



# Procurement Planning & the Rwanda Biomedical Centre (RBC)

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## Abstract

This study analysed the effect of procurement planning on the performance of public institutions using the case illustration of the Rwanda Biomedical Centre (RBC). The RBC is one of the public institutions in Rwanda with a mandate to promote health in the country. However, the institution has been marred by poor procurement practices. For example, the Auditor General's report (2015) indicated some inconsistencies in the procurement process at the RBC. Likewise, a national daily, the *New Times*, reported that RBC was the least performer. In light of these, the study set out to achieve four main objectives: to examine the significance of a proper needs assessment on RBC's performance; establish the effect of procurement cost estimation on RBC's performance; assess the effect of quality specification of goods on RBC's performance; and establish the strategies for addressing the challenges faced in the procurement planning practices at RBC.

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## 1. Introduction

The Rwanda Biomedical Centre (RBC) is the nation's central health implementation agency. Established in 2011 through a merger of fourteen key health institutions, RBC strives to improve the health of the Rwandan population by providing high-quality, affordable, and sustainable health care services. It seeks to accomplish this mandate through the implementation of preventative, rehabilitative, and curative health interventions. RBC also conducts scientific research, provides diagnostic services, and implements innovative health interventions to protect the nation against diseases and other health threats. The mission of the entity is to promote high-quality, affordable, and sustainable health care services to the population through evidence-based interventions and practices guided by ethics and professionalism. Its broader vision is *"to become a Centre of Excellence for the prosperity of the country, ensuring quality health service delivery, education, and research"*. The Board of Directors of the Rwanda Biomedical Centre was appointed by the Cabinet Decision in the cabinet meeting held in 2016. Interestingly, RBC also has a strong gender balance in its Senior and Middle management as at the time of writing this article.<sup>1</sup>

This study analysed the effect of procurement planning on the performance of public institutions using the case illustration of the RBC. The RBC is one of the public institutions in Rwanda with a mandate to promote health in the country. However, the institution has been marred by poor procurement practices. For example, the Auditor General's report (2015) indicated some inconsistencies in the procurement process at the RBC. Likewise, a national daily, the *New Times*, reported that RBC was the least performer. In light of these, the study set out to achieve four main objectives: to examine the significance of a proper needs assessment on RBC's performance; establish the effect of procurement cost estimation on RBC's performance; assess the effect of quality specification of goods on RBC's performance; and establish the strategies for addressing the challenges faced in the procurement planning practices at RBC.

Whereas previous studies have always looked at procurement planning and its effect on the performance of public institutions, not all factors have been dealt with within the institutions of RBC in Rwanda. The aim of the Public Procurement Regulations of 2012 was to promote fairness, accountability, and procedures in procurement in public institutions with the main aim of ensuring the efficient use of public funds. However, studies reveal that even after the enactment of the Regulations, there are losses of public funds that can be attributed to public procurement. Further, studies indicate dissatisfaction among stakeholders brought about by loopholes left by the Regulations, which may be used by dishonest people to make the process inefficient.

## Statement of the Problem

Procurement planning is an essential component of public finance that has an impact on many other components and thus affects the overall efficiency and effectiveness of an organisation's performance (Basheka & Mugabira, 2008). Despite the important role played by the procurement system, some government institutions in Rwanda still practice lengthy bureaucratic procurement processes in acquiring goods and services, corruption, and discriminatory awards of tenders, hence some government projects have failed. The Rwanda Biomedical Centre (RBC) is one of the public institutions in Rwanda that is mandated to promote health in the country. However, the institution has poor procurement practices. For example, The New Times (2017) reported that RBC was the worst performer. The Auditor General's report (2015) indicated some inconsistency in the procurement process of the Rwanda Biomedical Centre. The researcher believes that poor procurement planning has an effect on the performance of RBC. However, there is limited research that has been conducted on this institution in regard to its procurement planning, practices, and how these functions affect its performance. It is in light of this research gap that this study seeks to explore how procurement planning affects the performance of RBC.

