with stakeholders already using e-procurement system. The fact that RDA carefully monitors its expenditures, the initial costs might include system implementation cost such as payments for software specialists and staff training. E-procurement system provides Procurement management practices with efficiency and transparency in the construction process.

Additional Findings based on the appendix included herein:

Poor Quality Contract Documents

Some of the forms of agreement were not fully signed and did not even have dates indicating when contractual works where to begin or to be completed. While some of the documents consisted of wrong drawings that were showing a paved road instead of a gravel road which was the initial contract, as well as missing documents making the trail of the entire agreement difficult.

Lack of Drawings and Condition Survey

Drawings and condition surveys for the contracts were in most cases either delayed or not prepared leading to inadequate interventions and unnecessary variations where the contractors did not even know how far to proceed with the works.
Irregular Payments on works not done

There were some cases where no construction works were done and yet payments were made for works not done without proper explanation why the payment was made in the first place.

Inadequate Provisions for Contracts

Adequate funds were not provided in the budget to cover the contracts. This resulted in delayed payments and completion of works.

Late Engagement of Supervising Consultants

Consultants were mostly engaged later than the starting date of the works contract. In this regard part of the contract period were running without supervision leading to poor quality of works and in some cases wastage of resources.

Negotiation Meetings

RDA did not usually hold contract negotiation meetings despite the inconsistencies in the evaluation and poor contract documents, which was discovered to be one major contributing factor to poor delivery of services by contractors.

Poor contract Administration

There were considerable delays in decision making relating to issues raised by consultants/contractors which in some cases led to extension of time and additional costs.

Delayed Payments to Contractors and Consultants

Some Payments to contractors were delayed resulting in interest charges and standing time and if not adressed in good time led to contractors completely abandoning the works.

Irregular Instructions to the Contractors by RDA

In some cases the Agency issued instructions directly to the contractors disregarding the consultants. This affected the proper procedure of how to engage with the contractors. The instructions were mostly related to payments to RDA staff and service of RDA motor vehicles.

Delayed Works

There were very few projects which were completed on time. In most cases the contracts had to be extended and in some cases more than once. There were also cases were RDA instructed the contractors to slow down or stop works because of lack of funds and since in most cases there were no progress reports from supervisors it was hard to determine how much work was still work in progress to enable the agency plan ahead for the completion of the works.
Supervision Funds and Compliance Monitoring Assessments

In cases where the supervision of the contracts was done by RDA, supervision funds were paid through the contractor thereby raising issues of objectivity. Additionally, the study revealed that most of the compliance assessments conducted by Zambia Public Procurement Authority covering areas such as procurement procedures, availability of resources, staff adequacy, structure of the procurement unit, Procurement Committee composition, readiness to use the Electronic Government Procurement (e-GP) System did not include RDA and it was evident that the agency has not yet incorporated e-GP in the procurement system.
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The aim of this research was to investigate and assess the procurement management practices and their impact on the success of construction projects using Road Development Agency (RDA) as a case study. This chapter finalizes the study by presenting the conclusion and recommendation.

5.1 Conclusion

The findings of the study revealed that all the variables that were investigated were very significant and can be used to predict the impact of construction projects in the country. It was clear that RDA has a fertile platform for procurement management practices and that the Agency provides a solid benchmark for sustainable development in the construction industry.

It was also evident that the Agency lacked an effective procurement system in that a number of procurement practices were not followed according to the Zambia Public Procurement Authority standards in areas such as accountability of funds, evaluation committees of contracts which were inconsistent in some cases as well as minimal efficiency in terms of projects completion, duration and monitoring.

The research also discovered that certain ethical issues were compromised during execution stage of some projects such as poor contract administration among the stakeholders in relation to contracts decision making that led to additional costs and delay in project completion period.

The study also explained the views of stakeholders on the influence of procurement policy and procurement planning on construction of projects delivery. The respondents categorically believed that to some extent this could influence the success of construction projects if the procurement policies are not aligned with acceptable procurement standards.

The study also revealed that procurement management practices can potentially affect the successful development of construction projects in the public sector if project monitoring system is not strong. The study also found that e-procurement system was not incorporated for construction projects by RDA and to a large extent this could be taken as a challenge for the Agency when it engages business partners already using e-procurement.
5.2 Recommendation

- Based on the findings from this study, it can be recommended that for Procurement Management Practices to contribute to successful project development, it must be tailored to meet the expected project completion time frame and Evaluation of initial project costs and benefits of both the public and private sectors.
- There must be critical thinking before a decision is arrived at to go ahead with a project in order to avoid it stalling at some point.
- There must be a strong and consistent relationship between the agency and the suppliers of construction materials to avoid not receiving materials should there be a delay in payment from the agency.
- The agency should look into their entire procurement practices and ensure that there is full participation of the procurement department from the start of the project, to the planning, decision making, implementation and completion.

5.3 Suggestion for Further Study
The current study recommends that further research could be done on the role of central Government in e-procurement and the extent of its involvement in the Agency’s Procurement Management Practices.
REFERENCES


APPENDIX I: RESEARCH QUESTIONNAIRE

Dear respondent,

This questionnaire has been formulated for the purposes of acquiring relevant information on the topic under study, “A Critical Analysis of Procurement Management Practices and their impact on the success of construction projects—Case study of Road Development Agency”. The information you will provide is strictly for academic purposes and as such shall be treated with utmost confidentiality.

**INSTRUCTIONS**: The questions in this questionnaire have YES/NO …as possible answers. Tick the one you consider appropriate and where it says state or specify please briefly do so.

1. Sex: Male ( ) Female ( )

2. Indicate your designation ______________________________________________________

3. Do you think Road Development Agency (RDA) has a role to play in developing the country?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

4. Do you think procurement practices are responsible for performance of construction projects in Zambia?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

5. Do procurement management practices influence the success of construction projects?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
6. Does procurement planning play a major role in the achievement of effective and efficient construction projects?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

7. Does sustainable procurement practice influence the success of construction projects in Zambia?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

8. Does RDA monitor its procurement expenditure?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

9. Is procurement performance appraisal effective at RDA in procurement Department?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

10. Is procurement Management system at RDA efficient?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

11. Is the performance of procurement direct reporting line effective?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

12. Does procurement system follow procurement ethics and comply with ZPPA regulations?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>
13. Does RDA use E-Procurement for construction projects?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

14. Does E-Procurement present challenges to RDA procurement practices?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</table>

15. Does procurement management system at RDA require any improvements?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

16. Are supervising consultants from RDA always on sight from onset of works till completion?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
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<tr>
<td></td>
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</table>

17. Do all RDA contracts contain complete information for contractors?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

18. Does RDA’s contracts contain all the Drawings accordingly and Condition Survey?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

19. Are RDA’s contracts well documented for contractors to follow and be guided?
20. Are there payment agreements with RDA from on start?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

21. If the answer was No, explain why?

22. If the answer was yes, is the agreement on payment followed by RDA?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

23. Does RDA issue instructions to contractors?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

24. If the answer is ‘No’ above, does that affect the contractors?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

25. Does RDA contribute to delay in completion of works?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Not Sure</th>
</tr>
</thead>
</table>

“Thank you for your co-operation”