

Effect of Procurement Contract Management Practices on Performance of Public Institutions. A Case of Integrated Polytechnic Regional College (IPRC) Musanze, Rwanda

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ABSTRACT

The general objective of this research was to examine the effectiveness of procurement contract management practices on performance of public institutions in Rwanda. The specific objectives of the study were to assess the effect of contract cycle on performance of Integrated Polytechnic Regional College (IPRC) Musanze, analyze the effect of contract execution on performance of Integrated Polytechnic Regional College (IPRC) Musanze, examine the effect of contract relationship management on performance of Integrated Polytechnic Regional College (IPRC) Musanze and assess the effect of contract monitoring on performance of Integrated Polytechnic Regional College (IPRC) Musanze. This study utilized descriptive and correlation analysis as its primary research methods. A descriptive study also was used to describe the participants' demographic information. A correlational analysis also was performed. The researcher was able to identify the relationship among contract management and performance of public institutions through a correlation study. The study population for this study was 72 Staffs of IPRC Musanze including Principal, Deputy Principal in Charge of Academics and Training, Corporate services Division Manager, Legal officer, Internal auditor, Logistics officer, Store keeper, Procurement Officer, Administration & Finance department, Workshop Assistants (End users), Instructors (End users), Receiving committee, Contract management team and public tender committee. Given the limited number of individuals or units in the population under study, the researcher has chosen to use a census inquiry method rather than sampling. Documentary, interview and questionnaire sources used as tools of data collection for the study. Questionnaires were distributed to 72 employees of IPRC Musanze. Using SPSS, the researcher determined descriptive statistics such as frequency distributions, percentages, means, and correlations. The correlation results show that a strong contract cycle exhibits highly significant positive correlation with the Performance of public institution ($r=0.668$, $p=0.000<0.05$). Effective Contract execution is significantly correlated with Performance of public institution ($r=0.627$, $p=0.000<0.05$). Contract relationship significantly correlates with Performance of public institution ($r=0.699$, $p=0.000<0.05$). Contract monitoring demonstrates a significant positive relationship with the Performance of public institution ($r=0.699$, $p=0.000<0.05$). The findings show that contract execution shows the highest effect ($\beta_1 = 0.264$, $t=2.760$), followed by contract monitoring ($\beta_2 = 0.239$, $t=2.069$), contract cycle ($\beta_3 = 0.232$, $t=1.884$), and relationship ($\beta_4 = 0.212$, $t=1.592$). IPRC Musanze should strengthen performance through enhanced contract cycles, execution, relationships, and monitoring, while focusing on sustainability and technology integration.

Keywords: Contract Cycle, Contract Execution, Contract Monitoring, Contract Relationship Management, Performance

I. INTRODUCTION

Despite numerous reforms and efforts by governments of developing countries, like Rwanda, and development partners like the World Bank to improve the performance of the procurement function, public procurement is still plagued by poorer contracts and poor-quality goods and services (Kakwezi & Nyeko, 2019).

According to reports from the Office of the Auditor General of State Finances (OAG) and the Rwanda Public Procurement and Procurement Authority (RPPA) for the fiscal year ending June 30, 2018, the Rwandan government has suffered losses due to widespread contract mismanagement and other instances of noncompliance with procurement procedures. Lack of timely and adequate decision-making during contract implementation, resulting in subpar final products; lack of skilled staff able to manage contracts; poor performance from contractors or suppliers without delay penalties; and haphazard planning that results in a shift in scope are all major problems in contract management, as evidenced by the RPPA's annual activity report for the 2018–2019 fiscal year.

The Auditor General's Report (2021) emphasizes the thirty-eight (38) public organizations and projects with sixty-two (62) instances of delayed contracts due to deficient contract management. Lack of clearly defined roles and responsibilities, lack of adequate supervision, and poor delivery quality all contribute to improper monitoring of the implementation of the procurement contract, which can lead to cases of inadequate follow-up by government officials in charge of contract management.

However, the impact of procurement contract management on public institution performance has not been studied systematically at Integrated Polytechnic Regional College (IPRC) Musanze. Previous research didn't give Integrated Polytechnic Regional College (IPRC) Musanze the attention it deserved on this topic. Umunezero (2022) analyzed the impact of contract management on the efficiency of government purchases made by Rwanda's Ministry of Environment. Using the building of the Bugesera district office as a case study, Caritas et al. (2016) assessed the impact of procurement methods on the success of public projects in Rwanda. Mutijima (2022) examined the impact of procurement procedures on the efficiency of the Development Bank of Rwanda. To fill these knowledge gaps, the current study looked at how procurement contract management affected the efficiency of public institutions at Musanze's Integrated Polytechnic Regional College (IPRC).

