



Effect of Procurement Contract Management Practices on the Performance of Public Projects in Rwanda: A Case Study of the Ministry in Charge of Emergency Management (MINEMA)

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Abstract: *This study assessed the effect of procurement contract planning on the performance of public projects in Rwanda, focusing on the Ministry in Charge of Emergency Management (MINEMA). Specifically, it examined how procurement contract planning influences public project performance. The study adopted a quantitative approach and a descriptive correlational research design. The target population comprised 120 staff members from five MINEMA departments. A census approach was used, and 100 completed questionnaires were returned and analyzed using SPSS. Descriptive statistics, Pearson correlation, and simple linear regression were employed. The findings revealed that procurement contract planning positively contributes to public project performance. Respondents recognized the importance of clear contract objectives, dispute mitigation, resource availability, and project execution efficiency. Correlation analysis indicated a strong, positive, and statistically significant relationship between procurement contract planning and public project performance ($r = 0.844$, $p < 0.001$). Regression analysis showed that procurement contract planning explained 71.3% of the variation in project performance. The study concluded that effective procurement contract planning supports project implementation through clear objectives, improved resource allocation, risk anticipation, and stakeholder coordination. It recommends that MINEMA strengthen procurement planning by defining contract requirements, preparing realistic budgets and schedules, identifying potential risks, and involving relevant stakeholders to support improved public project performance.*

Keywords: *Procurement Contract Management Practices, Procurement Contract Planning, Public Project Performance, MINEMA, Rwanda.*

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1. Introduction

Procurement contract planning is particularly important because it establishes the basis on which a procuring entity will enter into and manage a contractual relationship. It involves identifying needs, defining the scope and specifications, estimating costs, considering risks, arranging resources and developing a realistic schedule. When these elements are prepared carefully, the procuring entity and the supplier or contractor have a clearer understanding of expected deliverables, responsibilities and timing. Conversely, incomplete requirements or unrealistic

estimates can create uncertainty during implementation and may contribute to variations, disputes or delays. Contract planning is consequently relevant to the management of both project expectations and implementation risks (OECD, 2019; World Bank, 2020).

International procurement guidance places emphasis on linking procurement decisions with wider institutional objectives, sound planning, transparency, risk management and value for money. These principles are relevant throughout the procurement cycle, from identifying requirements to managing contract delivery. Effective

planning should be informed by the actual needs of the project, the availability of funding and the capacity to oversee performance. It should also allow appropriate coordination between technical specialists, procurement personnel, finance officers and project managers. Such coordination can reduce the likelihood that contracts are prepared without adequate consideration of implementation conditions (OECD, 2025; World Bank, 2020).

Public projects are implemented in environments where requirements, prices, delivery conditions and operational circumstances may change. Planning cannot eliminate all uncertainty, but it can provide a structured basis for anticipating foreseeable risks and deciding how they will be managed. Risk assessment, clear specifications and realistic schedules can help project teams identify potential obstacles before contract award. A plan that is not updated when material circumstances change, however, may lose its practical value. The relationship between planning and performance should therefore be considered alongside the quality of implementation, monitoring and contract administration (OECD, 2025; Songa & Akumuntu, 2024).

In many developing-country settings, public procurement is closely connected with the delivery of infrastructure and essential services, while institutions may face constraints involving resources, technical capacity and coordination. These conditions make the quality of procurement preparation significant: the procuring entity needs to align the proposed contract with available budgets, implementation capacity and the intended public benefit. Evidence from individual countries and institutions can nevertheless vary because procurement systems, project types and organizational arrangements differ. Findings from one setting should therefore be considered in relation to, rather than automatically generalized to, another setting (World Bank, 2020; Uwiringiyimana & Dushimimana, 2024).

Recent procurement reform discussions continue to emphasize that formal rules alone do not guarantee effective procurement outcomes. Institutions also require practical capacity to apply procedures, prepare suitable procurement documents, coordinate stakeholders and manage contracts after award. Planning is thus connected to institutional capability and the broader procurement system. Its contribution to project performance may be direct where it improves readiness, but it may also depend on whether the plan is translated into effective negotiation, execution, monitoring and communication. This provides a rationale for examining planning as a distinct practice while recognizing its connection with the wider contract-management process (OECD, 2025; Gatsinzi & Madichie, 2024).

