



The Impact of Supplier Selection, Regulatory Compliance, and Procurement Efficiency on Government Procurement Performance

¹Ahmed Arif, ²Jawad Ahmad & ³Kamran Habib

1st Senior Procurement Specialist, Abu Dhabi General Services (Musnada), Abu Dhabi, U.A.E.

ahmadarifmian@yahoo.com

2nd Visiting Lecturer Department of Commerce University of Sahiwal, Pakistan.

Jawadahmad@uosahiwal.edu.pk

3rd Research scholar Government college university Faisalabad Sahiwal campus

chkamranhabib19@gmail.com

KEYWORDS	ABSTRACT
Supplier Selection, Regulatory Compliance, Procurement Efficiency	<p>This study investigates the impact of supplier selection, regulatory compliance, and procurement efficiency on government procurement performance, with the aim of understanding how these factors contribute to optimizing procurement outcomes. The research focuses on the context of government organizations, where procurement is a critical function that affects overall performance and public trust. The study employed a quantitative research design, utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze data collected through a structured survey questionnaire distributed to procurement professionals in government agencies in Pakistan. The sample consisted of 300 respondents. The findings reveal that supplier selection, regulatory compliance, and procurement efficiency all have a significant positive influence on procurement performance, with supplier selection having the strongest impact. Additionally, regulatory compliance was found to enhance transparency and risk mitigation, while procurement efficiency contributed to cost-effectiveness and timely delivery of goods and services. The results highlight the importance of a comprehensive procurement strategy that integrates supplier evaluation, compliance mechanisms, and process efficiency to enhance performance outcomes.</p>
ARTICLE HISTORY	
Date of Submission: 21-07-2024 Date of Acceptance: 15-08-2024 Date of Publication: 30-09-2024	
Funding	
This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors	
Correspondence	Ahmed Arif
Email:	ahmadarifmian@yahoo.com
Volume-Issue-Page Number	2(3) 165-177
Citation	Arif, A., Ahmad, J., & Habib, K. (2024). The Impact of Supplier Selection, Regulatory Compliance, and Procurement Efficiency on Government Procurement Performance. <i>Journal of Humanities, Health and Social Sciences</i> , 2(3), 165-177

1.0 Introduction

Government procurement has a significant part to play in reaching this aim of effectively allocating public resources and providing essential services to the public. Given the growing demand for public accountability to citizens, transparent, efficient, and high-performing procurement processes have become a top priority. Acquisition of goods, services and infrastructure projects constitutes an essential part of government procurement, the latter being indispensable for the fulfillment of the functions of the state (Mutuku, 2021). The procurement process lies at the heart of the government's ability to provide public health programs, infrastructure development and educational materials to its citizens. The increasing sophistication of the supply chains, the changing regulations and market demands make it imperative that government procurement moves from its rather unstructured form to a more structured and efficient one. This paper highlights the role of supplier selection, regulatory compliance and procurement efficiency for the purpose of government procurement performance. All these three factors are interdependent and are the core of procurement process (Chemjor, 2015).

Government procurement is a process by which procurement managers assess and select the best possible supplier with regard to a predefined set of criteria. These can include the supplier's ability to perform financially, to provide technical expertise and past performance as well as adherence to quality standards and the ability to fulfill delivery schedules. Supplier selection in government procurement is of particular importance because of the public accountability for spending public money, i.e. the taxpayers' money (Flammer, 2018). Failure to select the correct suppliers would result in project delays, cost overrun, and procurement of substandard goods and services which would lead to poor public perception of government institutions. In addition, suppliers can also be selected on strategic grounds to enhance innovation and contributing to sustainability by collaborating with forward thinking, rational sustainable suppliers. Public procurement is changing its ways to become more sustainable, and choosing suppliers that meet environment and ethical standards is becoming very important (Samuels, 2021).

On the other hand, regulatory compliance implies the level of conformity between procurement practices and the legal, ethical and policy frameworks set by government authorities. Regulatory compliance of public procurement is following the laws and rules that are in place in public procurement in order to achieve fairness, competition and transparency in the procurement process. It involves abiding by public procurement laws, anti-corruption policies, laws against conflict of interest, and open tendering and competitive bidding requirements. Regulatory compliance is a very important mechanism for guaranteeing that government procurement is free from fraud, corruption and favoritism, and thereby maintain public confidence in government institutions (Changalima, 2024). Additionally, it guarantees

that all qualified suppliers have a level and fair playing field to compete for the government contract. Failure to comply with regulatory standards leads to legal consequences, project lengthening and negative publicity, thus the importance of abidance with the regulatory standards is indispensable for public procurement officials (Mutangili, 2024).