## Significance of the Study

The findings of the study provided insight into the current problem of improving public institutions' performance. Procurement planning in public institutions is expected to assist all public organizations in coming up with policies in their respective entities to overcome the problem. The policy will help improve the quality of procurement through cost-cutting purchases, reduced delivery periods, quality attainment, and efficient and effective processes. The poor planning concept has given public institutions a poor public image because of misplaced priorities of funds due to a lack of serious plans in the public procurement institutions. Therefore, the study will enable the sector to prioritize procurement planning in every financial year, leading to quality procurement and improved performance. The study was necessary to assist central and county governments in achieving their objectives through planned procurement. If public institutions emphasize and practice procurement planning, they stand a chance of receiving more funds from donors or private sector stakeholders who can step in to cater for deficits courtesy of inadequate funding by the central government, thus resulting in improved organizational performance.

## 2. Literature Review

In our review of the literature on the subject matter, we draw extensively from about five key sources (Thomson, 2004; Gelderman, et al. 2006; De Boer and Telgen, 2008; Basheka and Bisangabasaija, 2010; Kakwezi and Nyeko, 2010) in chronological order.

Thomson (2004) asserts that the contribution of procurement planning in facilitating efficient and effective service delivery in public sector organizations is generally undisputed in both developed and developing countries. Its contribution can be at both central and local government levels of public sector management. This study revealed a significant positive relationship between procurement planning and performance in local government procurement systems. These results

are compared to international research findings, and suggestions are offered for management, policymaking, and future research. Gelderman, et al. (2006) contend that specification is an integral part of the procurement function. Without a quality specification, the process can be filled with pitfalls and obstacles for the purchasing department. He lists the characteristics of a good specification as follows: identifies the minimum requirements of the end user, allows for a fair and open procurement process, provides for testing/inspection to ensure the goods/services received meet the standard set forth in the specification, and provides an equitable award at the lowest possible cost.

De Boer and Telgen (2008) describe comprehensive procurement performance as a function of an all-inclusive procurement planning process that analyses all the variables in a specific environment. In relation to the above discussion, studies and theories have established the value of cost estimation, quality specification, and needs assessment. They, however, fail to highlight in clear terms the role of the above procurement planning variables on institutional performance. Basheka and Bisangabasaija (2010) argue that procurement planning is one of the primary functions of procurement with the potential to contribute to the success of local government operations and improved service delivery. It is a function that sets in motion the entire acquisition/procurement process of acquiring services in local governments. Kakwezi and Nyeko (2010) further add that effective procurement planning is an important route towards securing the right service to be delivered to the public, and also maximising the level of service provision which can be achieved within the local Supporting People. A procurement plan helps Procuring Entities to achieve maximum value for expenditures on services to be delivered and enables the entities to identify and address all relevant issues pertaining to a particular procurement before they publicise their procurement notices to potential suppliers of goods, works, and services.

## 2.1. Needs Assessment in Procurement Planning

Procurement Planning entails the identification of what needs to be procured (which is the result of a Needs Assessment), how the organisation's needs can best be met, the scope of the goods, works or services required, what procurement strategies or methods to be deployed, setting the time frames, and the accountability for the full procurement process. It indeed involves determining what needs to be procured, when, how, and by whom (Seminega, 2012). According to Tan, et al. (2009), needs assessment is "*a systematic process for determining and addressing the needs, or gaps between current conditions and desired conditions or wants*". This is important in procurement because it is an effective tool to identify appropriate interventions or solutions by clearly identifying the problem to ensure that finite resources (prior budget appropriations) are directed towards developing and implementing a feasible and applicable solution for identified projects (Thomson, 2004). He further argues that a good needs assessment will lead to a well-thought-out project selection through a workshop or challenge session for all the stakeholders involved in a project or service delivery, including the beneficiaries of the project or service. This creates an opportunity for stakeholders to conduct a robust peer review of the project concept and design selection to assure them that what is being proposed is the best solution for the beneficiaries' situation. This model can also be applied to public sector projects to achieve the same results if government projects are to succeed (Seminega, 2012).