In Rwanda, public procurement supports the implementation of government programmes and public investment, making procurement preparation relevant to the delivery of public projects. Rwanda's procurement institutions operate within a national framework intended to guide procuring entities in planning, tendering and contract management. For public organizations, the practical

challenge is to translate procurement requirements into well-prepared contracts that reflect project needs, realistic budgets and implementation schedules. Studies conducted in Rwandan public institutions provide context-specific evidence about procurement planning and contract management, although their findings need to be interpreted according to each study's setting, measures and research design (Ingabire & Dushimimana, 2024; Mukamazimpaka & Nimpano, 2025).

MINEMA's projects are associated with emergency management and related public responsibilities, where timely access to goods, works and services can be important for planned activities and operational readiness. Procurement contract planning in this context needs to connect defined project objectives with clear requirements, available resources, realistic timelines and foreseeable risks. Weaknesses in any of these areas may complicate implementation, while planning that is coordinated with contract execution and monitoring can provide a stronger basis for accountability. The relevance of planning at MINEMA therefore warrants examination within the organization's own project and contract-management context.

Although procurement contract planning is widely recognized as a core procurement activity, its relationship with project performance may not be identical across institutions. Positive perceptions of planning do not by themselves demonstrate that planning independently explains performance after other contract-management practices are considered. Accordingly, this paper focuses on the specific objective of examining the effect of procurement contract planning on the performance of public projects in MINEMA, Rwanda. It draws on the dissertation's reported descriptive and inferential findings and considers how those findings relate to recent procurement literature, while distinguishing a bivariate association from an adjusted regression result.

Public procurement is a major instrument through which governments convert public resources into goods, services and infrastructure that support social and economic development. Its contribution to public project performance extends beyond the act of purchasing: procurement decisions influence whether project inputs are available when required, whether technical requirements are clearly understood, and whether public expenditure is directed towards intended results. In projects involving construction, emergency response and public service delivery, delays or weaknesses in procurement can affect implementation schedules, costs, quality and the achievement of planned objectives. Procurement therefore needs to be understood as an integral part of project management rather than as an isolated administrative function (OECD, 2019; World Bank, 2020).

2. Literature Review

Procurement contract planning refers to the preparatory activities through which a procuring entity defines the requirement, determines the procurement approach, estimates resources, establishes timelines and anticipates risks before contract implementation. It connects organizational objectives with the contract's scope, deliverables and implementation arrangements. Public procurement frameworks treat planning as a cycle-wide activity that supports transparency, competition and value for money (OECD, 2015; World Bank, 2016).

Planning also requires the coordination of technical, financial and procurement functions. Needs assessment and clear specifications help ensure that the contract describes the intended outputs; cost estimates and budget allocations help establish affordability; and schedules and risk assessments help determine whether the project can be delivered within the expected period. These elements are consistent with the strategic procurement principles outlined by OECD (2015) and the procurement planning requirements described in the World Bank's procurement framework (World Bank, 2016).

Project performance is commonly considered in terms of whether planned outputs are delivered within the expected time and budget, meet required quality standards and achieve intended objectives. In public projects, performance also relates to accountability and the effective use of public resources. The OECD (2015) connects procurement to value for money and public outcomes, while the World Bank (2016) emphasizes procurement arrangements that support project implementation and development results.

The relationship between planning and performance is not necessarily automatic. A well-prepared plan may be undermined by changing needs, weak contract administration, delayed payments, supplier capacity problems or external shocks. Conversely, a project may perform adequately despite imperfect planning because of effective coordination during implementation. Public procurement literature therefore encourages an integrated view of planning and contract management rather than assuming that one planning activity alone determines results (Thai, 2001; OECD, 2015).

2.2. Theoretical Review

Agency Theory provides one explanation for the importance of procurement contract planning in public projects. The theory considers relationships in which a principal delegates responsibility to an agent, while differences in information and interests can create monitoring and accountability challenges (Jensen & Meckling, 1976). In public procurement, citizens and public authorities expect procuring entities and contractors to use resources for agreed purposes. Clear objectives, specifications, budgets and responsibilities can reduce ambiguity and provide a basis for monitoring whether agents meet their contractual obligations (Jensen & Meckling, 1976; OECD, 2015).

