



RESEARCH PAPER

Evaluating the Effect of Procurement Planning and Contract Management on Public Procurement Performance in Kabul City

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ABSTRACT

This study examined the influence of procurement planning and contract management on public procurement performance in Kabul City. A quantitative research design was employed. Data were collected through a structured questionnaire from 282 procurement employees, selected using a simple random sampling technique from a total population of 950 employees. The collected data were analyzed using descriptive statistics and multiple linear regression analysis in STATA. The findings revealed that the overall model is statistically significant ($F = 416.833$, $P < 0.05$) with strong explanatory power $R^2 = 0.759$, which means procurement planning and procurement contract management jointly explain 75% of the variation in public procurement performance. Additionally, procurement planning had a significant positive effect on public procurement performance ($\beta = 0.345$, $t = 7.69$, $p < 0.05$), implying that realistic and accurate procurement planning greatly enhances public procurement output. Similarly, procurement contract management greatly enhances procurement performance ($\beta = 0.558$, $t = 11.56$, $p < 0.05$). Overall, the study concludes that effective procurement planning and contract management are essential for enhancing public procurement performance in Kabul City. The study provides valuable insights for policymakers and procurement entities seeking to strengthen procurement practices and improve procurement performance in Afghanistan.

KEYWORDS Procurement Planning, Contract management, Public Procurement Performance, Public Procurement, Kabul City

1. Introduction

Public procurement is the systematic, official, and structured process of acquiring the necessary products, works, and services for the organization. Public procurement refers to the purchasing processes of public entities, ranging from the procurement of basic goods and services to the construction of large buildings and infrastructure facilities (Siyal & Xin, 2020). Procurement has emerged as one of the key strategic tasks of organizations, whereas it was previously regarded as an administrative and routine task (Hussein, 2018). Procured goods, works, and services in developing countries are estimated to account for around 15–20% of GDP and 40-50% of government budget, while some emerging countries, such as Singapore, spend up to 80% of the budget through the procurement process (Pettersen et al., 2020). This evidence highlights the vital role of public procurement worldwide. However, it remains an area that is often ignored in many developing countries, including Afghanistan, where public entities are concerned with procuring quality goods and services “at the appropriate time, and from the right source” (Brammer & Walker, 2011, p.8).

According to Basheka (2008), adequate and realistic procurement planning enhances the public procurement performance through comprehensive requirements assessment, accurate definition of needs, selection of appropriate procurement methods, and the development of procurement timelines in accordance with organizational requirements. Similarly, procurement contract management process

helps public entities to guide and oversee the acquisition process of public organizations for optimal utilization of resources and reduce potential risks related to procurement (Ochola & Kitheka, 2019). Thus, public procuring entities synchronize their activities to satisfy the interests of all parties involved in the contract, improve procurement quality, lead times, and overall resource utilization (Guchu & Charles, 2024). Many central authority promotes the growth of the local economy, address regional economic disparities, and assist deprived minority groups through the proper implementation of procurement activities (Gatari et al., 2022). According to Sarawa and Masud (2020), procurement has become a key tool for achieving public, social, environmental, and economic objectives worldwide. The total amount spent through the procurement cycle has grown in recent years, highlighting the growing needs for transparent, competitive, and efficient procurement processes. Despite its significant role and increasing global attention, there is still a lack of a deeper understanding regarding public procurement. A report by the National Procurement Authority (NPA) shows that public procurement represents 33.84% of Afghanistan's GDP and around 50 percent of the national budget in Afghanistan (Habibi, 2020). Many Afghan public entities are still facing challenges such as complex standard forms, absence of a proper e-tendering system, limited funding, sluggish procurement process, noncompliance of procurement activities with law and regulation, and poor execution of procurement practices, while procuring their requirements (Zahed, 2017).

