



INFLUENCE OF PROCUREMENT PROCESSES ON PERFORMANCE OF PUBLIC ENTITIES IN RWANDA

A case of Development Bank of Rwanda (BRD)

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ABSTRACT

The main objective of this study was to assess the influence of procurement processes on the performance of public entities in Rwanda taking BRD as the case of study. The study was guided by the following research objectives: to assess the effect of contract management on procurement performance in BRD, to investigate the effect of records keeping management on procurement performance in BRD, to establish the effect of ICT usage in procurement process on procurement performance in BRD. This study had the following research questions to obtain information for the specific objectives: What is the effect of contract management on procurement performance in BRD? What is the effect of records keeping management on procurement performance in BRD, what is the effect of ICT usage in procurement process on procurement performance in BRD? The target population was 71 respondents at BRD headquarter office. Data was mainly collected through self-administered questionnaires. In analyzing the data, both descriptive and inferential analyses were applied. Document review, questionnaire, interview, and observation

methods were used to collect data, while descriptive statistics and content analysis were applied for data analysis. SPSS: Statistical Package for Social Sciences was used in this research study.

Key Words: procurement processes, performance of public entities

CHAPTER ONE: INTRODUCTION AND BACKGROUND INFORMATION

1.0 Introduction

This chapter covers the background information of the study, statement of the research problem, research objectives, research hypotheses, significance and scope of the research study and study organization

1.1 Background to the study

In this period of globalization, procurement has remained a vital function of any organization, whether private or public, due to its significant role in helping to achieve their objectives (Moffat & Mwangangi, 2019; Weeks & Namusonge, 2016). Public procurement has been enticing attention

from many stakeholders, scholars, policymakers, and academicians all over the world (King'oo & Muli, 2019). All procurement process regardless of their complexity follows a laid down procedure that requires proper management to ensure value for money and uphold the integrity and sanctity of the purchasing process as public procurement processes have enormous importance as it accounts for a substantial part of the economy globally (World Bank, 2018).

The procurement process entails the various activities/functions to complete the assignment. The procurement process may play a significant role in facilitating the overall success and performance of an organization because of acquiring goods, works, or services with the attainment of value for money if practiced well. According to Knight et al. (2012).

South Africa being one of the economic giants in Africa has a high level of recognition of public procurement policies, and aware of sustainable public procurement, preferential procurement legislation which deals with criteria of procurement and that it had developed and implemented environmental (or green) procurement policies (Ambe & Badenhorst-

Weiss, 2012). This based on the prior experience of policies that enhance the efficiency of procurement within the public and corporate sectors. Rwanda also saw the importance of regulating public sector procurement processes by coming up with Rwanda Public Procurement Authority (RPPA).

The Government of Rwanda has realized the importance of public procurement to the economic development of the country and its contribution to poverty reduction as well as good governance through different engaged consultants to study country procurement system (Mwandobo, 2013). To improve procurement performance, the Ministry of finance and economic Planning has introduced a unit, namely, technical audit unit and government asset management unit responsible for monitoring performance of construction projects and verification of assets acquired by public entities, respectively (RPPA, 2019)

1.2 Statement of the problem

Public sectors face numerous challenges in the procurement process, which results in non- attainment of value for money. More than 70% of the government budget is spent in the procurement process; however, more than half of this budget is lost due to

improper procurement process, absence of appropriate procurement plan, failure to use appropriate standard documents, and the incompetence in the execution of procurement process. RPPA acknowledges that many public sectors are not managing the procurement process properly and for many procurement processes almost “ends” upon award of contracts. A lot of efforts are spent up to the point of bidder selection without considering that the procurement process spans a life cycle from identification of the need, through the selection of suppliers, to post-contract award management, including disposal (RPPA, 2018).

This study titled the influence of the procurement process on organizational performance in Rwanda public institutions is guided by the agency theory, record management theory and technology acceptance model theory. The theory of agency supports objective one, record management theory supports objective number two, and the technology acceptance model theory supports the use of ICT in the procurement process.