The general objective of this research was to assess the effect of procurement contract management on performance of public institutions in Rwanda. This study had the following specific objectives:

- i. To assess the effect of contract cycle on performance of Integrated Polytechnic Regional College (IPRC) Musanze.
- ii. To analyses the effect of contract execution on performance of Integrated Polytechnic Regional College (IPRC) Musanze.
- iii. To examine the effect of contract relationship management on performance of Integrated Polytechnic Regional College (IPRC) Musanze.
- iv. To assess the effect of contract monitoring on performance of Integrated Polytechnic Regional College (IPRC) Musanze.

The following null hypotheses were proposed by the researcher:

- H₀₁:** Contract cycle does not have significant effect on performance of Integrated Polytechnic Regional College (IPRC) Musanze
- H₀₂:** There is no significant effect of contract execution on performance of Integrated Polytechnic Regional College (IPRC) Musanze
- H₀₃:** Contract relationship management has no significant effect on performance of Integrated Polytechnic Regional College (IPRC) Musanze
- H₀₄:** There is no significant effect of contract monitoring on performance of Integrated Polytechnic Regional College (IPRC) Musanze

II. LITERATURE REVIEW

2.1 Empirical review

According to research conducted by Oliveira (2016) on the administration of construction agreements in South Africa, insufficient attention to detail during contract negotiation might result in a loss of revenue. The study also indicated that that poorly managed contracts affect the procuring entity's trustworthiness through a snowball effect. This indicates the trouble to internally sell and enforce future contracts. That's why a company has to clearly spell out its future in the agreement. The entity needs should be well recorded and that employees in all management levels and users need to be involved in the establishment of specifications and keeping record.

Nyaga and Mwangangi (2019) investigated the impact of contract management procedures on the efficiency of the Kenyan government. According to the study's findings, procurement regulators admitted that many PEs were not properly managing their contracts. One area of concern was the failure to appoint inspection and acceptance committees to inspect deliveries and ensure that the goods delivered were of the required quantity and quality. Works supervisors to monitor the execution of construction works were not hired, despite the fact that these contracts often included larger financial commitments compared to products and services.

Kimundu and Moronge (2019) investigated how contract management affects Kenyan manufacturers' procurement efficiency. The findings of the study indicated that procurement contracts performance indicators involve attainment of value for money, quality products and services, reduced lead time, procurement contracts cost reduction, timely contract closure and termination. The study also noted that for a successful contract management the contracting parties should consider; appropriate contract administration, management of service and products delivery, managing relationships with suppliers, conflict resolutions, contract monitoring and effective contract termination procedures in line with public procurement Act.

Despite the importance of the procurement act, some government institutions in Rwanda continue to use inefficient and time-consuming bureaucratic procurement processes when buying goods and services. This, along with

corruption and discriminatory awards of tenders, has led to the failure of some government projects. A census was carried out to gather information. Spearman's correlations were used to determine the degree to which the variables were linked to one another. The results of the contract administration show that the procurement contract for the construction of the Bugesera district office was properly handled since many aspects were taken into account while drawing up the contract. According to the findings, the government should keep a close eye on the procurement processes for its projects in order to maintain accountability and openness (Caritas et al., 2016).

III. METHODOLOGY

3.1 Study Design

Designing a study means developing a framework, method, or plan to answer a research question. The mixed quantitative and qualitative approach reflects the complexity of the subject under investigation. For this study, descriptive and correlation analysis used. A descriptive study also used to describe participant demographic information. A correlational analysis also performed. The researcher able to investigate the relationship between contract management and performance of public institutions through a correlation study.

3.2 Study population and sampling

The study population for this study was 72 Staffs of IPRC Musanze including Principal, Manager of the Corporate Services Division and Associate Principal in Charge of Instruction, Legal officer, Internal auditor, Logistics officer, Store keeper, Procurement Officer, Administration & Finance department, Workshop Assistants (End users), Instructors (End users), Receiving committee, Contract management team and public tender committee.

Table

Target Population

S/N	Population category	Population size
1.	Principal	1
2.	Deputy Principal in Charge of Academics and Training	1
3.	Corporate services Division Manager	1
4.	Legal officer	1
5.	Internal auditor	1
6.	Logistics officer	1
7.	Store keeper	1
8.	Procurement Officer	1
9.	Administration & Finance department	10
10.	Workshop Assistants (End users)	12
11.	Instructors (End users)	20
12.	Receiving committee	7
13.	Contract management team	8
14.	Public tender committee	7
	Total	72

Given the limited number of individuals, the researcher has chosen to use a census inquiry method rather than sampling. This method involves gathering information from every single individual or unit within the specified population, without employing any sampling procedures. This approach is expected to give a precise and complete understanding of the entire group being studied. The findings obtained through this methodology are likely to be highly relevant and could potentially be applied to the larger population as a whole.