With the growing international commitment to enhancing procurement performance, public procuring entities strive to implement best procurement practices, ranging from procurement planning to contract award and contract management (Gatari et al., 2022). In the face of natural resource shortages, global warming, ecological deterioration, ongoing global hunger, and inequality, public entities are expected to enhance social well-being and the economic development of nations through improved procurement performance (Onyango & Ondiek, 2021). Studies by (Ahmed & Kitheka, 2019; Higiro, 2021; Udoba & Mwalukasa, 2025) have analyzed key factors such as requirements assessment, requirement specifications, and budget approval, which are essential indicators when gauging the extent of influence; however, the majority of these studies were conducted in other geographical settings, with none focusing on the Afghan context. Furthermore, studies conducted by (Matwa, 2023; Wanjiku, 2019) provide opposing results. In Afghanistan, procurement-related challenges remain significant. Kakar et al. (2024) reported that with the growing need for cost-effective project execution and efficient utilization of limited resources, many projects in Afghanistan still face cost overruns and excessive delays due to inadequate planning, poor contract management, and corrupt procurement procedures. Similarly, Zaheer and Sadiq (2024) emphasized that improved administrative systems can enhance the efficiency and effectiveness of Afghan organizations. Correspondingly, Masoud (2023) found that the poor application of legal frameworks and political intervention significantly affect public procurement performance in Afghanistan. Despite these findings, empirical evidence on the combined effect of procurement planning and contract management on public procurement performance in Afghan public entities remains limited. Overall, the existing literature has focused on other procurement indicators rather than examining the joint effect of planning and contract management on public ministries' procurement performance. This represents both a contextual gap and a conceptual gap in the existing literature. Therefore, this study aims to empirically investigate the effect of procurement planning and contract management on public procurement performance in Kabul City, Afghanistan. Study findings provide valuable evidence that can help procurement practitioners, managers, and policymakers in improving procurement practices and performance.

2. Literature Review

Salasia et al. (2025) stated that accurate procurement planning, which includes precise needs assessment, clear specifications, appropriate sourcing methods, and efficient resource utilization, is essential for improving procurement performance. Furthermore, the active participation of user departments in the process contributes to the accurate identification of needs, the development of better market-oriented specifications, and enhanced purchasing through market surveys. Mebrate and Shumet (2024) evaluated the influence of staff competency and procurement planning on procurement performance using a structural equation modeling (SEM). Findings revealed that both staff competency and planning significantly improve the performance of procurement performance. The study recommends that, public institutions are urged to follow the right staff competence practices and procurement planning procedures to optimize performance. Similarly, Muhwezi et al. (2020) argued that for improving procurement performance, supply chain departments must align their procurement process with pre-established delivery timelines, estimated values, and technical specifications. A study by Oenga et al. (2022) empirically studied the association between planning and performance of the procurement process. Based on study findings, effective planning is essential for reducing procurement costs, improved quality, and shorter delivery times. Additionally, Procurement performance is slightly

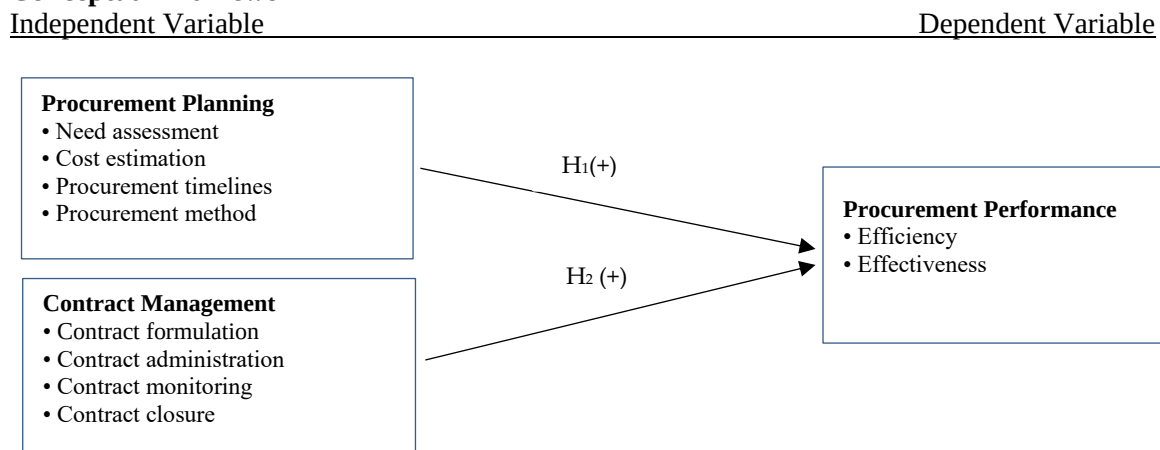
correlated with procurement planning, while it is positively and significantly impacted by increased staff competencies.