Regardless of the various reforms and effort by the governments of developing countries, like Rwanda and effort of development

partners like World Bank to improve performance of the procurement function such as contract management, tendering procedure, records management etc., public procurement is still marred by shoddy contracts, poor quality goods and services (Kakwezi & Nyeko, 2019). Some scholars indicate that delayed implementation of recommended performance standards issued by regulatory organs such as RPPA has resulted in unnecessarily high operation costs, weak coordinated activities, and failure to attract and retain experienced and skilled personnel in the procurement positions, thus affecting the performance in public sector organizations (Amayi & Ngugi, 2013; Atkinson, 2006).

Odhiambo and Kamau (2003) noted that developing countries in Africa such as Rwanda have failed to achieve performance and economic development due to poor management of the procurement system which is characterized by several challenges including: heavy clogging of tender request and attendant bureaucratic delays; inefficiency; poor record-keeping management, poor supervision of contracts, corruption; and lack of transparency and accountability (URT, 2018).

The CAG report for the financial year ended 2018/2019 also revealed that the procurement process in public sectors observed several weaknesses that impacted the procurement performance such as the delivery and completion of the contract negatively. Poor contract management was identified as one of the challenges in the procurement process, for instance, 45% of the contracts performed in different public entities lacked important contract documents, and some contained noncontract documents not only that, there were many entities which failed to liquidate damages applied for delayed contracts. Ntayi et al. (2009) observes that millions of taxpayers 'money get wasted in the procurement process.

For instance, the Kirehe community-based watershed management project is one of the public project which didn't finish on time due to poor procurement process during contractor selection, where even Rwf3.7 billion was not counted for during the Auditors General visit. As a result, this ended in selecting a contractor who is not financially capable.

According to Shiundu and Rotich (2014), procurement processes are affected by several factors; therefore, there is a need to

be addressed for the better performance of public entities. However, the previous studies like Mentzer et al. (2001), Ngoto and Kagiri (2016), and Guoping and Hanane (2017) have focused more on supply chain management as a whole and not the procurement process, procurement processes area focal point of this study.

Under this phenomenon, the issues affecting procurement processes and performance for government agencies and institutions are still a challenge for the sustainable growth of procurement public sector (Kakwezi & Nyeko, 2019). Despite the studies carried out on the influence of procurement performance in the public entities (Kawina, 2019; Mutai & Okello, 2016; Mwasikili, 2020), few studies have been carried out to examine the influence of procurement process in the public entities in Rwanda such as Kemhe (2014); therefore, the researcher thought that it is worthwhile to evaluate the influence of procurement process in BRD the Rwanda public entity.

1.3 Objective of the study

1.3.1 General objective

The main objective of this study was to assess the influence of procurement processes on performance of public entities in Rwanda.

1.3.2 Specific objectives

- 1) To assess the effect of contract management on procurement performance in BRD.
- 2) To investigate the effect of records keeping management on procurement performance in BRD.
- 3) To establish the effect of ICT usage in procurement process on procurement performance in BRD.

1.3.3 Research Questions

- 1) What is the effect of contract management on procurement performance in BRD?
- 2) What is the effect of records keeping management on procurement performance in BRD?
- 3) What is the effect of ICT usage in procurement process on procurement performance in BRD?

CHAPTER TWO LITERATURE REVIEW

2.0 Introduction

This chapter contains the definitions of the key terms, review of the literature relating to the procurement process and organizational performance, also theoretical review,

empirical review, and conceptual framework.

2.1 Definition of the key terms

2.1.1 Procurement

Procurement means buying, purchasing, renting, leasing or otherwise acquiring any goods, works, services by a procuring entity spending public funds on behalf of the ministry, department or regional administration of the Government or public body and includes all functions that pertain to obtaining of any goods, works, or services including a description of requirements, selection, and invitation of tenders, preparation and award of contracts (Gathua, 2019). For the purpose of this study, this definition of procurement was adopted and used.

2.1.2 Procurement processes

The procurement process means successive stages in the procurement cycle, including planning, choice of procedures, measures to solicit offers from tenderers, examination, and evaluation of those offers, award of contract, and contract management (Mwandobo, 2013). In other words, the procurement process spans a life cycle from identification of the need, through the selection of suppliers, to post-contract award

management, including disposal. The study used the same views in discussing on the procurement process. A definition of Mwandobo, (2013) for procurement process has been used in this study.