Agency Theory is relevant to MINEMA because project delivery involves multiple actors, including procurement personnel, finance staff, technical specialists, project

managers and contractors. Planning can clarify what each party is expected to deliver, when resources should be available and how performance will be assessed. However, planning does not eliminate information asymmetry or guarantee compliance; its contribution depends on the quality of contract design and the subsequent oversight arrangements (Jensen & Meckling, 1976; World Bank, 2016).

Transaction Cost Economics explains why organizations need to consider the costs and risks associated with arranging and governing transactions. Williamson (1981) argues that transaction characteristics and bounded rationality affect the choice and management of governance arrangements. Applied to procurement, early definition of requirements, realistic cost estimates, risk identification and clear contract terms may reduce avoidable negotiation, coordination and dispute costs. This perspective supports examining whether procurement contract planning is associated with project performance, while recognizing that actual outcomes also depend on contract execution and the surrounding institutional environment (Williamson, 1981; OECD, 2015).

2.3. Empirical Literature

In Kenya, public procurement studies have considered procurement planning and contract-management practices as contributors to organizational and project performance. Research in Kenyan public organizations commonly uses structured questionnaires and descriptive or inferential statistical analysis to examine planning, compliance and performance relationships; the broader procurement literature stresses that planning should align needs, budgets and procurement methods with the organization's objectives (Thai, 2001; World Bank, 2016). These sources support the relevance of the planning-performance question, although they do not provide a directly comparable effect estimate for MINEMA and should not be treated as evidence of a MINEMA-specific outcome.

In Ethiopia, Bogale (2024) examined procurement-related practices in the North Shoa Zone public-project context. The study is relevant because it considered procurement practices alongside public-project performance in a setting where public institutions implement projects under resource and administrative constraints. The dissertation's available source material does not provide sufficient details about Bogale's sample, statistical estimates or recommendations to report them reliably; therefore, those particulars should be checked against the original publication before being included in a final reference list. The study nonetheless signals the value of examining procurement processes in a context-specific public-project setting (Bogale, 2024; World Bank, 2016).

In Rwanda, Gatsinzi and Madichie (2024) examined procurement contract planning, negotiation and execution in Gicumbi District. The researchers used a census of 127 staff, collected information through document analysis, questionnaires and interviews, and applied descriptive and correlational analysis using SPSS. Their reported regression

coefficient for contract planning was positive and statistically significant ($\beta = 0.237$, $p < .001$). They recommended strengthening procurement personnel's capacity, using standardized planning templates and adopting collaborative negotiation practices. The results indicate a positive planning-performance association in Gicumbi, but the district-level finding should not be generalized automatically to MINEMA.

Twizere and Dushimimana (2024) studied contract management and road-project performance in Nyabihu District during 2019–2022. Their study used a multiple-regression approach to examine planning, negotiation, execution and monitoring/evaluation. Contract planning had a positive coefficient ($\beta = 0.350$, $p < .001$), indicating a statistically significant association with road-project performance in the study model. The authors recommended strengthening contract-management practices throughout the project cycle and encouraging collaborative contract negotiation. Since the study focused on district road projects, its findings provide comparative Rwandan evidence rather than a direct estimate for MINEMA projects.

Kayitesi and Dushimimana (2024) assessed procurement planning and public-institution performance at the Rwanda Development Board. The study used a census approach involving 156 employees and collected quantitative and qualitative information through questionnaires, interviews and document review. Its reported analysis identified needs/specification planning, procurement budgeting and procurement risk management as significant planning dimensions, with p -values below .05. The authors concluded that procurement planning can support institutional efficiency and recommended improving requirements identification, budgeting and risk-sensitive supplier engagement. The study is pertinent to MINEMA because it emphasizes planning components, though its dependent variable and institutional setting differ from the present study.

Ingabire and Dushimimana (2024) investigated procurement planning and organizational performance at Ruhengeri Referral Hospital in Musanze District. Their study considered needs assessment, quality specifications, cost estimation and payment terms as dimensions of planning. The source available for this revision identifies the objectives and study setting but does not provide complete methods, sample details or final statistical results; these should be verified from the full article before quoting specific estimates. Its focus nevertheless illustrates how planning is operationalized through technical, financial and contractual preparations in a Rwandan public institution (Ingabire & Dushimimana, 2024; OECD, 2015).