As pointed out by PPA (2007), the beginning of the procurement process involves the realisation and identification of the

requirements. This is informed by the inventory status, project plans, production schedules, work plans, capital or operational requirements budgets, and the procurement plan. The establishment of the requirements is the foundation for conducting market surveys to ascertain aspects such as prices, new products or alternative or substitute products, new sources of supply, the nature of competition, and environmental aspects that may affect the supply market. In their report in the same year, Karin et al. (2007) singled out non-adherence to procurement methods as a major impediment to public procurement development in Kenya. They, however, did not specify the stage of procurement where this happened.

Inasmuch as the above studies highlight the core role of proper need assessment as a foundation for effective procurement, they fail to bring to the fore the link between need assessment and institutional performance. Public service agencies strive to maximize overall 'value for money' for citizens. This requires consideration of issues such as client satisfaction, the public interest, fair play, honesty, justice, and equity (Trionfetti, 2000). Recent theorists also point to the importance of public administration as a moral and ethical concern and recognize that administrative action is permeated by moral choices and is therefore a model of not only technical and professional competencies but also of moral behaviour (Van, 2006). According to the Judiciary Strategic Plan (2012-2016), the intention is "*to institutionalize results-based budgeting and establish a financial management and accountability capacity so as to meet regulatory standards and customer needs*". Specifically, the Judiciary plans to develop and operationalize value-for-money standards, trails and indicators for forensic audit, train procurement committees at the devolved units, and develop an annual procurement plan.

## 2.2. Cost Estimation and Forecasting in Procurement

According to Wee (2002), purchases must be economical and efficient. This means that they should be based on market prices and should be able to generate savings. It also means that bad practices such as irresponsible procurement leading to wastage, wear and tear of stocks, overinvoicing, unplanned expenditure, shortage of goods when needed, poor quality products, and similar factors are to be avoided. The PPOA prepares and updates a Market Price Index (MPI) to be used by the Procuring Entity (PE) on a periodic basis. The Procurement Plan must be integrated into the budgetary processes based on the indicative or approved budget, as stipulated in the PPDA (2006). The budget, as well as the procurement plan, are to be based on realistic cost estimates derived from the market research database, which is to be compiled and updated regularly by the procurement unit in line with regulations, PPDA (2009). Costs are one of the factors that are concerned with the customer perspective. The price is not seen as the only parameter for costs. Other issues involved are ordering and delivery arrangements, paying for materials, and storing the materials, to mention a few. The customer might choose the more expensive supplier knowing that the delivery will be defect-free. That is why taking the customer's perspective is crucial for the organization to succeed (Thomson, 2004).

The Public Procurement Act (PPA henceforth) has been adopted in Rwanda to improve the national public procurement system with respect to international standards. Most developing countries prefer the flexibility that comes with receiving development aid through budget support; they have an incentive to reform their public procurement and financial management systems (Baily et al., 2005). This is the case for the government of Rwanda, whose public procurement was



recently decentralised to local governments in order to meet the aforementioned requirements. It is against this background that the Rwandan procurement process had to undergo radical reforms in order to comply with these principles so as to make profitable use of donor funds in a more effective and transparent manner (Basheka and Mugabira, 2010).

According to a report made by *Transparency International* Rwanda on the assessment of Public Procurement in 2006, public procurement accounted for 52% of the total public funds' expenditure. For example, in Rwanda, public procurement is estimated at 13% of GDP and 40% of public expenditure. When one does not consider salaries, public procurement accounts for over 66% of public expenditure, which could even be higher if one further does not consider public debt repayment (MINECOFIN, 2011). Inevitably, this has a certain effect on the management of government expenditure and projects as well. The study report of May 2010 by the Rwanda Association of Local Government Authorities (RALGA) on procurement practices in local governments states that the RPPA and the ombudsman's reports of 2008 indicated failures in the procurement practices of the public sector, and local governments in particular (RALGA, 2010).