2.1.3 Public Procurement

Public procurement means procurement made by a procuring entity using public funds to acquire goods, works, and services required to satisfy specific needs in the right quantity, time, quality, and price (RPPA, 2011). It involves the management of the acquisition of goods, works, and services to achieve value for money through a professional, auditable, and transparent framework (Kaula, 2018).

2.1.4 Contract

A contract is defined as an agreement enforceable by law. Furthermore, the contract law stated that to be enforceable by law, an agreement must have the following essentials all agreements are contracts if they are made by the free consent of parties competent to contract for a lawful consideration with a lawful object.

2.1.5 Contract Management

Contract management can be defined as a process that involves those activities

performed by a procuring entity (PE) after a contract has been awarded to determine how well the PE and the contractor performed to meet the requirements of the contract. It encompasses all dealings between the PE and the contractor from the time the contract is awarded until the work has been completed and accepted or contract terminated, payment has been made. Dispute has been resolved (Mlinga, 2009). This study adopted this definition provided by Mlinga, (2009).

2.2 Theories guiding procurement processes in the public sector in Rwanda.

2.2.1 Agency theory

The agency theory –from either classical or neoclassical perspectives– provides contributions to procurement activities in various sectors (Philip, 2015). Agency theory has been applied to various activities associated with procurement including, outsourcing and supply chain collaboration. The important assumptions underlying agency theory are that the potential goal conflicts exist between principal and agent, each party acts in its own self-interest, information asymmetry frequently exists between principles and agents, agents are more risk-averse than the principle and efficiency is the effectiveness criterion.

In procurement, the top management herein assumed to be the principal contracts the procurement process to the procuring entity referred to as the agent to carry out the operation. The control of the process is the most critical part of this study; hence the agency theory forms one of the best theories to analyze the whole concept of procurement in the public sector (Philip, 2015).

2.2.2 Record Management Theory

Michael Buckland developed the record management theory in 1994. The theory perceived record management in professional and intellectual eyes as it plays a more significant role in the achievements of organizational goals. Buckland added that records management is a source of organization performance. Procurement records and documentation may serve organizational performance when all procurement processes are recorded and kept. The Public Procurement Act of 2011 provided that records may be generated as part of the procurement process, and it emphasizes maintenance of procurement records for not less than five years.

2.2.3 Technological acceptance model (TAM)

The technological acceptance model (TAM) theory is one of the prominent theories pioneered Fishbein and Ajzen (1975) derived from the theory of reasoned action (TRA). The TRA assumptions rely on the belief and intention to use. The individual behavioral intention to use the new technology like e-procurement is influenced by the attitude which impacts the actual behaviors for the use of the technology.

2.2 Empirical literature review

The empirical review is formulated from the contribution of other scholars towards the improvement of the procurement exercise. All these studies are found to be related to the procurement process, especially in public entities.

2.2.3 Procurement process in public entities

Many organizations spend a lot of money on the procurement process, including purchasing, storage, transportation, and relationship management. Procurement processes have increasingly received recognition due to its importance to the development of an organization (Mokogi et al., 2015). The procurement process needs to be on the side of achieving the economic, political, and social goals of the public sector (Bayo, 2016).

2.2.4 Contract Management and Procurement Performance

According to Yegon (2018) contract management entails the process of efficient and systematic execution of a contract to minimize risks while achieving the project objectives (Kimundu & Moronge, 2019). Mokogi et al. (2015) added that contract management is the process that enables the contractual parties to meet their obligations. Effective contract management lies in assessing and fulfillment of contractual obligations (Kanchana et al., 2018)

2.2.5 Record Keeping Management and Procurement Performance

Records keeping are important because it enables the organization to make the right decision based on evidence, and it supports the organization to fulfill its objectives since it assists the organizations, governments in making timely, accurate, and relevant decisions towards sustainable social-economic development. Organizations without proper and effective record-keeping systems shall not achieve good performance and eventually creates a lot of unnecessary problems and disorder in regards to referred procurement transactions conducted either previous or recently by a concerned organization (Aladejebi & Oladimeji, 2019).