Overall, the empirical literature presents supportive but context-dependent evidence. Gicumbi and Nyabihu studies report positive, statistically significant planning coefficients, while RDB research highlights needs definition, budgeting and risk planning as relevant dimensions (Gatsinzi & Madichie, 2024; Twizere & Dushimimana, 2024; Kayitesi & Dushimimana, 2024). However, these studies examine different institutions,

project types and outcome measures. The present MINEMA-focused analysis therefore contributes institution-specific evidence by examining the descriptive responses and statistical relationship reported for procurement contract planning, without assuming that correlation alone establishes causality.

3. Methodology

The study was conducted at the Ministry in Charge of Emergency Management (MINEMA), Rwanda, and focused on procurement contract planning and the performance of public projects. The research followed a quantitative approach because it sought to collect standardized responses from personnel involved in procurement and project-related functions and to analyze the resulting data statistically. The scope of this paper was restricted to the dissertation's specific objective of examining procurement contract planning; it did not treat the other contract-management practices as separate objectives.

A descriptive and correlational research design was used. The descriptive design enabled the researcher to present respondents' views about procurement contract planning, while the correlational design enabled examination of the association between planning and public-project performance. The study was observational and relied on survey responses collected from MINEMA personnel. Accordingly, the findings describe reported patterns and statistical relationships and are not interpreted as proof that planning alone caused project performance outcomes.

The target population comprised 120 staff members from five departments at MINEMA: Procurement, Finance, Project Management, Civil Engineering and Contract Management. The population included personnel whose responsibilities were related to procurement preparation, budgeting, technical inputs, project coordination and contract administration. The dissertation specified 30 employees in Procurement, 10 in Finance, 30 in Project Management, 25 in Civil Engineering and 25 in Contract Management. These groups were included because their work could provide relevant information about the planning and delivery of public projects.

A census approach was adopted because the target population was relatively small and the identified staff groups were directly relevant to the research problem. Questionnaires were distributed to the target population, and completed questionnaires were checked for usability before being included in the analysis. The dissertation reports that 100 questionnaires were returned and analyzed from the 120 distributed. The response rate was calculated by dividing the number of usable returned questionnaires by the number distributed and expressing the result as a percentage.

Primary data were gathered through a structured questionnaire. The instrument contained items about procurement contract planning and public-project performance. Respondents indicated their level of agreement with statements using a five-point Likert response format, ranging from strongly disagree to strongly

agree. The planning items covered clarity of contract objectives, planning as a means of mitigating contract disputes, availability of required resources and the contribution of planning to efficient execution. These items were used to represent respondents’ perceptions of procurement contract planning.

Before the main data collection, the questionnaire was reviewed to assess whether the statements were clear and relevant to the study objectives. The dissertation also reports a pilot exercise involving six MINEMA personnel, intended to identify unclear wording and practical issues in administering the instrument. Feedback from the review and pilot process was used to refine the questionnaire before its wider distribution. The pilot was treated as an instrument-development step, while the main analysis was based on the completed questionnaires included in the dissertation.

Validity was addressed through the alignment of questionnaire statements with the study objective and the dimensions of procurement contract planning identified in the research. The review process was intended to ensure that the items were understandable and relevant to respondents’ responsibilities. Reliability was examined using Cronbach’s alpha for the planning scale. The methodology reports the reliability procedure without presenting its numerical outcome here, in accordance with the requirement that the methodology explain how the research was conducted rather than report statistical results.

Data collection involved distributing the questionnaire to the identified staff, allowing respondents time to complete it, and collecting the completed forms for checking and coding. The returned responses were reviewed for completeness and prepared for statistical analysis. Data were entered into the Statistical Package for the Social Sciences (SPSS), as specified in the dissertation. The researcher organized the responses by questionnaire item and constructed the relevant planning and project-performance measures for analysis.

Descriptive statistics were used to summarize respondents’ answers to the procurement contract planning items. The researcher used measures such as frequencies, percentages, means and standard deviations to describe response patterns. Pearson’s product-moment correlation was used to examine the direction and strength of the relationship between procurement contract planning and public-project performance. Multiple regression analysis was also reported in the dissertation to examine the planning variable while accounting for other contract-management variables included in the wider model. In this focused paper, regression is interpreted as an adjusted statistical association, not as conclusive causal evidence.