3.3 Data Collection Methods and Instruments

Each study goal probed with detailed inquiries to guarantee its fruitful conclusion. Documentary, interview and questionnaire sources used to compile information for the study.

The researcher used documentation method to gather secondary data. As part of the documentary analysis process, the researcher used documents to evaluate and analyze the texts' relevance to this study, classify them on manuscripts, and then type them into a computer so they can be put together. This is very important because it looks at



the relevant literature and tries to find international perspectives from which to build a comparative evaluation framework.

According to Creswell and Creswell (2017) stated that in a questionnaire, respondents are given a list of questions to answer independently of the interviewer. Employees of IPRC Musanze sent questionnaires. Most of the questions on the survey closed-ended. Closed questions require that responders pick one answer from a predetermined set of options. All 72 employees of IPRC Musanze given a survey.

3.4 Reliability

Cronbach's alpha calculated in SPSS to ensure the research instrument's reliability. A dependability between 0.7 and 1.0 is typically regarded as satisfactory. For the purposes of this analysis, an alpha coefficient of 0.7 or above is deemed statistically significant.

Table 2

Reliability Statistics

Variables	No of Items	Cronbach's Alpha	Verdict
Contract cycle	5	.842	Accepted
Contract execution	5	.813	Accepted
Contract relationship	5	.827	Accepted
Contract monitoring	5	.812	Accepted
Performance of public institution	5	.806	Accepted

In Table 2, reliability statistics are presented for various variables related to contract management and the performance of public institutions. Each variable, including contract cycle, contract execution, contract relationship, contract monitoring, and performance of public institution, comprises five items. The reliability of these variables is evaluated using Cronbach's Alpha, with values ranging from .806 to .842, as alpha coefficient of 0.7 or above is deemed statistically significant it indicates a high degree of internal consistency and reliability in measuring these aspects.

3.5 Data Analysis

According to Denzin and Lincoln (2018) Information is analyzed by carefully describing it, giving examples, summarizing it, and using statistical and/or logical methods to judge it. Evaluation of data by breaking it down into its constituent parts and analyzing it logically. Using SPSS, the researcher determined descriptive statistics such as frequency distributions, percentages, means, and correlations.

The adopted model presented as follow:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

Where;

Y= Performance of public institution

X1= Contract cycle

X2= Contract execution

X3= Contract relationship

X4= Contract monitoring

α = Constant; y intercept that is, the value of y when x is equal to zero

β = Coefficients of the mode

IV. FINDINGS AND DISCUSSION

4.1 Response Rate

The focus of this chapter was on providing specifics on the findings of the investigation and discussing those results at length. Descriptive and inferential statistics (including percentages, means, and standard deviations) were used to better comprehend the findings and were explained in relation to the study's aims. SPSS was required to work out the analyses shown here. There were 72 people that participated in the survey, and every single questionnaire was filled out and returned.



4.2 Descriptive Statistics

Respondents' Likert scale ratings for different statements were presented using frequencies, percentages, mean, and standard deviation. A 5-point scale was employed where respondents could express their agreement or disagreement, ranging from 1 for Strongly Disagree to 5 for Strongly Agree.

Table 3

Descriptive Statistics on Performance of Integrated Polytechnic Regional College (IPRC) Musanze.

	SD		D		N		A		SA		Mean	Std. Dev.
	F	%	F	%	F	%	F	%	F	%		
IPRC Musanze consistently achieves its procurement goals and objectives.	2	2.8	3	4.2	5	6.9	36	50.0	26	36.1	4.12	0.92
The performance of IPRC Musanze in procurement positively impacts its overall institutional effectiveness.					1	1.4	38	52.8	33	45.8	4.12	0.53
IPRC Musanze demonstrates high levels of efficiency and effectiveness in procurement activities.	3	4.2	2	2.8	4	5.6	38	52.8	25	34.7	4.11	0.94
The procurement performance of IPRC Musanze aligns with the organization's strategic objectives.	1	1.4	1	1.4	2	2.8	43	59.7	25	34.7	4.25	0.71
IPRC Musanze exhibits a strong track record of delivering quality goods and services through its procurement processes.	2	2.8					29	40.3	41	56.9	4.49	0.77
Stakeholders perceive IPRC Musanze's procurement performance as satisfactory or above expectations.	2	2.8			1	1.4	35	48.6	34	47.2	4.37	0.78
Overall											4.30	0.77