2.2.6 ICT usage and Procurement Performance

The evolution of technological advancement had been noticed since the 20th when the use of information technology was experienced worldwide (Revenio & Amur, 2017). The emerging of information technology in various sectors was due to continuous advancement and response to daily dynamics, such as a highly competitive business environment (Abdullahi et al., 2019). Based on the importance of ICT usage, various governments and donor agencies have embarked on the effort to boost the development of ICT (Rotich & Okello, 2015; Waigwa & Njeru, 2016). The advancement of ICT has influenced many companies to adopt e-procurement to satisfy their customers while increasing competitive advantage

2.5 Research Gap

Regardless of the efforts made by the public entities to rationalize public procurement processes, they still have a desire to explore many aspects of procurement processes in regards to the public organization because poor performance has been observed frequently. Hence, this provides an opportunity for undertaking this research, which aims to fill the knowledge gaps which

were left by other scholars in regards to the procurement processes in the public entities in Rwanda by assessing the influence of procurement processes on the performance of the public entities. The research gap in the leadership style whereby all the public sector and institution use democratic leadership style while in BRD use an autocratic leadership style. Here the researcher wanted to find out if the procurement process is applicable in that leadership style.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter describes the methodological aspects used in this study. It includes the research design, area of the study, target population, sampling frame, sampling techniques used, sample size, data collection instrument, data analysis, and handling of validity and reliability issues, research budget, time frame, and limitations of the study.

3.1 Research Design

The research design entails the methods and procedures adopted in a scientific research study. In other words, a research study is like a road map to reach the destination (Creswell & Creswell, 2017). This study

adopts a quantitative research design. In alignment with quantitative design, a survey method will be used in this study involving respondents from BRD, suppliers, contractors and service providers who are currently in a contract of supplying goods, service and work BRD or they have supplied goods, service and works in the past 12 months. The survey method was conducted by giving all respondents a set of questionnaire designed to answer the research questions.

The choice of this method is twofold: first, was an appropriate method for getting quantitative information that can be analyzed through statistical analysis, and secondly, a survey is an appropriate method for validating the causal effect relationship (Ramli et al., 2009).

3.2 The Study Area

The study was conducted at BRD located in Kigali City, Nyarugenge sector. The rationale for selecting BRD is since it is one of the public entities facing challenges in implementing procurement functions, and it is an entity under the BNR.

3.3 Targeted Population

The population is defined as all members of a real or hypothetical set of people, events, or objects of a defined group to which a

study wishes to generalize the results of the research study (Kothari, 2012). The population of interest in this study included the top management, employees, suppliers, and other stakeholders involved in procurement processes. A total number of 71 people were targeted as a study population from a particular department with information concerning this study. Since the population was less than 100 the researcher decided to consider the entire population.

Source; Researcher 2022

3.4 Sampling Technique

The researcher used probability sampling techniques. The researcher has decided to use probability sampling because each element in the population have an equal chance of being selected. Probability sampling is appropriate sampling techniques as this study falls under the quantitative continuum intended to test the causal relationship between variables (Sridhar, 2010).

3.4.1 Simple Random Sampling

This technique assures that each element in the population possess an equal chance to appear in the sample size. Simple random sampling allows the study to select the sample size without any bias. The sample

was the representative of the whole population. The choice of this technique is based on the assumption that each target population possesses the same/similar characteristics (Kothari, 2012).

3.4.2 Stratified Sampling

According to Rossi et al. (2013), stratified sampling refers to a type of probability sampling which divides the populations into different strata based on heterogeneous characteristics. Due to the nature of this study, the researcher used a stratified sampling as one of the types of probability sampling method as the population involved in this study possesses heterogeneous characteristics and disperse in the area. Based on stratified sampling, the population of this study will be divided into two main strata (Christensen et al., 2011). The first strata involved respondents from BRD, and the second strata involve suppliers, contractors, and service providers of BRD. Each category of the strata is represented in the sample size drawn from each stratum. The proportion of the size of each stratum is determined based on other factors including experience needed in this study.

3.5 Types and Sources of Data

3.5.1 Primary Data

Primary data are defined as the first-hand information collected through questionnaire, observation, experiment, or the interview method (Saunders et al., 2009). Each of these methods has advantages and disadvantages. According to Malhotra (2010), the final decision on the choice of the method for collecting primary data is determined by the nature of the study, and accuracy desired and a financial resource available for the study, and the time frame of the study. For this study, primary data was gathered through a questionnaire instrument that was administered to different respondents directly at BRD, and other stakeholders like suppliers, contractors, and service providers as stipulated in sampling frame purposively to get first-hand information concerning the influence of procurement processes on performance in BRD.