Statistical significance was assessed using the .05 threshold described in the dissertation. The correlation analysis was interpreted using the correlation coefficient, significance value and number of observations. The regression analysis was interpreted using the planning coefficient and its associated test statistics, with attention to the distinction between the bivariate relationship and the adjusted model. The dissertation contains inconsistent planning regression figures between its abstract and detailed coefficient table; the discrepancy is noted in the results discussion and should be checked against the original SPSS output before final submission.

Ethical considerations were addressed by explaining the purpose of the research and treating participation as voluntary. Responses were handled confidentially and presented in aggregate form, without identifying individual staff members. The information was used for academic analysis of procurement contract planning and public-project performance. These procedures were intended to protect participants and support responsible use of the information collected.

4. Results and discussion

4.1. Response and Reliability

The analyzed dataset contained 100 respondents, out of 120 questionnaires distributed, representing an 83% response rate. The procurement contract planning scale consisted of four items and had Cronbach’s alpha of .802, indicating acceptable internal consistency according to the threshold used in the dissertation.

4.2. Descriptive Findings on Procurement Contract Planning

This section presents the descriptive findings on procurement contract planning at the Ministry in Charge of Emergency Management (MINEMA). It examines respondents’ perceptions of how procurement contract planning contributes to the performance of public projects. The analysis focuses on four aspects: establishing clear contract objectives, reducing the likelihood of contract disputes, ensuring the availability of required resources, and improving project execution efficiency. The findings are presented using mean scores and standard deviations to show the level of respondents’ agreement and the variation in their responses. These results provide an overview of how procurement contract planning is practiced and perceived within MINEMA.

Table 1: Level of agreement on Procurement Contract Planning

Statement	N	Mean	SD
Planning ensures well-defined contract objectives	100	4.54	.904
Planning mitigates the probability of contract disputes	100	4.40	.829
Planning helps ensure availability of required resources	100	4.25	.914
Planning enhances project execution efficiency	100	4.18	.957
Overall mean		4.34	

Source: Field data, 2026

The overall mean of 4.34 indicates that respondents generally expressed favourable views about procurement contract planning at MINEMA. Among the four statements, the highest mean was recorded for the view that planning ensures well-defined contract objectives (M=4.54, SD=.904). This result suggests that clarity of objectives was the most strongly endorsed aspect of planning among the respondents. Clearly stated objectives can provide a shared understanding of the work to be delivered, the expected outputs and the standards against which implementation can be assessed. They can also reduce uncertainty by helping the procuring entity and contractor understand the purpose and boundaries of the contract. Nevertheless, the mean score represents respondents' perceptions and should not be interpreted as direct evidence that every MINEMA contract had fully defined objectives.

The statement that planning mitigates the probability of contract disputes recorded a mean of 4.40 (SD=.829), making it the second-highest rated item. This finding indicates that respondents generally recognised the value of anticipating issues and clarifying expectations before contract execution. Resource availability recorded a mean of 4.25 (SD=.914), suggesting that respondents also viewed planning as relevant to identifying the inputs required for implementation. The lowest mean was recorded for the statement that planning enhances project execution efficiency (M=4.18, SD=.957). Although this was the

lowest score among the four items, it remained within the generally favourable range. The standard deviations, which ranged from .829 to .957, indicate that respondents did not all express exactly the same level of agreement. Taken together, the results suggest that respondents particularly valued planning for its role in setting objectives and anticipating contract difficulties, while views about its contribution to execution efficiency were somewhat less uniform.

4.1.4. Correlation Analysis

This section presents the results of the Pearson correlation analysis conducted to examine the relationship between procurement contract planning and the performance of public projects at the Ministry in Charge of Emergency Management (MINEMA). The analysis was used to establish the direction and strength of the relationship between the two variables and determine whether the observed association was statistically significant. The Pearson correlation coefficient (r) indicates the direction and strength of the relationship, while the significance value (p-value) indicates whether the relationship is statistically significant at the 5% level. The findings provide evidence of the association between procurement contract planning and public project performance, but correlation alone does not establish a causal relationship.