In addition, Changalima and Mdee (2023) stated that procurement expertise improves performance through the mediating pathway of purchasing planning, which means the effects are indirectly linked through procurement planning, suggesting the substantial role of procurement planning while studying the association. The study concluded that procurement performance and procurement skills association were greatly mediated through procurement planning. Thus, for improved procurement performance, staff knowledge and skills have to be applied to improve procurement planning. Asande et al. (2023) examined the association between procurement planning and procurement function output in Kakamega. The system theory played the theoretical foundation role, and cross sectional research design was employed. Findings showed that procurement planning was slightly affected by purchasing planning. The study further demonstrated that the application of other supply chain practice is essential for improving performance, alongside procurement planning.

Aluonzi et al. (2016) examined how the performance of procurement in Uganda is affected by contract management. Based on research findings, contract management improves procurement performance through timely delivery, cost conformity, and obtaining quality products. Correspondingly, Faustin and Gamariel (2021) explored the extent to which Rwanda Energy Group's procurement function efficiency is influenced by contract procedures. Findings show a favorable correlation between procurement final results, contract evaluation, and administration. Study concludes that adequate administration of contracts significantly improves procurement performance. The study recommended that procuring entities must ensure the fulfillment of terms and contract conditions, maintain accurate contract records, and establish control procedures. Furthermore, Masoud et al. (2024) empirically examined how contract administration affects Kiambu County's procurement performance. Statistical findings showed that the procurement function is considerably impacted by contract cost estimation procedures and contract administration. Guchu and Charles (2024) studied the interrelated pathways among contract management, vendor relationships, and supply process outcomes in Kenya. The study finding suggests that adequate contract management is essential for maximizing optimal performance. To guarantee successful and efficient procurement processes, it is recommended that county governments should put more effort into electronic records systems and strengthen their ties with suppliers.

A study by Changalima et al. (2022) examined how contract management affects procurement performance and vendor relationships. Findings indicate a strong and positive association between procurement performance and vendor relationships. While challenges in contract management adversely and considerably moderated the relationship. It means that contract management challenges have a detrimental effect on the procurement process. According to Muinde (2022), regulatory alignment, contract management, and procurement risk management have significant impact on procurement effectiveness. Suggesting that public entities must carry their current synergy-based programs with electronic contract records management systems and ensure all procuring activities strictly follow procurement rules. Furthermore, Kimundu and Moronge (2019) noted that contract automation, contract administration team, and contract risk administration must all be executed successfully for improving procurement performance.

Conceptual Framework



3. Material and Methods

A quantitative research design was employed to ensure systematic data collection and analysis. A simple random sampling technique was employed to ensure equal chance of selection for all participants. The study respondents include procurement employees from public ministries in Kabul City. A sample size of 282 respondents was determined using Yamane's formula from a total population of 950 procurement employees (NPI, 2025). Out of 282 distributed questionnaires, 268 usable questionnaires were received, yielding 95.03% response rate, which exceeds the commonly recommended threshold in social science research (Booker et al., 2021). Due to a finite size of total population, the study used the following mathematical formula, known as Yamane's Formula:

$$n = \frac{N}{1 + N(e)^2}$$

In the above formula, n refers to the required sample size, N represent the total population, which in this study refers to the total number of employees working in procurement departments, and e denotes the margin of error or level of precision, which is commonly accepted as 0.05 for (5%). The value 1 refers to the likelihood of the occurring event. Therefore, during the sample size calculation, a 95% confidence level and a margin of error of 0.05 were applied, resulting in a total sample size of 282 respondents.