### 2.3. Quality Specification in Procurement

According to Sunil (2004), quality is defined using five different approaches, namely, the transcendent approach; the product-based approach; the user-based approach; the manufacturing-based approach; and the value-based approach. The transcendent approach equates quality with innate excellence. The product-based approach defines quality as a sum or weighted sum of the desired attributes in a product. The user-based approach identifies a high-quality item as one that best satisfies consumer needs or wants. The manufacturing-based approach equates quality with conformance to specifications. And the value-based approach defines quality as a measure of not only the product's conformance to specifications or performance at an intended level but also conformance at an acceptable cost or price.

Hui et al. (2011) defined service quality as a measure of how well the service level delivered meets customer expectations. A common definition of service quality is that the service should correspond to the requirements (Edvardsson, 1998). Despite rigorous academic debate and attention to issues related to understanding service quality from an external customer's perspective, research on the procurement needs domain is relatively new (Hui et al., 2011). Osei et al. (2012) stated that service organizations should not only focus on the external customer but also monitor the exchange of services within the organization, that is, service provided by an employee in one department or section to an employee in another area of the firm. The importance of internal functions has been recognized, and most researchers agree that internal organizational support activities and the quality of internal service operations are key links to external customer satisfaction and an overall service quality strategy (Basheka and Mugabira, 2008).

This implies that both the user-based approach and the transcendent approach are likely used by procurement departments, depicting the user department as their major source of existence; they are the first clients to consider before going outside the organization. Service quality can be described in terms of seven perceived criteria, which include professionalism and skills; attitudes and behaviour; accessibility and flexibility; reliability and trustworthiness; service recovery; servscape; and reputation credibility (Kagendo, 2012). However, Tookey et al. (2001) bring out five dimensions

that can be used as measurements for perceived service quality, which include tangibles, reliability, responsiveness, assurance, and empathy. Gelderman et al. (2006) contend that specification is an integral part of the procurement function. Without a quality specification, the process can be filled with pitfalls and obstacles for the purchasing department. They list the characteristics of a good specification as follows: identifies the minimum requirements of the end user, allows for a fair and open procurement process, provides for testing/inspection to ensure the goods/services received meet the standard set forth in the specification, and provides an equitable award at the lowest possible cost.

## 2.4. Conceptual Framework

The conceptual framework shows the hypothesised relationship between procurement planning and performance. Procurement planning, which is the independent variable, is represented by needs assessment, cost estimation, and quality specification, while performance (dependent variable) is measured in terms of efficiency, economy, and effectiveness. The hypothesised conceptual framework in Figure 1 shows the possible relationship between procurement planning and performance. The arrows indicate the direction of the effect of procurement planning on performance. Needs assessment, cost estimation, and quality specification have been selected as the predictor variables of procurement planning, while performance was measured based on three indicators: effectiveness, efficiency, and economy.