Table 3 provides observations into the performance perceptions of Integrated Polytechnic Regional College (IPRC) Musanze. IPRC Musanze consistently achieves its procurement goals and objectives, as indicated by the high mean score of 4.12. Respondents' agreement is diverse, ranging from 36.1% strongly agreeing to 50% agreeing. The standard deviation of 0.92 indicates some heterogeneity in opinions, reflecting differing perceptions among respondents about IPRC Musanze's procurement achievements. The performance of IPRC Musanze in procurement positively impacts its overall institutional effectiveness, with a high mean score of 4.12. A strong majority (52.8%) agree and 45.8% strongly agree, while a standard-deviation of 0.53 implies a heterogeneity in responses among respondents. This shows the significant role of procurement in enhancing institutional effectiveness. IPRC Musanze demonstrates high levels of efficiency and effectiveness in procurement activities, supported by a high mean score of 4.11. Respondents' agreement varies, with 52.8% agreeing and 34.7% strongly agreeing. The standard-deviation of 0.94 indicates heterogeneity in opinions, reflecting mixed perceptions of IPRC Musanze's procurement efficiency. The procurement performance of IPRC Musanze aligns with the organization's strategic objectives, reflected by the very high mean score of 4.25. Respondents predominantly agree (59.7% agree and 34.7% strongly agree), and the standard-deviation of 0.71 indicates heterogeneous opinion. This indicates IPRC Musanze's effective alignment of procurement efforts with strategic goals. IPRC Musanze exhibits a strong track record of delivering quality goods and services through its procurement processes, as evidenced by the very high mean score of 4.49. A majority (56.9%) strongly agrees, and 40.3% agrees, resulting in a standard-deviation of 0.77. This indicates a heterogeneous response on agreement among respondents, highlighting confidence in IPRC Musanze's ability to provide quality procurement outcomes. Stakeholders perceive IPRC Musanze's procurement performance as satisfactory or above expectations, supported by the very high mean score of 4.37. Respondents' agreement varies, with 48.6% agreeing and 47.2% strongly agreeing. The standard deviation of 0.78 indicates heterogeneity in opinions, reflecting diverse perceptions of IPRC Musanze's procurement performance.

Overall, the very high mean score of 4.30 indicates a favorable perception of IPRC Musanze's procurement performance. The standard deviation (0.77) indicates heterogeneity in respondents' opinions, underlining diverse perceptions of IPRC Musanze's procurement outcomes. This range of perspectives shows the complexity of evaluating procurement performance across different stakeholders.



Table 4

Descriptive Statistics on Contract Cycle of Integrated Polytechnic Regional College (IPRC) Musanze.

	SD		D		N		A		SA		Mean	Std. Dev.
	F	%	F	%	F	%	F	%	F	%		
The contract cycle at IPRC Musanze is well-defined and clearly understood.	2	2.8	1	1.4	1	1.4	29	40.3	39	54.2	4.42	0.84
The contract cycle at IPRC Musanze is efficiently managed.	2	2.8	1	1.4	1	1.4	34	47.2	34	47.2	4.35	0.83
The contract cycle at IPRC Musanze ensures timely procurement activities.	2	2.8	2	2.8	4	5.6	30	41.7	34	47.2	4.28	0.91
The contract cycle at IPRC Musanze facilitates effective resource allocation.	2	2.8	2	2.8	4	5.6	35	48.6	29	40.3	4.21	0.89
The contract cycle at IPRC Musanze minimizes delays in procurement processes.	1	1.4	1	1.4	29	40.3	29	40.3	37	51.4	4.39	0.78
The contract cycle at IPRC Musanze enhances overall organizational efficiency.	0	0.0	0	0.0	3	4.2	38	52.8	31	43.1	4.39	0.57
Overall											4.34	0.80

Table 4 provides detailed observations into respondents' perceptions. The very high mean score (4.42) indicates that respondents strongly agree that the contract cycle at IPRC Musanze is well-defined and understood. This shows that a clear contract cycle contributes to smoother procurement processes and decision-making. The standard deviation of 0.84 indicates heterogeneous response on agreement. The numerous participants (54.2%) strongly agree and 40.3% agree, further reinforcing the notion that a well-defined contract cycle positively impacts procurement practices and performance. The very high mean score (4.35) indicates that respondents generally perceive that the contract cycle is efficiently managed. The standard deviation (0.83) indicates a heterogeneous response of agreement, showing some variability in opinions among participants. Almost half of the respondents (47.2%) agree, while an equal percentage (47.2%) strongly agrees. This combined strong agreement indicate that those respondents positively view the efficiency of contract cycle management. The very high mean score (4.28) indicates that respondents generally believe the contract cycle ensures timely procurement activities. The standard deviation (0.91) indicates heterogeneity in opinions. The combined percentages of agreement (41.7% agreed + 47.2% strongly agreed) underline the importance of a well-functioning contract cycle in maintaining efficient procurement timelines. The very high mean score (4.21) indicates that respondents believe the contract cycle facilitates effective resource allocation. The standard deviation (0.89) indicates heterogeneity in opinions. Nearly half of the respondents (48.6%) agreed and 40.3% strongly agreed, indicating the importance of well managed contract cycle in effective resource allocation. The very high mean score (4.39) and the very strong agreement percentage (51.4%) emphasize that respondents believe the contract cycle minimizes delays in procurement processes. The standard deviation (0.78) indicates heterogeneous response of agreement. The results reflect the effectiveness of the contract cycle in avoiding disruptions and ensuring smooth procurement, contributing to improved performance. The very high mean score (4.39) and the combined agreement percentages (52.8% agreed + 43.1% strongly agreed) underline that the contract cycle enhances overall organizational efficiency. The standard deviation (0.57) indicates heterogeneity in agreement among respondents. The results highlight that an efficient contract cycle positively influences the institution's overall efficiency, which in turn affects performance positively.