Table 2: Correlation between independent variable and dependent variable

		Procurement contract planning	Public projects performance
Procurement contract planning	Pearson	1	
	Correlation		
	Sig. (2-tailed)		
	N	100	
Public projects performance	Pearson	.844**	1
	Correlation		
	Sig. (2-tailed)	.000	
	N	100	100

Source: Field data, 2026

The Pearson correlation analysis revealed a strong positive relationship between procurement contract planning and public project performance at MINEMA ($r = .844$, $p < .001$, $N = 100$). This indicates that higher levels of procurement contract planning were associated with higher levels of public project performance among the respondents. The reported significance value of .000 in SPSS is interpreted as $p < .001$, indicating that the relationship was statistically significant at the 5% level. Therefore, the findings show a statistically significant association between procurement contract planning and public project performance. However, correlation alone does not establish that procurement

contract planning causes improvements in project performance.

4.1.5. Regression analysis

Simple linear regression analysis was conducted to examine the effect of procurement contract planning on the performance of public projects at the Ministry in Charge of Emergency Management (MINEMA), Rwanda. The analysis aimed to determine the extent to which procurement contract planning explains variations in public project performance. The regression results were examined using the model summary, ANOVA table, and regression coefficients.

Table 4. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.844 ^a	.713	.710	.22704

a. Predictor: (Constant), Procurement contract planning (X1)

The model summary indicates a strong positive relationship between procurement contract planning and public project performance at MINEMA, as shown by the multiple correlation coefficient ($R = .844$). The coefficient of determination ($R^2 = .713$) indicates that procurement contract planning explains 71.3% of the variation in public project performance in the regression model. The adjusted

R^2 of .710 shows that the model accounts for 71.0% of the variation after adjustment. The remaining 28.7% of the variation may be associated with other factors not included in the model. The standard error of the estimate was .22704, representing the average deviation of observed project performance values from the values predicted by the regression model

Table 5. ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.348	1	15.348	243.21	.000 ^b
	Residual	6.185	98	.063		
	Total	21.534	99			

a. Dependent Variable: Public projects performance

b. Predictors: (Constant), Procurement contract planning (X1)

The ANOVA results indicate that the regression model examining the relationship between procurement contract planning and public project performance at MINEMA was statistically significant, $F(1,98)=243.21$, $p<.001$. This suggests that procurement contract planning is statistically associated with variations in public project performance. The findings highlight the importance of establishing clear

contract objectives, preparing realistic implementation schedules, ensuring resource availability, and identifying potential risks before project execution. Strengthening these planning practices may support more effective implementation and improved performance of public project.

Table 8. Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.206	.204		1.012	.313
	Procurement contract planning	.935	.054	.844	17.256	.000

a. Dependent Variable: Public projects performance

The regression coefficients indicate that procurement contract planning had a positive and statistically significant relationship with public project performance at MINEMA ($B = .935$, $\beta = .844$, $t = 17.256$, $p < .001$). This means that a one-unit increase in procurement contract planning was associated with an estimated 0.935-unit increase in public project performance, according to the fitted model. The standardized coefficient ($\beta = .844$) indicates a strong positive association. The findings imply that MINEMA should strengthen procurement contract planning through clear contract objectives, realistic schedules, appropriate resource allocation, and systematic risk assessment to support effective public project implementation.

4.2 Discussion of Findings

The findings on procurement contract planning at the Ministry in Charge of Emergency Management (MINEMA) were discussed using descriptive, correlation, and regression analyses. The descriptive analysis examined respondents' perceptions of planning practices, including the clarity of contract objectives, mitigation of contractual disputes, availability of resources, and efficiency of project execution. The results provide insight into how procurement contract planning is perceived within the institution and how these practices relate to public-project performance.

The descriptive findings were compared with those of Kayitesi and Dushimimana (2024), who examined procurement planning at the Rwanda Development Board. Their study identified needs identification, procurement budgeting, and risk management as important aspects of procurement planning. These findings are relevant to MINEMA because clearly defined requirements, adequate resource allocation, and early identification of potential risks can help establish a sound basis for project implementation. From the perspective of Agency Theory, clearly defined objectives and responsibilities can help reduce ambiguity between the institution and contractors and strengthen accountability in fulfilling contractual obligations (Jensen & Meckling, 1976). However, the present descriptive findings reflect respondents' perceptions and should not, on their own, be interpreted as evidence that these practices directly improve project performance.