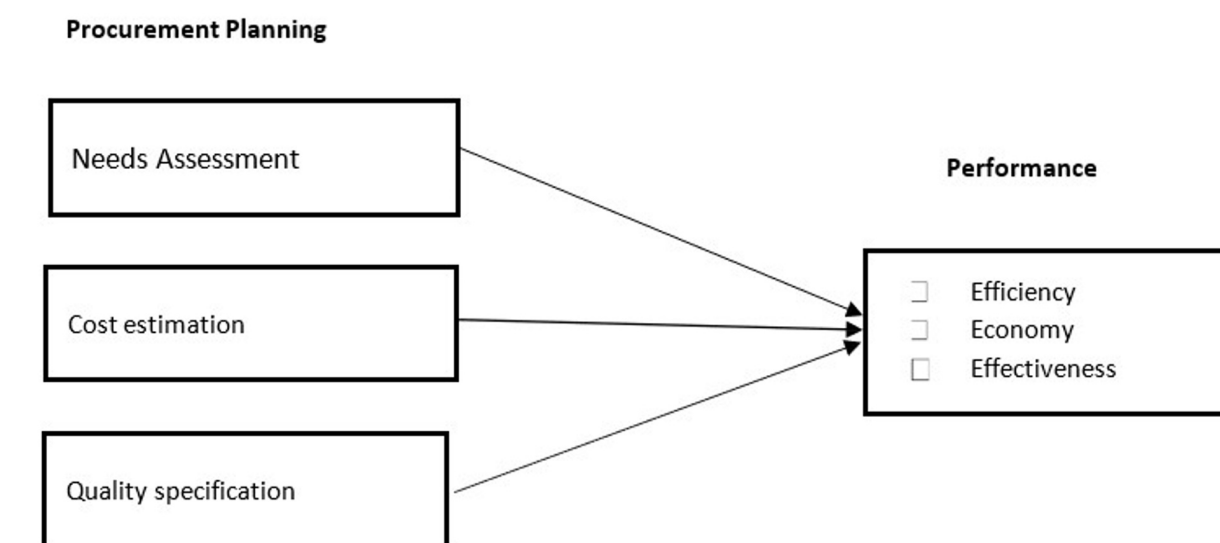


Figure 1. Conceptual Framework

## 3. Methodology

The total target population of the study included 61 staff drawn from key departments such as procurement, finance, accounts, and administration at the RBC - who are active participants in the procurement planning process. This qualification was based on the fact that the participants are, in one way or another, involved in the application of public procurement. The sample of 61 employees (44 from the Finance department and 17 from the Procurement department) were purposively selected to inform the study. Following the sample selection, the multiple regression model was used to

analyse the relationship of key variables with a view to addressing the research objectives.

### 3.1. Research Design

The researcher used a mixed-methods research design by incorporating both quantitative and qualitative approaches. The mixed design was preferred because it provides multiple approaches for studying the research problem; it also allows the researcher to collect data using multiple methods, which enhances the validity and reliability of the findings.

### 3.2. Study Population and Sampling

For this case, the total target population was 61 staff from some key departments of Procurement, Accounts, and Finance at the RBC who are active participants in the procurement planning process and belong to the Procurement, Finance, Accounts, and Administration departments. This qualification was based on the fact that the participants are, in one way or another, involved in the application of public procurement.

The sample size was determined using universal or census sampling techniques, in which all the elements of the target population are taken as the sample size. The sample within each selected population was selected using purposive sampling. Because the study requires people with technical knowledge about the study, the respondents within each sample were selected using purposive sampling, i.e., selecting a sample based on the researcher's judgement on how such a sample will enable him/her/them to answer questions that align with the study objectives (Saunders et al., 2000).

### 3.3. Qualitative Data Collection using Interview Guides

In order to address the objectives of the study, primary data were collected by holding in-depth interviews using an interview guide with the heads and staff of the key departments of RBC. These in-depth interviews involved discussions between the researcher and the respondents on procurement planning and performance. This approach is consistent with the work of Kothari (1998) and Saunders et al. (1999), who argued that in-depth interviews constitute one of the vital approaches for understanding phenomena that have not been significantly studied. During the interview, a set of questions was designed to guide the researcher in the interview process. This helped the researcher to ensure that the interview was not diverted, and the researcher remained focused on the objectives of the study. During the unstructured interviews, respondents were requested to share their experiences as freely as possible. There was no intervention from the researcher except for occasional guidance to keep the interview on track. In order to promote the freedom of the respondents to express themselves, interview guides were not used during these interviews. The data that were obtained from the unstructured interviews were analyzed to identify common themes emerging from them. The use of semi-structured interviews is intended to deepen the researcher's understanding of procurement planning and performance in public institutions.

### 3.4. Quantitative Data Collection using Questionnaires



The quantitative data were collected using one set of questionnaires. The questionnaire was designed using a five-point scale; both closed and open-ended questions were used. Open-ended questions sought the views of respondents on the subject matter. In this study, the researcher used both structured and unstructured self-administered questionnaires. The questionnaires were given to the respondents; the researcher explained the objectives and the purpose of the study to the respondents and assured them of anonymity, and that the study was only going to be used for academic purposes. The researcher used this type of questionnaire in the study because of the advantages it has over other instruments, as shown in the literature (Saunders et al., 1999; Kothari, 2000; Kasomo, 2006; Mugenda, 2008); it is relatively cheap to collect data through the use of questionnaires since it involves only the cost of preparing the questionnaire and mailing it to the respondents. In addition, when the study involves both deductive and inductive approaches, questionnaires are usually the preferred method. Furthermore, when the study involves identifying a relationship between variables, questionnaires help to gather data that describe a relationship between different variables.