The very high overall mean score of 4.34, along with the standard deviation of 0.80, indicates a heterogeneous positive perception among respondents regarding the effect of the contract cycle on the performance of IPRC Musanze. This collective response indicate that a well-managed and efficient contract cycle has a strong positive impact on various aspects of the institution's performance, from procurement to organizational efficiency.



Table 5
Descriptive Statistics on Contract Execution of Integrated Polytechnic Regional College (IPRC) Musanze.

	SD		D		N		A		SA		Mean	Std. Dev.
	F	%	F	%	F	%	F	%	F	%		
Contracts at IPRC Musanze are executed in accordance with the agreed terms and conditions.	2	2.8	1	1.4	3	4.2	32	44.4	34	47.2	4.32	0.85
The contract execution process at IPRC Musanze is transparent and fair.	3	4.2	6	8.3	2	2.8	33	45.8	28	38.9	4.07	1.07
IPRC Musanze ensures timely completion of contract deliverables.	4	5.6	2	2.8	4	5.6	37	51.4	25	34.7	4.07	1.01
The contract execution process at IPRC Musanze effectively manages risks and contingencies.	3	4.2	6	8.3	4	5.6	34	47.2	25	34.7	4.00	1.06
The contract execution process at IPRC Musanze promotes accountability and responsibility.	1	1.4	6	8.3	4	5.6	40	55.6	21	29.2	4.03	0.90
IPRC Musanze demonstrates high levels of compliance during contract execution.	2	2.8	6	8.3	5	6.9	35	48.6	24	33.3	4.01	1.00
Overall											4.08	0.98

Table 5 shows a very high mean score of 4.32 indicates that respondents strongly agree that contracts at IPRC Musanze are executed in accordance with agreed terms and conditions. This signifies that proper execution aligns with smoother processes and decision-making. The standard deviation of 0.85 reflects some heterogeneity in agreement. A significant proportion (44.4%) strongly agrees, while 47.2% agree, reinforcing the positive impact of effective contract execution on procurement practices and performance. Similarly, with the high mean score of 4.07, respondents perceive that the contract execution process at IPRC Musanze is transparent and fair. The standard deviation of 1.07 indicates a heterogeneity in responses. While 45.8% agree, 38.9% strongly agree. This collective agreement shows the importance of fairness in execution. The findings indicate that timely completion of contract deliverables is prioritized.

A significant proportion (51.4%) agrees, and 34.7% strongly agree. This united agreement indicates the importance of timely performance. This supported by the presence of high mean score of 4.07 and standard deviation of 1.01 which indicates heterogeneity in participants' responses. With a high mean score of 4.00, respondents recognize IPRC Musanze's effective management of risks and contingencies during contract execution. This indicates a proactive approach in mitigating potential challenges. The standard deviation (1.06) indicates heterogeneous perspectives, with a balanced agreement and strong agreement distribution as confirmed by 34.7% strongly agreed and 47.2% agreed on the statement. The high mean score of 4.03 shows participants' perception of IPRC Musanze's promotion of accountability and responsibility through the execution process. This indicates a commitment to transparent operations. The standard deviation (0.90) shows heterogeneous views. Notably, 55.6% agree and 29.2% strongly agree, reflecting a strong endorsement of accountability. Furthermore, respondents acknowledge IPRC Musanze's high levels of compliance during contract execution with a high mean score of 4.01. This indicates the institution's commitment to adhering to established procedures. The standard deviation (1.00) signifies heterogeneous opinions, and the agreement percentages (33.3% strongly agreed and 48.6% agreed) support the institution's strong compliance stance.

The high overall mean score of 4.08, along with the standard deviation of 0.98, indicates a heterogeneous positive perception among respondents regarding the effect of contract execution on the performance of Integrated Polytechnic Regional College (IPRC) Musanze. These findings collectively underline the crucial role of effective contract execution in shaping IPRC Musanze's performance.



Table 6
Descriptive Statistics on Contract Relationship Management of Integrated Polytechnic Regional College (IPRC) Musanze.