$$n = \frac{950}{1 + 950(0.05)^2} = 282$$

3.1 Measurement Instrument

Data were collected using a structured questionnaire. To ensure the validity and reliability of the measurement instrument, all measurement items were adapted from previously validated studies. Specifically, Items regarding procurement planning were adapted (Changalima & Mdee, 2023; Hamza et al., 2016; Msinga, 2023; Munyawera et al., 2018). Items measuring procurement contract management were adapted from previous studies (Uwiringiyimana & Dushimimana, 2024; Wachiran & Wanyoike, 2025), whereas items for procurement performance were taken from (Ketemaw, 2020; Wachira & Wanyoike, 2025; Asande et al., 2023). The procurement planning was measured using six items, procurement contract management with six items, and procurement performance was measured with five items. All items were assessed on five-point Likert scale ranging from strongly disagree (SD) to strongly agree (SA).

3.2 Statistical Techniques

Before conducting regression analysis, the key regression model assumptions, including linearity, heteroscedasticity, normality, multicollinearity, and autocorrelation, were assessed using SPSS 24 to ensure the appropriateness of the proposed model. Multiple linear regression was employed using STATA to empirically examine the effect of procurement planning and contract management on public procurement performance in Kabul City. The regression equation for the study is depicted as:

$$PERF = \beta_0 + \beta_1 PPL + \beta_2 PCM + \varepsilon$$

Where, $PERF$ represents procurement performance of public entities, whereas PPL denotes procurement planning, and PCM represents procurement contract management. The β_0 is a constant term, which indicates the value of procurement performance when both procurement planning and contract management are considered zero. β_1 and β_2 are the regression coefficients, which indicate expected change in procurement performance relative to a unit change in PPL and PCM . Whereas, ε denotes the error, which refers to the extent of variation that is not explained by the two included Predictors in the model.

4. Results and Discussion

4.1 Descriptive Statistics

Table 1
Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Procurement planning	268	1.17	5.00	3.3483	1.01660
Contract management	268	1.00	5.00	3.3035	.94531
Procurement performance	268	1.20	5.00	3.3888	.95236

The descriptive statistics for the study variable are presented in Table 1 based on 268 valid observations. The mean value for procurement planning was (Mean = 3.3483, SD = 1.01660), indicating a moderate level of agreement among respondents, with response ranging from 1.17 to 5.00. Meanwhile, the mean score for contract management was (Mean = 3.3035, SD = .94531), suggesting somewhat lower agreement than procurement planning, but consistent responses ranging from 1.00 to 5.00. Finally, the mean score of (Mean = 3.3888, SD = .95236) for public procurement performance, indicating the highest consistent mean among the three constructs, with responses ranging from 1.20 to 5.00.

4.2 Reliability and Validity of the Measurement Instrument

Table 2
Reliability of measurement Instrument

Variables	Cronbach's (α)	CR	AVE	Interpretation
Procurement planning	.834	.863	.513	Good
Contract management	.735	.833	.456	Acceptable
Procurement performance	.782	.853	.539	Good

Pilot testing was conducted with 38 respondents to assess the reliability of the measurement instrument. As shown in Table 2, all constructs achieved Cronbach's (α) value above the 0.70 threshold. Therefore, the measurement tool was considered reliable for data collection. Furthermore, the questionnaire was critically reviewed by three experts in the fields of public procurement for face validity. Convergent validity was assessed to determine the extent to which the items in the underlying construct correlated to each other (Lim, 2024). The results indicate that all constructs achieved CR>0.7. In addition, the average variance extracted (AVE) values for procurement planning and procurement performance are greater than the commonly accepted threshold of 0.5, whereas the AVE value for contract management was slightly below 0.5. Dos and Cirillo (2023) stated that if AVE is less than 0.5, but CR is above 0.7 the construct can still be considered acceptable and retained for subsequent analysis.