The correlation analysis examined the relationship between procurement contract planning and public-project performance at MINEMA. The findings were considered alongside Gatsinzi and Madichie (2024), whose study of procurement contract planning, negotiation, and execution in Gicumbi District reported a positive relationship between contract planning and performance. The similarity between

the two studies suggests that procurement planning and project performance are related in more than one Rwandan public-sector context. Nevertheless, differences in institutional mandates, project characteristics, and study methods should be considered when interpreting the findings. The correlation identified at MINEMA indicates a statistical association, but it does not establish that procurement contract planning causes changes in project performance.

The regression analysis further examined the extent to which procurement contract planning statistically explains variation in public-project performance. The results provide an estimate of the relationship between the planning variable and project performance within the study model. However, the findings should be interpreted with consideration of other factors that may influence project outcomes, including funding, contractor capacity, monitoring, and institutional coordination. Agency Theory provides a useful perspective for interpreting the relationship because it emphasises the importance of clearly defined responsibilities and expectations between principals and agents (Jensen & Meckling, 1976). In the MINEMA context, clearly specified contractual obligations and accountability arrangements may help stakeholders coordinate activities and assess compliance with agreed requirements. These are plausible explanations for the observed relationship rather than effects independently established by the regression analysis.

Transaction Cost Economics also provides a relevant perspective for understanding procurement contract planning. The theory emphasises the costs associated with negotiating, coordinating, and enforcing transactions (Williamson, 1981). In public projects, identifying potential risks, clarifying contractual requirements, and establishing procedures for addressing disputes may help manage uncertainties and reduce avoidable coordination and enforcement costs. Applied to MINEMA, this perspective helps explain why planning practices may be relevant to project implementation. However, unless transaction costs were directly measured in the study, their reduction should be presented as a possible explanation rather than a demonstrated finding.

Overall, the descriptive, correlation, and regression analyses provide complementary insights into procurement contract planning and public-project performance at MINEMA. The descriptive results indicate how respondents perceive planning practices, while the inferential analyses examine the statistical relationship between planning and performance. The findings can be discussed in relation to previous research at Gicumbi District and the Rwanda Development Board, while recognising differences in institutional and project contexts. Agency Theory and Transaction Cost Economics provide complementary explanations for the potential importance of clear contractual responsibilities, accountability, risk identification, and coordination. Nevertheless, the findings are specific to the MINEMA study context and do not

establish that procurement contract planning alone determines public-project performance

5. Conclusion and Recommendations

5.1. Conclusion

The study examined the effect of procurement contract planning on the performance of public projects at the Ministry in Charge of Emergency Management (MINEMA) in Rwanda. The study concludes that procurement contract planning is an important aspect of public project management because it provides a foundation for defining project objectives, identifying procurement requirements, estimating costs, allocating resources, and anticipating potential risks. Effective planning helps clarify the responsibilities of procurement officers, project managers, technical personnel, and contractors, thereby supporting coordination and accountability throughout project implementation. The findings also highlight the relevance of clear procurement objectives, appropriate specifications, realistic budgeting, and risk mitigation in supporting project execution. These aspects are consistent with Agency Theory, which emphasises the importance of clearly defined responsibilities, objectives, and monitoring arrangements in relationships between principals and agents. Therefore, strengthening procurement contract planning at MINEMA can contribute to improved coordination, resource management, and implementation of public projects. However, planning should be supported by effective contract monitoring, communication, and institutional capacity to address challenges that may arise during implementation

5.2. Recommendations

Based on the study findings on the effect of procurement contract planning on the performance of public projects at MINEMA, the following recommendations are proposed:

1. MINEMA should ensure that procurement plans clearly define project objectives, procurement requirements, specifications, timelines, and responsibilities before project implementation begins.
2. The ministry should prepare realistic procurement budgets and ensure that the required financial, human, and material resources are identified and allocated in line with project requirements.
3. MINEMA should identify potential procurement and contract implementation risks during the planning stage and establish appropriate measures to prevent or minimise delays, disputes, and unnecessary costs.
4. Procurement officers, project managers, technical staff, finance personnel, and contractors should be involved in the planning process to improve communication, clarify expectations, and support effective implementation.

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