## 4. Findings

### 4.1. Summary of Findings

In Table 1, the respondents were asked whether they have been involved in procurement planning before. Responses show that 95.1% of the respondents said yes, while 4.9% of respondents said no. Results in Table 2 indicate that respondents were asked whether procurement planning is important to the Rwanda Biomedical Center, where 47.5% of respondents strongly agreed and 52.5% agreed. The results from the survey revealed that the majority of respondents agreed that procurement planning is important to the Rwanda Biomedical Center. Table 3 shows the people involved in procurement planning at the RBC, where 19.7% of respondents state that only the senior managers in the procurement department are involved, 26.2% of respondents state that senior managers in all departments are involved, 18% of respondents state that both senior managers and middle-level managers in procurement are involved, and 36.1% of respondents state that all levels in procurement (senior managers, middle-level managers, and support staff) are involved. The results from the survey revealed that the majority of respondents state that people involved in procurement planning at the Rwanda Biomedical Center are all levels in procurement (senior managers, middle-level managers, and support staff), as represented by 36.1% of the respondents. Table 4 shows how respondents rate the cost of the procurement function reduced through procurement planning and service delivery at RBC, where 29.5% of respondents mentioned that it is highly reduced, 52.5% said it is reduced, and 18% said it is fairly reduced. The results from the survey revealed that the majority of respondents mentioned that the rate at which the cost of the procurement function is reduced through procurement planning and service delivery at RBC is reduced, as represented by 82% of the respondents. Table 5 shows that the quality of service in regard to the procurement function improved due to the procurement planning strategy, where 40% of respondents mentioned that it is highly improved, 50.8% said it is improved, and 8.2% said it is fairly improved. The results from the survey revealed that the majority of respondents mentioned that the quality of service in regard to the procurement function improved due to the procurement planning strategy is improved, as represented by 91.8% of the respondents. Table 6 shows that the time for getting goods from suppliers is reduced because of the procurement plan at

RBC, where 42.6% of respondents mentioned that it is highly reduced, 45.9% said it is reduced, and 11.5% said it is fairly reduced. The results from the survey revealed that the majority of respondents mentioned that the time for getting goods from suppliers is reduced because of the procurement plan at the RBC is reduced, as represented by 88.5% of the respondents.

**Table 1.** Respondents' views on whether they were involved in procurement planning before

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	58	95.1	95.1	95.1
	No	3	4.9	4.9	100.0
<b>Total</b>		<b>61</b>	<b>100.0</b>	<b>100.0</b>	

Source: Survey Data 2021

**Table 2.** Procurement planning is important to RBC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agreed	32	52.5	52.5	52.5
	Strongly agree	29	47.5	47.5	100.0
<b>Total</b>		<b>61</b>	<b>100.0</b>	<b>100.0</b>	

Source: Survey Data 2021

**Table 3.** People involved in procurement planning at the RBC

Participants	Frequency	Percentage
Only the senior managers in the Procurement Department.	12	19.7
Senior managers in all departments	16	26.2
Senior managers and middle-level managers in procurement	11	18.0
All levels in procurement (senior managers, middle-level managers, and support staff).	22	36.1
<b>Total</b>		<b>100.0</b>

**Table 4.** Cost of the procurement function reduced through procurement planning & services delivery

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly reduced	18	29.5	29.5	29.5
	Reduced	32	52.5	52.5	82.0
	Fairly reduced	11	18.0	18.0	100.0
<b>Total</b>		<b>61</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

**Table 5.** Quality of service in procurement function improved due to procurement planning strategy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly improved	25	41.0	41.0	41.0
	Improved	31	50.8	50.8	91.8
	Fairly improved	5	8.2	8.2	100.0
<b>Total</b>		<b>61</b>	<b>100.0</b>	<b>100.0</b>	