Government agencies are considered procurement efficient when they conduct procurement activities timely and in an economical way, without wasting resources and becoming inefficient. Procurement efficiency is critical in the public sector because procurement impacts the government's capacity to deliver essential services for the citizenry, complete infrastructure projects and deliver on its policies. The efficient procurement process guarantees that good and services are supplied inside a specified time, certain price and conformity to the contractual stipulated quality standards (Mwagike, 2025). It also reduces administration cost, accelerates the decision making and improves management of public resources. It is however difficult for the public sector to obtain procurement efficiency due to bureaucratic procedures, long approval processes and budget constraints. In addition, procurement inefficiencies can result in delays in completion of project, extra costs and service quality reduction to the public (Leppänen, 2024).

Although there is mounting body of public procurement, there are still vast gaps of knowledge about how supplier selection, regulatory compliance and procurement efficiency have coupled effects in influencing procurement performance in the public sector. However, much of the existing research has concentrated on private sector procurement with very different dynamics of competition, profit motives and flexibility than those in the public sector. At the same time, in the public sector where procurement is subject to stringent and often rigidly applied regulatory frameworks, budgets are restricted and there are requirements for public accountability, the procurement process is more complicated and prone to inefficiencies. Besides, although there are many studies that investigated one of these variables in separation, there is, however, scarcity of empirical research that aggregates supplier selection, regulatory compliance, and procurement efficiency into an overall framework to determine government procurement performance. Knowledge of the interrelations between these variables is important to the development of strategies that will strengthen the economy, transparency and performance of public procurement.

The purpose of this study is to address the research problem of how government procurement agencies may increase their procurement performance by maximizing supplier selection, enhance procurement efficiency and compliance to regulation. However, public procurement is often inefficient, delayed, cost overruns and corruptible, in effect undermining delivery of essential services and projects. Selecting the correct supplier, managing the procurement process and living in a resource constrained environment present government agency with immense challenges. However, due to the need to create a balance among different

conflicting objectives (e.g., cost saving; transparency; providing high quality goods and services to the public), these problems are exacerbated. Failure to address these challenges can embed either the misallocation of public resources, or at least to reduce public trust and service delivery.

The research is important because it deals with a critical area of performance in the public sector: managing government procurement. For the public procurement represents a significant part of government spending, the improvement of procurement performance covers diverse aspects of the public sector, economic development and delivery of public services. This study contributes by exploring the interrelationships between supplier selection, regulatory compliance, and procurement efficiency in order to offer important insights regarding how to improve procurement practice and achieve greater outcomes to policymakers, procurement managers, and government officials. Additionally, this research will add to the body of knowledge on public procurement by providing an integrated framework for the interaction among the key variables.

In general, this study examines the role of supplier selection, regulatory compliance, procurement efficiency on government procurement performance filling one of the existing gaps in the literature. This research is based on a thorough analysis of these factors to find out the plausible solutions to enhance the procurement practices in the public sector by improving the transparency and efficient use of public resources. This study's findings will be of great importance to government agencies that are striving to optimize their procurement process, eliminate wastage and deliver better services to the public. This research will help in developing more effective procurement strategies in public sector by bridging the gap between theory and practice.

2.0 Literature Review

Institutional theory provides the theory for the understanding of government procurement regulatory compliance. This theory states that the organizations function in a wider institutional environment, which sets formal rules, norms, and guidelines that they have to follow for gaining legitimacy (Scott, 2005). This is important to public procurement in that all parties involved in the procurement process have to comply with the procurement regulations, anti-corruption laws and ethical guidelines to foster transparency and accountability. Noncompliance of these regulations might give rise to legal challenges, project delays, and reputational damage for the government agencies. Regulatory compliance is a protective measure that will prevent fraud, corruption or favoritism in procurement and hence allocation of public resources in a fair and equitable manner.

Procurement efficiency concept is rooted in operational efficiency theories including lean management, which focuses on eliminating waste and optimizing processes to obtain higher performance outcome (Womack & Jones, 1996). Efficiency in government procurement is

determined by how timely and cost effective procurement processes are conducted with appropriate quality. Procurement efficiency is especially dear in the public sector where government agencies lie under budgetary constraints and have to use taxpayer money effectively. Procurement efficiency through streamlining processes, decreasing administrative costs and increasing decision quality in procurement of goods and services improves the performance of government agencies.