4.3 Linearity Test

Table 3
ANOVA Test for Linearity

		Sum of Squares	Df	Mean Square	F	Sig.
PERF*PPL	Linearity	154.302	1	154.302	486.473	.000
	Deviation from Linearity	10.471	22	.476	1.501	.074
PERF*PCM	Linearity	170.754	1	170.754	662.310	.000
	Deviation from Linearity	8.506	22	.387	1.500	.074

An ANOVA test for Linearity was conducted to assess the linear association between predictor and outcome variables (Dormann, 2020). Linearity results depicted in Table 3 show that the

relationship between procurement planning and public procurement performance is significant and linear ($F = 486.473$, $p = 0.000$), but the deviation from linearity has a non-significant value ($F = 1.501$, $p = 0.074$). Similarly, contract management and public procurement performance has significantly linear ($F = 662.310$, $p = 0.000$) relationship, while the deviation from linearity test is not significant ($F = 1.500$, $p = 0.074$). Therefore, the assumption of linearity was satisfied, indicating that the appropriateness of the proposed regression model.

4.4 Normality Test

Table 4
Normality Test Results

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Standardized Residuals	.389	.149	.726	.297

Skewness and kurtosis were examined to assess the normality of the standardized residuals in the regression model (MacGillivray & Balanda, 1988). As presented in Table 4, the skewness was 0.389 (SE = 0.149), indicating a slight positive skewness, while the kurtosis value of 0.726 (SE = 0.297) demonstrates a moderate peaked distribution. However, both values fall between the commonly accepted range of -1 to +1, suggesting that the standardized residuals follow an approximately normal distribution.

4.5 Multicollinearity Test

Table 5
Collinearity Diagnostics

Model		Collinearity Statistics	
		Tolerance	VIF
1	Procurement planning	.397	2.519
	Contract management	.397	2.519

Collinearity diagnostics (VIF and Tolerance) were examined to specify the degree of independence between predictor variables (multicollinearity) (Miles, 2005). Findings in Table 5 indicate that a tolerance of $0.397 > 0.1$, and VIF with $2.519 < 3$ shows no multicollinearity between procurement planning and contract management, supporting the suitability of regression model for subsequent analysis.

4.6 Heteroscedasticity Test

Table 6
The Glejser Test for Heteroscedasticity

Predictors	t	sig
Procurement planning	.443	.658
Contract management	-1.553	.122

Outcome: ABS_Residual

The Glejser test was conducted to examine whether the residuals in the regression model have a constant variance (homoscedasticity) or whether their variance changes with the value of the independent variables (Heteroscedasticity) (Kyung, 2000). The Glejser test results presented in Table 6 indicate that both procurement planning and contract management are statistically insignificant in explaining absolute residual values, as their p-values are above the 0.05 significance level ($t = 0.43$, $p = 0.658$; $t = -1.553$, $p = 0.122$), respectively, suggesting that both predictors did not significantly affect the absolute residual values. Therefore, the assumption of homoscedasticity (constant variance) was satisfied.

4.7 Correlation Matrix

Table 7
Correlation Matrix

Variables	(1)	(2)	(3)
(1) Procurement performance	1.000		
(2) Contract management	0.840	1.000	
(3) Procurement planning	0.798	0.777	1.000

** Correlation is significant at the 0.05 level (2-tailed).

Findings presented in Table 7 indicate that contract management is positively and significantly associated with procurement the procurement performance of public entities in Kabul City ($r = 0.840$). similarly, procurement planning demonstrates a significant positive relationship with public procurement performance ($r = 0.798$). Overall, these findings indicate that improvement in contract management and procurement planning practices are associated with improved procurement performance of public entities in Kabul City.

4.8 Regression Result

Table 8
Result of Regression Coefficients

PERF	Coef.	S.Err	t-value	p-value	[95confid]
PCM	.558	.048	11.56	0	0.463 - 0.653
PPL	.345	.045	7.69	0	0.257 - 0.433
Constant	.392	.108	3.64	0	0.18 - 0.604
R-squared	0.759				
F-test	416.833				
Prob > F	0.000				

The findings presented in Table 8 show that the model is statistically significance ($F = 416.833$, $P < 0.05$), indicating that both procurement planning and contract management have a significantly positive influence on procurement performance of public entities in Kabul City. Furthermore, the coefficient of determination ($R^2 = 0.759$) indicates that approximately 75.9% of the variation in procurement performance is explained by procurement planning and procurement contract management, demonstrating the strong explanatory power of the regression model.