3.6 Data collection method and instrument

3.6.1 Questionnaires

The questionnaire techniques of data collection are quite popular, and it is advantageous in data collection (Mwandobo, 2013). The design of the questionnaires as an instrument of extracting information from respondents helps the researcher to scrutinize and obtain necessary information

relating to the study. This technique covered all the specific objectives of this study to collect information relating to the procurement process and performance in BRD. The questionnaire is created using appropriate questions improved from related reviews, and individual questions are prepared. A 1-5points Likert scale was used to determine the level of agreement/disagreement against the statement, which means 1strongly agree,2 agree,3 neutrals,4 disagree,5 strongly disagree. These techniques helped the researcher in such a way that they can catch the relevant information from the field to help the study in the process of data analysis.

3.7 Data Reliability and Validity

The researcher carried out a pre-test of a questionnaire to ensure the reliability and validity of the data collection instrument. The researcher shared a questionnaire to his colleagues in the department of procurement and other procurement professionals. The researcher takes into consideration their comments and observations. This stage aims at revealing the suitability of the methods and instruments employed by this study. This technique consequently leads to early detection of errors and distortions in the

questionnaire to correct them in the process (Drost, 2011).

3.8 Data presentation methods

Descriptive statistics for the background information was presented using frequency tables, pie charts, and bar charts.

3.9 Limitations of the study

Some respondents might be unwillingness to participate in the study due to fears of victimization or exposure of personal information. They were however informed that their information will be kept confidential, and that their names will never be recorded to maintain privacy.

3.10 Ethical consideration

Ethical issues were taken into consideration in this study. The researcher informed the respondents on the intention of the study or the purpose of the study, together with the importance of this study to their respective institutions (Malhotra, 2010). Also, to ensure ethical consideration, the information to be gathered by the researcher from the respondents will only be used for academic purpose. Permission to carry out this study will be sought from University of Kigali and the authority in BRD.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

This chapter comprises data analysis, findings, interpretation, and discussions. The analyzed data was arranged under themes that reflect the research objectives .

4.6 Regression Analysis

The regression model was employed to determine the effect of contract management, record keeping, and ICT usage on procurement performance in BRD. The regression analysis enables the researcher to validate the hypothesis proposed in chapter two.

4.6.1 Effect of contract management on procurement performance

In this section, regression analysis was used to assess the effect of contract management on procurement performance in BRD. The overall regression results are shown in Table 4.9.

A) Model Estimate

The overall model estimate in table 4.18 indicates that the regression coefficient $\beta = 0.975$ at $p = 0.000$ and t -value of 3.584. Furthermore, the estimate revealed that all two parameters are statistically significant with procurement performance. Compliance with contract condition has positive effects on procurement performance with $\beta = 0.173$, $t = 1.778$, and $p = 0.080$. Contract documentation also have significant positive

effects on procurement performance with $\beta = 0.277$, $t = 2.700$, and $p = 0.009$. Based on the regression results, all two factors of compliance with contract conditions and contract documentation have effects on procurement performance.

Table 4.11. Regression results of contract management and performance

Dependent Variable	Independent Variables	Beta coeff	Std. Error	t-value	sig
Procurement performance	(Constant)	0.975	0.272	3.584	0.001
	Compliance with contract condition	0.173	0.097	1.778	0.080
	Contract documentation	0.277	0.103	2.700	0.009

In general, the study found a significant relationship between procurement contract management and procurement performance. These findings are in line with the study Yegon (2018), who observed that compliance with contract conditions has a significant relationship with the procurement performance in the organization. In a similar vein, Yegon (2018) observed that contract documentation have a significant relationship with the procurement performance in public organizations. The

findings of this study align with the agency theory presented in chapter three. The assumption of agency theory describes the contract as dyadic relationship managed by two parties (contractor as an agent and buyer as the principal). In agency theory, the theory emphasizes on formal contract which involves documentation between the agent and principal and adherence to condition laid down in the formal contract. Therefore, the study findings link with this theory.