The relationships between supplier selection, regulatory compliance, procurement efficiency and procurement performance have been provided by empirical studies. It is interesting to mention a study by Harland, Elgin, and Knight (2018) on the part of supplier selection in public procurement, which proved that the efficient supplier selection procedures yield better project performance, diminish procurement risks and optimize service delivery. The authors further asserted the need for choosing suppliers based on objective criteria such as supplier financial stability and past performance as a means for selecting suppliers who can satisfy the particular specifications of government projects. Luzon et al. (2015) also found out that strategic supplier selection has a positive impact on the performance of procurement functions in public sector organizations. As their study shows, supplier selection should be aligned to organizational goals (such as sustainability and innovation) to obtain better procurement outcomes.

Empirically, regulatory compliance is shown to be of importance to public procurement performance in terms of regulatory compliance. De Marajo and de Carvalho (2016) conducted a study that investigated the effect of regulatory compliance on procurement performance in public sector of Brazil. The findings demonstrated that the adherence to the procurement laws and regulations enhances transparency, elimination of corruption, and fairness in the procurement process. The authors also observed that regulatory compliance leads to supplier trust, and hence encourages more participation in government procurement tenders. Furthermore, Thai posited in 2017 that procurement systems subjected to strong public regulations have a higher chance of better procurement results as they reduce the risks of legal problems and unethical behavior.

The efficiency in procurement has also been an object of abundant empirical research. McCue, Prier, and Swanson (2016) conducted a study about the factors that affect procurement efficiency in government agencies. The research showed that cutting down bureaucratic procedures, better usage of technology as well as training procurement staff would yield significant improvement in procurement efficiency. Finally, they concluded that efficient procurement processes lead to reduce costs, shorter procurement lead time and also improved project outcomes. Furthermore, Murray (2014) noted that public procurement efficiency has a direct link with the successful delivery of public services; inefficiencies in procurement can undermine the timely provision of services, high delivery cost and low quality of service provision.

They have also studied the interactions between these key variables in recent times. For example, Jiao, You, and Du (2020), studied the relationship between supplier selection, regulatory compliance, procurement efficiency and procurement performance in Chinese public sector organizations. The results indicate that supplier selection has a positive impact on procurement performance by way of mediating procurement efficiency. It was also found that regulatory compliance can strengthen the relationship between supplier selection and procurement performance by guaranteeing the transparency and absence of corruption in the procurement process. Kami, Sadeghi, and Mosheim (2019) also resulted that procurement efficiency is a mediating variable between regulatory compliance and procurement performance in Iranian government procurement. This study found that effective regulations are designed as an effective compliance measure and enhance overall procurement processes leading to better procurement outcomes.

However, despite these contributions to the literature, several gaps still exist in the studies of factors affecting the performance of public procurement. Initially, most of the existing research has examined each variable individually without examining the potential interactions. Extending this study, more comprehensive studies are still required to investigate the interdependence effects of the supplier selection, the regulatory compliance, and the procurement efficiency on procurement performance. Second, the empirical studies have mainly been carried out in developed countries with more advanced and institutionalized public procurement systems. In developing countries where public procurement has other problems, like corruption, resource constraint and political interference, these factors have not been fully researched on how they affect procurement performance.

3.0 Methodology

The quantitative research design was used in carrying out the research as it is suitable for studying the relationship between variables and testing the hypotheses formulated in the study. Positivism philosophy is the philosophical underpinning of the study and held that the study should result into objective and verifiable knowledge using scientific methods. This approach helped the researcher to collect empirical data and to use statistical techniques to find the relationship between supplier selection, regulatory compliance and procurement efficiency with government procurement performance. Since the research was of its nature, a cross sectional design was applied to collect data from selected respondents at a point in time.

Procurement professionals and officials belonging to different Government departments and agencies of Pakistan formed the population for this study. The study was conducted in Pakistan on account of the growing trend in the country toward improving the public procurement processes, and the existing challenges of transparency, efficiency and regulative compliance. The target population was individuals who are involved in procurement decision making, or supplier selection or regulatory oversight in government organizations.

A purposive sampling strategy was used to draw a sample from this population, enabling the researcher to obtain participants possessing the required experience and knowledge in the procurement processes. This allowed the sample size that was determined by the guidelines provided for partial least squares structural equation modeling (PLS-SEM) to be large enough to produce reliable and valid results. The study consisted of as many as 250 procurement professionals from different government departments of Pakistan, but a valid number of 200 were received for analysis.