	SD		D		N		A		SA		Mean	Std. Dev.
	F	%	F	%	F	%	F	%	F	%		
The contract relationships established by IPRC Musanze contribute to a smooth procurement process.	3	4.2	3	4.2	1	1.4	31	43.1	34	47.2	4.25	0.99
IPRC Musanze maintains effective communication channels with its contract partners.	0	0.0	3	4.2	4	5.6	35	48.6	30	41.7	4.28	0.76
The contract relationships of IPRC Musanze foster a sense of mutual trust and cooperation.	2	2.8	4	5.6	6	8.3	33	45.8	27	37.5	4.10	0.97
IPRC Musanze actively engages with contract partners to address any issues or concerns that may arise.	0	0.0	4	5.6	6	8.3	41	56.9	21	29.2	4.10	0.77
The contract relationships of IPRC Musanze promote transparency and fairness in the procurement process.	1	1.4	3	4.2	3	4.2	45	62.5	20	27.8	4.11	0.78
IPRC Musanze demonstrates a commitment to building long-term, sustainable contract relationships.	2	2.8	0	0.0	4	5.6	40	55.6	26	36.1	4.22	0.79
Overall											4.18	0.84

The data in Table 6 provides observations into the perceptions of Integrated Polytechnic Regional College (IPRC) Musanze's contract relationship management. The very high mean score of 4.25 indicates that respondents believe that the contract relationships established by IPRC Musanze significantly contribute to a smooth procurement process. This indicates that well-managed relationships positively impact the efficiency of procurement activities. The standard deviation (0.99) shows a heterogeneous response of agreement. While 47.2% strongly agree and 43.1% agree, some respondents have a more neutral view on this aspect. With a very high mean score of 4.28, the findings indicate that IPRC Musanze effectively maintains communication channels with contract partners. This implies a commitment to information exchange and collaboration. The standard deviation (0.76) reflects a heterogeneous response among participants, with 48.6% agreeing and 41.7% strongly agreeing, supporting the institution's positive communication practices. The high mean score of 4.10 shows that IPRC Musanze's contract relationships foster mutual trust and cooperation. This indicates the importance of trust-building in procurement collaborations. The standard deviation (0.97) shows heterogeneous response of agreement, with 37.5% strongly agreeing and 45.8% agreeing, indicating a balanced perspective among respondents. The data indicates that IPRC Musanze actively engages with contract partners to address issues, as reflected by the high mean score of 4.10. This indicates a proactive approach to conflict resolution and problem-solving. The standard deviation (0.77) indicates a heterogeneous response, with 56.9% agreeing and 29.2% strongly agreeing, reinforcing the institution's commitment to addressing concerns. The high mean score of 4.11 signifies that the contract relationships of IPRC Musanze promote transparency and fairness in the procurement process. This indicates the importance of ethical practices. The standard deviation (0.78) reflects heterogeneous opinions, with 62.5% agreeing and 27.8% strongly agreeing, indicating a strong alignment with transparent procurement practices. IPRC Musanze's commitment to building long-term, sustainable contract relationships is emphasized by the very high mean score of 4.22. This implies a focus on enduring partnerships. The standard deviation (0.79) shows a heterogeneous response of agreement, with 55.6% agreeing and 36.1% strongly agreeing, supporting the institution's dedication to sustainable collaborations.

Overall, the high mean score of 4.18 reinforces the positive sentiment toward IPRC Musanze's contract relationship management, with a standard deviation (0.84) indicating a heterogeneous response among respondents. These findings collectively highlight the institution's emphasis on effective and ethical contract relationship management.



Table 7
Descriptive Statistics on Contract Monitoring of Integrated Polytechnic Regional College (IPRC) Musanze.

	SD		D		N		A		SA		Mean	Std. Dev.
	F	%	F	%	F	%	F	%	F	%		
IPRC Musanze consistently monitors the performance of its contract partners.			1	1.4	1	1.4	36	50.0	34	47.2	4.43	0.60
The contract monitoring activities of IPRC Musanze ensure compliance with contractual obligations.	2	2.8	1	1.4	2	2.8	39	54.2	28	38.9	4.25	0.82
IPRC Musanze promptly identifies and addresses any deviations or breaches in contract terms.							21	29.2	51	70.8	4.71	0.46
The contract monitoring process of IPRC Musanze effectively mitigates risks associated with procurement contracts.	1	1.4					54	75.0	17	23.6	4.19	0.57
IPRC Musanze utilizes appropriate tools and systems for efficient contract monitoring.	2	2.8			2	2.8	51	70.8	17	23.6	4.13	0.71
The contract monitoring activities of IPRC Musanze contribute to continuous improvement in procurement processes.	1	1.4					40	55.6	31	43.1	4.39	0.64
Overall											4.35	0.63