**Table 6.** The time for getting goods from suppliers reduced because of procurement plan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Highly reduced	26	42.6	42.6	42.6
	Reduced	28	45.9	45.9	88.5
	Fairly reduced	7	11.5	11.5	100.0
<b>Total</b>		<b>61</b>	<b>100.0</b>	<b>100.0</b>	

## 4.2. Discussion of Findings

The first objective of this study aimed at examining the effect of proper need assessment on an institution's performance. The overall performance of the procurement function improved because of procurement planning at RBC, where 44.2% of respondents mentioned that it is highly improved, 52.5% that it is improved, and 3.3% that it is fairly improved. The results from the survey revealed that the majority of respondents mentioned that the overall performance of the procurement function improved because of procurement planning at RBC, as represented by 96.7% of the respondents.

The second objective of the study established the effect of procurement cost estimation on an institution's performance. The cost of the procurement function reduced through procurement planning and service delivery at RBC, where 29.5% of respondents mentioned that it is highly reduced, 52.5% that it is reduced, and 18% that it is fairly reduced. The results from the survey revealed that the majority of respondents mentioned that the rate at which the cost of the procurement function reduced through procurement planning and service delivery at RBC, as represented by 82% of the respondents.

The third objective of the study aimed at assessing the effect of quality specification of goods on an institution's performance. The quality of service in regard to the procurement function improved due to the procurement planning strategy, where 40% of respondents mentioned that it is highly improved, 50.8% that it is improved, and 8.2% that it is fairly improved. The results from the survey revealed that the majority of respondents mentioned that the quality of service in regard to the procurement function improved due to the procurement planning strategy, as represented by 91.8% of the respondents.

Based on these findings, the study concluded that a thorough needs assessment will lead to a well-thought-out project

selection through a workshop or challenge session for all the stakeholders involved in a project or service delivery, including the beneficiaries of the project or service. Costs are one of the factors that concern the customer perspective. The price is not seen as the only parameter for costs. Other issues involved include ordering and delivery arrangements, paying for materials, and storing the materials, to mention a few. We therefore concluded that specification is an integral part of the procurement function. Without a quality specification, the process can be filled with pitfalls and obstacles for the purchasing department. The study further recommends that RBC conduct a market survey to ascertain aspects such as prices, new products or alternative or substitute products, new sources of supply, the nature of competition, and environmental aspects that may affect the supply market. Public institutions like the RBC should also purchase economically and efficiently by avoiding such “bad practices” as irresponsible procurement leading to wastage, wear and tear of stock, over-invoicing, unplanned expenditures, stock shortages, and poor-quality products, among others. Public institutions should identify the minimum requirements of the end user, allow for a fair and open procurement process, provide for testing/inspection to ensure the goods/services received meet the standard, and provide an equitable award at the lowest possible cost.

## 5. Conclusions and Implications

The findings from the survey revealed that the cost of the procurement function was reduced through procurement planning and service delivery at RBC, where 29.5% of respondents mentioned that it had highly reduced, 52.5% said it was reduced, and 18% stated it was fairly reduced. The quality of service in regard to the procurement function improved due to the procurement planning strategy. The study concluded that quality specification is an integral part of the procurement function, which every purchasing department should have in place - not least the RBC. Indeed, the conclusions are similar to those reached in a study on the Medical Laboratory Equipment procurement in Kenyan Public Hospitals (Madichie and Sua, 2021). In that study, Madichie and Sua (2021) also observed in the case of Kenya, where *“the aim [...] was to establish who makes procurement decisions, what resources are used while researching the business buying decision-making process in the procurement of capital medical laboratory equipment (CMLE) in public hospitals. Participants for the study were selected using purposive sampling with a view to providing insights into the explored issues. The target respondents were medical superintendents, medical laboratory technologists and procurement officers in six county referral hospitals in Kenya between May-June 2018”*. Factors considered important in the business decision-making included quality [...] supplier capability, equipment costs, and ease of use. Public hospitals in Kenya should adopt participatory purchasing models where key stakeholders such as buyers, lower-level employees in hospital departments, and physicians are included in the buying decision-making process.