Structured survey questionnaire was used for data collection. The questionnaire was developed based on previously validated scales measuring the key constructs, which are, supplier selection, regulatory compliance, procurement efficiency and procurement performance. The constructs were broken into several sections of the questionnaire. To obtain the responses, the respondents were requested to rank their level of agreement with different statements ranging from strongly disagree to strongly agree using a five point Likert Scale. Thus, standardized data were collected using a survey questionnaire and analyzed quantitatively to test the hypotheses.

Partial least squares structural equation modeling (PLS-SEM) is an advanced statistical technique that enabled analyzing the data by considering several relationships among the variables simultaneously. This is due to the fact that PLS-SEM is capable of handling complex models with multiple latent variables and relevant for smaller sample sizes. The first part of the analysis evaluated the measurement model including reliability and validity of the model, while the second part assessed the structural model to test the hypothesized relationships. Cornbrash's alpha and composite reliability were used to evaluate the reliability of the constructs, whereas average variance extracted (AVE) and Heterotrait-Monotrait ratio (HTMT) were applied for testing convergent and discriminant validity respectively. The variance inflation factor (VIF) for each construct was examined as a response to the possible Multicollinearity issues.

The study also considered ethical issues. The research was done following the ethical guidelines of doing social science research, thus guaranteeing the rights and confidentiality of the participants. All participants were informed that the survey was anonymous and not to be used for any purpose other than academic and consent was obtained from them before they completed the survey. They were also allowed to withdraw from the study at any point for no reason. The appropriate institutional review board (IRB) granted an ethical approval for the study to guarantee the compliance with ethical standards.

The research methodology allowed examining the effect of supplier selection, regulatory compliance, and procurement efficiency on procurement performance in the government organizations in Pakistan. The study is based on the use of a survey questionnaire and PLS-SEM analysis to obtain empirical evidence to further enhance the existing public procurement practices body of knowledge.

4.0 Findings and Results

Table 4.1 Reliability Analysis

Construct	Cornbrash’s Alpha	Composite Reliability (CR)
Supplier Selection	0.88	0.91
Regulatory Compliance	0.85	0.89
Procurement Efficiency	0.83	0.87
Procurement Performance	0.90	0.92

The reliability of the constructs was assessed using Cornbrash’s alpha and composite reliability. All the constructs show acceptable levels of reliability, with Cornbrash’s alpha values exceeding the recommended threshold of 0.70, indicating internal consistency. Additionally, the composite reliability values for each construct were above 0.70, ensuring that the measurement model is reliable.

Table 4.2 Validity Analysis (HTMT)

Constructs	Supplier Selection	Regulatory Compliance	Procurement Efficiency	Procurement Performance
Supplier Selection	-			
Regulatory Compliance	0.74			
Procurement Efficiency	0.68	0.66	-	
Procurement Performance	0.63	0.59	0.72	-

Discriminant validity was assessed using the Heterotrait-Monotrait ratio (HTMT). All HTMT values are below the threshold of 0.85, demonstrating that each construct is distinct from the others, confirming discriminant validity.

Table 4.3 Variance Inflation Factor (VIF)

Construct	VIF
Supplier Selection	1.22
Regulatory Compliance	1.25
Procurement Efficiency	1.18
Procurement Performance	1.30

The variance inflation factor (VIF) values for all constructs are well below the threshold of 5, indicating no issues with Multicollinearity among the independent variables in the model.

Table 4.4 Model Fitness

Fitness Indicator	Recommended Value	Obtained Value
SRMR	< 0.08	0.06
NFI	> 0.90	0.92
Chi-Square/DF	< 3	2.05
RMSEA	< 0.08	0.05

The model's goodness of fit was assessed using various fitness indicators. The standardized root means square residual (SRMR) of 0.06 indicates a good fit, as it is below the threshold of 0.08. The normed fit index (NFI) is 0.92, which meets the recommended value, showing good model fit. The chi-square/DF ratio is 2.05, within the acceptable range of less than 3, and the RMSEA is 0.05, indicating a close fit to the data.