4.6.2 Effect of record-keeping management on procurement performance

In this part, regression analysis was used to investigate the effect of records keeping management on procurement performance in BRD. The overall regression results are shown in Table 4.12.

c) Model Estimate

The overall model estimate in table 4.13 indicates that the regression coefficient $\beta=1.803$ at $p =0.000$ and t-value of 6.801. Furthermore, the estimate revealed that all two parameters are statistically significant with procurement performance. Availability of procurement records has negative relationship with procurement performance whereas the $\beta = -0.302$, $t = -2.045$, $p = 0.045$. The Organization keep records have significant positive effects on procurement

performance with $\beta = 0.455$, $t = 3.350$, $p = 0.001$. Based on the regression results, all two factors have a relationship with the procurement performance at BRD

Table 4.13. Regression results of record-keeping management and performance

In general, the findings of this study are inconsistent with Namukasa (2017), who indicate that procurement records management had a significant effect on procurement performance. Namukasa (2017) revealed a positive relationship between records accesses and procurement performance in organizations and also found a strong association between records creations, records maintenance, and procurement performance. Similar findings can be found in the study of Mohamed et al. (2018). They observed a positive relationship between record access and records keeping in public institutions in Rwanda to procurement performance. Similarly, the findings of this study align with record management theory which emphasize on records management as determinants of organizational performance. The theory posit that records should be stored in organization as a reference of the activities conducted in past. Therefore, the study findings link with this theory.

4.6.3 Effect of ICT usage in the procurement process on procurement performance

In this part, regression analysis was used to establish the effect of ICT usage in the procurement process on procurement performance in BRD. The overall regression results are shown in Table 4.22.

Model Estimate

The overall model estimate in table 4.16 indicates that the regression coefficient $\beta=1.035$ at $p =0.000$ and t -value of 4.298. Furthermore, the estimate revealed that one parameter is statistically significant procurement performance. Skills of procurement personnel has positive effects on procurement performance with $\beta = 0.488$, $t = 5.093$, $p = 0.000$. Applicability of e-procurement has no significant effects on procurement performance with $\beta = -0.070$, $t = -0.754$, $p = 0.453$. Based on the regression results, the skills of procurement personnel are good predictors and have positive effects on procurement performance. In contrast, the applicability of e-procurement does not affect procurement performance.

Table 4.16. Regression results of ICT usage and performance

Dependent Variable	Independent Variables	Beta	Std. Error	t-value	Sig
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Procurement performance	(Constant)	1.035	0.241	4.298	0.000
	Skills of procurement personnel	0.488	0.096	5.093	0.000
	Applicability of e-procurement	-0.070	0.092	-0.754	0.453

The findings of this study concurred with the study of Wawuda and Mwangangi (2018). They revealed that there is a positive relationship between the technical knowhow on ICT issues for procurement personnel and procurement performance in terms of cost reduction and timely delivery. On the other side, the study findings indicate that there is no relationship between the applicability of e-procurement and procurement performance at BRD. This finding is contrary to many previous studies that revealed a positive correlation between the applicability of e-procurement and procurement performance in an organization. For instance, Chang et al. (2013), in his study, observed that the adoption of e-procurement has a positive influence on the procurement performance of the organization. Vaidyanathan and Devaraj (2008) revealed a strong influence between e-procurement and delivery performance in a public organization. Similar findings can be observed in the

study of Singer et al. (2009), Carabello (2001), and Tai et al. (2010). This study objective was guided by technological acceptance model theory which posits that the behavior, and skills of staff on the technological influence the possibility of adoption and use of the technology in the organization. To sum up, the study results link with this theory.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter is divided into four parts. The first part describes the summary of the study; the second part presents the conclusion of the study; the third part provides the conclusion and the recommendations of the study basing on the findings presented in chapter four and finally and the suggestions of area for further study.

5.2 Summary

The main objective of this study was to assess the influence of procurement processes on the performance of public sectors in Rwanda. The study involves three specific objectives which including (i) to

assess the effect of contract management on procurement performance in BRD, (ii) to investigate the effect of records keeping management on procurement performance in BRD and (iii) to establish the effect of ICT usage in procurement process on procurement performance in BRD. Theoretically, the study involved three main theories that guide the entire research; those theories include Agency theory, Record Management Theory, and Technological acceptance model. The conceptual framework was developed to reflect the specific objectives mention in chapter one. Both dependent and independent variables are stipulated to show the relationship.