Additionally, regression coefficients were assessed to examine the effect of each predictor on procurement performance. The findings revealed that procurement planning greatly improves public procurement performance ($\beta = .345$, $t = 7.69$, $p < .05$), indicating that realistic procurement planning significantly enhances public procurement effectiveness and efficiency. Hence, H1 was supported. Similarly, contract management has a significant positive effect on procurement performance of public entities in Kabul City ($\beta = .558$, $t = 11.56$, $p < .05$), demonstrating that appropriate contract management practices are essential for improving public procurement function output. Thus, H2 is accepted.

5. Discussion

This study aims to investigate the effect of procurement planning and contract management on public procurement performance in Kabul City. Based on study findings, proposed regression model is statistically significant ($F = 416.833$, $P < 0.05$) with strong explanatory power of model ($R^2 = 0.759$) indicates that approximately 75.9% of the variation in public procurement performance is jointly explained by two predictors. The Findings show that procurement planning significantly improves the procurement performance of public entities in Kabul City, indicating that public entities must ensure proper needs assessment, accurate cost estimation as per prevailing market rates, selection of appropriate procurement methods, and the development of realistic procurement timelines. This finding is consistent with previous studies (Gatobu, 2020; Oenga et al.,

2022), indicating that timely and effective procurement planning enhances public procurement performance through reducing procurement costs, improving quality, and ensuring timely delivery. Similarly, procurement contract management significantly contributes to procurement performance of public entities in Kabul City. This finding is aligned with previous studies (Ackah, 2025; Lawuo, 2026; Sylvere et al., 2024), which suggest that appropriate contract management practices lead to the successful completion of the procurement function. In addition, the findings of the current study further support the results of Masoud (2023), who states that the application of legal frameworks and best procurement practices significantly improves governmental purchasing performance in Afghanistan. Furthermore, Studies by (Ahmed & Kitheka, 2019; Higiro, 2021; Udoba & Mwalukasa, 2025) have shown that factors such as requirements assessment, requirement specifications, and budget approval are essential for enhancing procurement performance. However, studies conducted by (Matwa, 2023; Wanjiku, 2019) reported opposing results as these studies conducted in other geographical settings with limited institutional capacity, inconsistent implication of purchasing regulations, high supply chain disruptions, and weaker contract monitoring mechanisms. Therefore, the relationship between procurement practices and performance may appear stronger or weaker depending on the level of governance maturity, resource availability, and administrative stability in each setting. Additionally, as per the regression coefficient results, among the two predictors, contract management has a greater influence on public procurement performance compared to procurement planning, implying a sluggish and inconsistent implementation of planning in actual settings by public ministries in Kabul City. Overall, effective procurement planning and contract management are fundamental practices for enhancing procurement performance of public entities in Kabul City.

6. Conclusion

Based on study findings, both procurement planning and contract management have a significant positive effect on public procurement performance in Kabul City. The results indicate that procurement planning has a significant positive effect on public procurement performance ($\beta = 0.345$, $t = 7.69$, $p < 0.05$), through comprehensive needs assessment, accurate cost estimation based on prevailing market rates, selection of appropriate procurement methods, and the development of realistic procurement timelines. Additionally, procurement contract management shows the strongest positive effect on public procurement performance ($\beta = 0.558$, $t = 11.56$, $p < 0.05$), indicating that public entities should establish robust mechanism for contract formulation, contract administration, contract monitoring, and contract closure. The findings provide practical guidance for public entities, managers, and suppliers in Kabul City while designing and implementing procurement planning and contract management practices. Based on study findings, it is recommended that public entities must strengthen their procurement planning and contract management practices to improve procurement efficiency, achieve better value for money, enhance transparency and accountability, and ultimately improve overall procurement performance of public entities in Kabul City.

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