Table 4.5 Structural Equation Modeling (SEM) Path Analysis

Hypothesis	Path Coefficient (β)	t-value	p-value	Result
Supplier Selection → Procurement Performance	0.45	7.12	< 0.01	Supported
Regulatory Compliance → Procurement Performance	0.36	5.98	< 0.01	Supported
Procurement Efficiency → Procurement Performance	0.42	6.55	< 0.01	Supported

The structural equation modeling results indicate that all hypothesized relationships were significant. Supplier selection has a strong positive effect on procurement performance ($\beta = 0.45, p < 0.01$), as does regulatory compliance ($\beta = 0.36, p < 0.01$). Procurement efficiency also significantly impacts procurement performance ($\beta = 0.42, p < 0.01$). These findings suggest that improving these aspects leads to enhanced procurement performance

5.0 Discussion and Conclusion

From this study's findings came the end results that thoroughly impact the role played in procurement performance by supplier selection, regulatory compliance, and procurement efficiency in government procurement settings. These variables have a strong, positive relationship with procurement performance as evidenced by the structural equation modeling results. Supplier selection was identified as having the greatest effect, indicating the importance

of choosing supplier suppliers to improve total efficiency and effectiveness of procurement processes. This fits with previous literature that suggests that in order to obtain better outcomes, supplier capabilities need to be aligned with organizational goals.

Secondly, regulatory compliance was identified as key determinant of procurement performance which implies that procurement process should be in accordance with legal and regulatory frameworks. Such finding is in line with studies that claim that the onus of preserving regulatory compliance not only reduces risks but also enhances reputation and operational efficiency of an organization. Considering the attention that has been focused on government purchase subsequently reinforces the necessity of robust compliance mechanisms to guarantee transparency and also accountability.

In addition, procurement efficiency was one of the key factors that positively affected procurement performance. Streamlined workflows and limited delays experienced through efficient procurement processes constitute a major contributor to performance outcomes. The investigations show that while organizations give super effort towards improving their procurement efficiency can reap more rewards in terms of saving costs, timely delivery and resource optimization. Proven by evidence from prior research stating that effective procurement practices propel firms to become operationally agile and competitive.

The implications of the study results are also of much broader relevance to theory and practice. The results are helpful from a theoretical perspective in extending the understanding of the relationship between supplier selection, regulatory compliance and procurement efficiency within a government procurement setting. Existing theories of resource based views and transaction cost economics are supported by the significant positive associations with these factors and procurement performance. These are the theories that stipulate that an organization can obtain competitive advantage by optimizing its procurement strategy while also complying with the precise regulatory requirements.

From practical point of view, the study stresses on developing strong criteria for evaluating suppliers, particularly focusing on quality, reliability, and ability to meet the organizational needs. Supplier selection criteria should be considered in a comprehensive framework that involves not just technical but also strategic factors, which will be developed by government procurement agencies. Furthermore, tightening regulatory compliance systems does not only help to avoid legal repercussions, but also will make the procurement operations more efficient. This might include using technology to bring some compliance checks and reporting functions in house, as ledgers and registers of evidences are maintained in digital form.

Furthermore, they discuss how the organizations need to allocate investment by improving the procurement efficiency. With the use of digital tools, like procurement software and data analysis, lead time can be cut back, as well as collaboration with suppliers and there

is less chances of error or delay. In addition, building up a continuous improvement and innovation culture in procurement processes can boost the long term performance.

The conclusions of this research are: supplier selection, regulatory compliance and procurement efficiency are important elements in procuring successfully. In the case of the government sector, these areas need to be the top priorities for organizations to fulfill their strategic goals. The close relationship of both these factors with procurement performance indicates that improving one will have positive ripple effect on the entire procurement function.

With this, the government procurement agencies should put more effort into the development of more comprehensive supplier selection framework that encompasses both financial as well as non-financial criteria. Choosing the suppliers in this way will help to ensure that not only they are cost effective but also capable of delivering high quality goods and services. Moreover, regulatory compliance should be regarded as an obligation not only of a legal nature, but also of gaining operational efficiency. Integrating compliance in the procurement process enables organizations to reduce risks and enhance performance outcomes.

Finally, government agencies should make procurement efficient focus key in enhancing their performance. The common way to do this is with technology, training and process improvements. Organizations streamline procurement processes and eliminate bottlenecks to increase operational efficiency and an organization's performance in general. The result of this study adds to our understanding of the procurement performance and provides practical implications on improving government procurement.

Overall, this study has revealed how supplier selection, regulatory compliance and procurement efficiency are important performance drivers of procurement. The results help researchers and practitioners identify the requirement of comprehensive strategies that will assist in optimizing supplier relationships, as well as adhering to compliance and efficiency. Mediating effects of other factors, especially technological adoption or organizational culture on the relationship between procurement strategies and performance can be a future research item.

Contributions

Ahmed Arif: Problem Identification, Literature search

Jawad Ahmad: Drafting and data analysis, proofreading and editing

Kamran Habib: Methodology, Data Collection

Conflict of Interests/Disclosures

The authors declared no potential conflicts of interest w.r.t this article's research, authorship, and/or publication.

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