Table 7 provides detailed observations of the contract monitoring of Integrated Polytechnic Regional College (IPRC) Musanze. The very high mean score (4.43) indicates that respondents strongly agree that IPRC Musanze consistently monitors the performance of its contract partners. This indicates that a clear contract monitor contributes to smoother contract performance. The standard deviation of 0.60 indicates heterogeneous response on agreement. The numerous participants (47.2%) strongly agree and 50% agree, further reinforcing the notion that a well-defined contract monitoring positively impacts partners contract and performance. The very high mean score (4.25) indicates that respondents generally perceive that the contract monitoring activities of IPRC Musanze ensure compliance with contractual obligations. The standard deviation (0.82) indicates a heterogeneous response of agreement, showing some variability in opinions among participants. Almost half of the respondents (47.2%) agree, while an equal percentage (47.2%) strongly agrees. This combined strong agreement indicate that those respondents positively view the efficiency of contract monitoring in compliance with contractual obligations. The very high mean score (4.71) indicates that respondents generally believe IPRC Musanze promptly identifies and addresses any deviations or breaches in contract terms. The standard deviation (0.46) indicates homogeneity in opinions.

The combined percentages of agreement (29.2% agreed + 70.8% strongly agreed) underline the powerful agreement on the statement. The high mean score (4.19) indicates that respondents believe the contract monitoring process of IPRC Musanze effectively mitigates risks associated with procurement contracts. The standard deviation (0.57) indicates heterogeneity in opinions. A lot of the respondents (75%) agreed and 23.6% strongly agreed, indicating the significant importance of well monitored contract in mitigation of procurement risks. The high mean score (4.13) and the strong agreement percentage (23.6%) and agreement of 70.8% emphasize that respondents believe IPRC Musanze utilizes appropriate tools and systems for efficient contract monitoring. The standard deviation (0.71) indicates heterogeneous response of agreement. The results reflect the effectiveness of using appropriate tools and systems in efficient contract monitoring, contributing to improved performance. The very high mean score (4.39) and the combined agreement percentages (55.6% agreed + 43.1% strongly agreed) underline that the contract monitoring activities of IPRC Musanze contribute to continuous improvement in procurement processes. The standard deviation (0.64) indicates heterogeneity in agreement among respondents. The results highlight that an efficient contract monitoring positively influences the institution's overall efficiency, which in turn affects procurement performance positively.

Overall, the very high mean score of 4.35 reinforces the positive agreement contract monitoring of Integrated Polytechnic Regional College (IPRC) Musanze, with a standard deviation (0.63) indicating a heterogeneous response among respondents. These findings collectively highlight the institution's emphasis on effective and ethical contract monitoring.



4.3 Inferential Statistics

This section focuses testing hypotheses about the regression coefficients, assessing the overall fit of the regression model, and making predictions about the dependent variable.

Table 6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797 ^a	.636	.614	9.28412

a. Predictors: (Constant), Contract monitoring, Contract execution, Contract cycle, Contract relationship

In Table 8, the numbers R and R Square provide observations into the strength of the relationship between the factors being studied such as contract monitoring, contract execution, contract cycle, and contract relationship and the performance of public institutions. The R value of 0.797 indicates a relatively strong connection between these factors and the performance of public institutions. The R Square value of 0.636 tells us that around 64% of the variability in public institutions' performance can be accounted for by variations in these factors. This indicates that these factors play a significant role in influencing the performance of public institutions. The results match with Umunezero (2022) showed that good contract management is linked to better government procurement results. Important contract actions, like closing deals properly, managing them, and maintaining good relationships, are vital for improving how public institutions buy things. This lines up with what Table 1 shows a strong link between contract factors and how well public institutions perform.

Table 9

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10086.260	4	2521.565	29.254	.000 ^b
	Residual	5775.059	67	86.195		
	Total	15861.319	71			

a. Dependent Variable: Performance of public institution

b. Predictors: (Constant), Contract monitoring, Contract execution, Contract cycle, Contract relationship

The F-value of 29.254 and the corresponding significance level (Sig.) of .000 in Table 9 demonstrate that the regression model, which encompasses predictors such as contract monitoring, contract execution, contract cycle, and contract relationship, exerts a statistically significant influence on the dependent variable, which is the performance of public institutions. This indicates that the observed relationship between these contract factors and the performance of public institutions is unlikely to be a result of random chance alone. The findings align with Kakwezi and Nyeko (2019) emphasized on contract management's role in procurement outcomes. The relationship's statistical significance reinforces Kakwezi's notion that these factors influence performance beyond random chance, underlining their importance.