### 5.1. Limitations and Implications

At the risk of highlighting the limitations of this study – notably not being particularly pitched against Enterprise Education – it is our strong belief that it has implications for the subject matter. Besides, the study was crafted from a master's thesis at the University of Kigali, which goes to show that educators can develop problem-solving skills to impact real

organisational challenges, as has been the case at the RBC.

## 5.2. Policy Implications

The study posits that public institutions should purchase both effectively and efficiently by avoiding irresponsible procurement practices that often result in wastage, stock wear and tear, over-invoicing, unplanned expenditure, shortages of goods, and poor-quality products. The findings of the study provided insight into the current problem to improve public institutions' performance. The policy will help improve the quality of procurement through cost-cutting purchases, reduced delivery periods, quality attainment, efficient and effective processes. The poor planning concept has given public institutions a poor public image because of misplaced priorities of funds due to a lack of state-of-the-art procurement planning practices in the institutions. Therefore, the study will enable the sector to prioritize procurement planning in every financial year, leading to quality procurement and improved performance.

In a *Quartz* article reported in the Rwandan Daily, i.e., *The New Times*, it was evident that the components of our conceptual framework were noted. For example, in his summary of Rwanda's E-Procurement system, Augustus Seminega, Director General of the Rwanda Public Procurement Authority, pointed out that "*Government procurement officials should take advantage of the time saved in transactions to ensure compliance, transparency, competition, fairness and dedicate more time to achieve value for money, efficiency and effectiveness*". Furthermore, "...in 2013, the Rwandan government approached the World Bank to fund a feasibility study on the implementation of its e-GP system. The feasibility study identified major challenges and recommended solutions. Some of the challenges included inconvenient business registration; inaccurate management information & analytics; lack of one-stop procurement portal; and inefficient document and records management system" (Quartz, 2018). Interestingly, the government of Rwanda has been championing a course for the development of an e-procurement system since 2017, as the case of the launch of 'Umucyo' (meaning transparency) shows (Quartz, 2018):

"AOS Ltd, a Rwandan Information Technology Systems Integrator, has developed an electronic procurement system for the Government of Rwanda. Dubbed 'Umucyo' (transparency). The system was developed in collaboration with the Ministry of Finance and Economic planning and the Rwanda Public Procurement Authority (RPPA) to automate the public procurement process and enable the interactions of Government to Business entities (G2B)."

As Madichie and Sua (2021) also point out in their implications, *three broad implications derived from the conclusion of the study*. The first, according to them, was that "*public hospitals in Kenya should adopt participatory purchasing models where more stakeholders such as buyers, lower-level employees in hospital departments (users), physicians, and procurement officers included in the buying decision-making. This would ensure that the hospitals do not rely only on top management employees in making such critical decisions. This is expected to increase quality of purchases and thus increasing healthcare delivery*". The authors also cautioned that, "*second, in doing research on capital laboratory medical equipment during the procurement process, the members responsible for researching are encouraged to utilise electronic*

*sources of information more. This is because these sources are efficient and cost-effective. They also provide deeper information and can be used to countercheck the information provided by sales or other supplier representatives". Third, it was recommended "that in the process of procuring capital laboratory medical equipment, the participants in the procurement process should not overlook the performance feedback and evaluation phase [...] because this phase is critical in informing how well the purchased equipment is performing".*

## About the Authors

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## Footnotes

<sup>1</sup> Noella BIGIRIMANA, Deputy Director General; Dr. Isabelle MUKAGATARE, Head of the Department of Biomedical Services; Nathalie MUTEGARABA, Division Manager, Corporate Services; Eng. Francine UMUTESI, Division Manager, Medical Technology and Infrastructure (MTI); Dr. Yvonne KAYITESHONGA, Division Manager, Mental Health; Clarisse MUSANABAGANWA, Medical Research Analyst, Research, Innovation and Data Science working alongside Prof. Claude Mambo MUVUNYI, the Director General.

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