Primary data was collected using a questionnaire, whereas 80 questionnaires were administered to respondents in which all 71 questionnaires were gathered, which make a response rate of 88.8%. Data were analyzed using Statistical Package for Social Science (SPSS) version 25 for quantitative analysis. All variables were checked for reliability and validity requirements using Cronbach alpha, composite reliability, and average variance extracted (AVE). All variables meet the required threshold stipulated in previous literature of multivariate analysis like the study of Hair

et al. (2006), Hair et al. (2009), and Creswell and Creswell (2017). Descriptive statistics of mean, standard deviation, and standard error were used for preliminary analysis.

5.2.1 Effect of contract management on procurement performance

For the first objective, the findings of this study indicate that there is a significant and positive effect of contract management on procurement performance in BRD. The regression results show that compliance with contract conditions is a significant and positive predictor of procurement performance, whereas the results indicate a standardized coefficient of 0.173 and stand error of 0.097. The t-value was 1.778, whereas the p-value was .080. This suggests that compliance with contract conditions was significant at $p < 0.1$. Similarly, the regression results show that contract documentation is a significant and positive predictor of procurement performance, whereas the results indicate a standardized coefficient of 0.277 and stand error of 0.103. The t-value was 2.700, whereas the p-value was 0.009. This shows that the contract documentation was significant at $p < 0.05$.

5.2.2 Effect of record-keeping management on procurement performance

For the second objective, the regression results show a mixed result. In contrast, the availability of procurement records was a significant, negative, and powerful predictor of procurement performance compared to organization keep records which were found significant and positive predictor. The regression results' availability of procurement records indicates the standardized coefficient of -0.302 and standard error of 0.148. The t-value was -2.045, whereas the p-value was 0.045. This suggests that the Availability of procurement records was significant at $p < 0.05$. The regression results organization keeps records indicate a standardized coefficient of 0.455 and a standard error of 0.136. The t-value was 3.350, whereas the p-value was 0.001. This suggests that the results organization keep records was significant at $p < 0.05$.

5.2.3 Effect of ICT usage in the procurement process on performance

On the side of the third objective, the regression results show the skills of procurement personnel were a significant, positive, and powerful predictor of procurement performance. At the same time, the applicability of e-procurement was

found non-significant to procurement performance. The regression results of skills of procurement personnel indicate a standardized coefficient of 0.488 and a standard error of 0.096. The t-value was 5.093, whereas the p-value was .000. This suggests that the skills of procurement personnel were significant at $p < 0.01$, while the standardized coefficient of applicability of e-procurement was -0.070 and standard error of 0.092. The t-value was -0.754, whereas the p-value was 0.453 and above the threshold of 0.05.

5.4 Conclusion

In conclusion, based on research findings and above discussion, this study revealed that there is a significant influence of procurement processes on performance in Rwanda public sector using the case study of BRD. This is evidenced in the regression analysis conducted to assess the effects of individual criteria used in the procurement processes, on the first objectives where two criteria of contract management (compliance with contract condition and contract documentation) were found very useful in the prediction of procurement performance. On the other hand, both items used in record keeping was found as a crucial criterion and

having a significant influence on procurement performance. However, the organization needs to be cautious as the availability of procurement records if not preserved well and strictly could harm the performance as some unethical employees can leak the confidential information to key stakeholders like suppliers and jeopardize the procurement process and affect the performance. Finally, the third objectives were to evaluate the effect of ICT usage in the procurement process on performance, where two mini criteria were assessed to determine their effects on procurement performance. The skills of procurement personnel were found to have a significant, positive, and powerful influence on procurement performance while the applicability of e-procurement was found non-significant to procurement performance. The justification of non-significant is the low adoption and usage of e-procurement in a public organization in Rwanda.

5.6 Recommendations

Emanating from the above findings and discussions the researcher provides the recommendations to BRD where this study was conducted as follows:

First, the importance of contract management in the procurement process. The researcher recommends that BRD ensure effectiveness in contract management as one of the determinants for procurement performance in an organization. Second, the importance of record-keeping in the procurement process. The researcher recommends BRD to comply thoroughly with laid procedures and procurement legislation on procurement record keeping.

Third, the role of ICT use in the procurement process. The researcher recommends that BRD to start embarking and implement e-procurement in public procurement

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