Table 10

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.305	4.890		1.698	.094
	Contract cycle	.917	.487	.232	1.884	.004
	Contract execution	.889	.322	.264	2.760	.007
	Contract relationship	.840	.528	.212	1.592	.016
	Contract monitoring	.756	.366	.239	2.069	.042

a. Dependent Variable: Performance of public institution

The adopted model presented as follow:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

The fitted model was as follows:



$$\text{Performance of public institution} = 8.305 + 0.917 \text{ Contract cycle} + 0.889 \text{ Contract execution} + 0.840 \text{ Contract relationship} + 0.756 \text{ Contract monitoring} + 4.890$$

In Table 10, the coefficients show the relationships between the predictors (contract cycle, contract execution, contract relationship, contract monitoring) and the dependent variable (performance of public institution). Contract execution shows the highest impact (Beta = 0.264), followed by contract monitoring (Beta = 0.239), cycle (Beta = 0.232), and relationship (Beta = 0.212). The constant term (intercept) has an unstandardized coefficient of 8.305 and a significance value (Sig.) of 0.094, indicating its limited contribution to predicting public institutions' performance. The predictors' significance values (Sig.) for contract cycle, contract execution, contract relationship, and contract monitoring, are 0.004, 0.007, 0.016, and 0.042 respectively, indicating that all these predictors significantly contribute to explaining the variation in public institutions' performance. These findings emphasize the crucial role of these predictors in enhancing public institutions' performance. The findings, in line with Kimundu and Moronge (2019) revealed the importance of effective contract management in enhancing procurement performance. This aligns with the coefficients in Table 4.13, where contract execution holds the highest impact, followed by monitoring, cycle, and relationship. The significance values (Sig.) for these predictors affirm their meaningful contribution to explaining the variation in public institutions' performance, aligning with the study's emphasis on the predictors' crucial role.

Table 11
Hypothesis Testing Results

Hypotheses	P Value	Comment
H ₀₁ : Contract cycle does not have significant effect on performance of Integrated Polytechnic Regional College (IPRC) Musanze	p<0.05	Rejected
H ₀₂ : There is no significant effect of contract execution on performance of Integrated Polytechnic Regional College (IPRC) Musanze	p<0.05	Rejected
H ₀₃ : Contract relationship management has no significant effect on performance of Integrated Polytechnic Regional College (IPRC) Musanze	p<0.05	Rejected
H ₀₄ : There is no significant effect of contract monitoring on performance of Integrated Polytechnic Regional College (IPRC) Musanze	p<0.05	Rejected

Table 11 presents the findings regarding the hypotheses. The first hypothesis posited that the contract cycle does not significantly affect the performance of Integrated Polytechnic Regional College (IPRC) Musanze, with a p-value < 0.05. This indicates sufficient statistical evidence to reject the null hypothesis. Similarly, the second hypothesis, which proposed no significant effect of contract execution on IPRC Musanze's performance, yielded a p-value < 0.05, indicating statistical evidence to reject the null hypothesis. Likewise, the null hypothesis relating to contract relationship management's effect on IPRC Musanze's performance was rejected, as the p-value < 0.05, signifying substantial statistical evidence. Finally, the null hypothesis concerning the effect of contract monitoring on IPRC Musanze's performance was also rejected, given the p-value < 0.05.

The study revealed that contract cycle, execution, relationship, and monitoring all exerted a significant effect on the performance of Integrated Polytechnic Regional College (IPRC) Musanze. This necessitates the rejection of the initial assumptions (H₀₁, H₀₂, H₀₃, H₀₄) in favor of the alternative ones. These findings underscore how effective contract management practices profoundly impact the institution's procurement outcomes and overall performance.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

The study aimed to evaluate the impact of procurement contract management practices on the performance of Integrated Polytechnic Regional College (IPRC) Musanze in Rwanda. Through particular analysis, the research thoroughly investigated the influence of contract cycle, execution, relationship management, and monitoring on the institution's performance. Contrary to the initial assumptions, each aspect of contract management demonstrated significant effects on institutional success, as evidenced by the comprehensive statistical findings. The hypothesis testing revealed the rejection of null hypotheses (H₀₁, H₀₂, H₀₃, H₀₄) in favor of the alternative ones, underscoring the critical role of these practices in driving positive outcomes. The detailed examination of descriptive statistics, ANOVA results, model summaries, correlations, and coefficients collectively underscored the correlations of these factors and their noteworthy implications for procurement practices and overall institutional performance.

This study underscores the dominant importance of well-defined contract cycles, effective execution, proficient relationship management, and vigilant monitoring in shaping the procurement processes and overall performance of



IPRC Musanze. The results underscore the imperative for institutions to embrace and enhance these management practices to optimize efficiency, transparency, collaboration, and risk mitigation, ultimately leading to enhanced performance and organizational success.

5.2 Recommendations

IPRC Musanze should invest in strong contract monitoring practices to optimize performance. Establish a systematic and consistent monitoring framework that ensures compliance with contractual obligations.

IPRC Musanze should place a strong emphasis on consistent and proper contract execution. Implement transparent and fair execution processes, and ensure timely completion of contract deliverables.

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