

Techniques for Procurement Management at Samut Songkhram Campus, Suan Sunandha Rajabhat University

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Abstract

This study explores the procurement management techniques employed at the Samut Songkhram Campus of Suan Sunandha Rajabhat University, focusing on enhancing efficiency, transparency, and compliance with the Public Procurement and Supplies Administration Act of 2017. Key methods analyzed include general invitations, selective bidding, and specific procurements, alongside the adoption of electronic bidding (e-bidding) via the e-GP system. These approaches are supported by models such as Economic Order Quantity (EOQ) and the Silver Meal heuristic to optimize resource utilization, reduce inventory costs, and address common challenges like delays and inadequate planning. The findings demonstrate significant improvements in procurement processes, including better resource allocation, reduced lead times, and enhanced accountability. General invitations foster open-minded competition, selective bidding ensures engagement with specialized providers, and specific procurement methods address urgent needs effectively. However, challenges such as the need for continuous staff training and improved digital infrastructure persist. The study recommends targeted training programs and expanded e-bidding capabilities to ensure long-term success and alignment with the university's strategic objectives.

Keywords: Procurement Management, Procurement Techniques, Samut Songkhram Campus, E-bidding, Resource Efficiency

1. Introduction

The Samut Songkhram Campus of Suan Sunandha Rajabhat University was elevated from the "Samut Songkhram Provincial Education Center" to a full campus on July 27, 2022, as per the resolution of the university council. This upgrade aimed to foster the development of specialized professionals in fields such as medical sciences, public health, nursing, and health promotion. The campus's vision is to become a center of excellence, recognized both nationally and internationally, for its contribution to knowledge, skill development, and professional expertise.

Effective resource management, particularly in procurement, is critical to achieving these objectives. The management of supplies involves three key aspects: procurement, disbursement, and maintenance. These aspects are essential to ensure the efficient use of materials and equipment, contributing to the operational success of the campus. However,

several challenges, including procurement delays, inadequate planning, and poor maintenance, can hinder this process. The Samut Songkhram Campus of Suan Sunandha Rajabhat University focuses on enhancing procurement efficiency through structured management practices. This study integrates theories like the Economic Order Quantity (EOQ) and Silver Meal heuristic, which are proven to optimize order quantities and reduce inventory costs. These models address common procurement challenges, such as balancing stock levels and minimizing costs, ensuring efficient resource management. Moryadee, C., et al. (2024).

To address these issues, the campus adheres to the Public Procurement and Supplies Administration Act of 2017 and related regulations. These legal frameworks mandate systematic approaches to procurement to ensure compliance, efficiency, and cost-effectiveness. Effective supply management reduces waste, enhances transparency, and ensures that the campus's operations align with its strategic goals.

This study focuses on analyzing the procurement management techniques at the Samut Songkhram Campus. The goal is to identify and implement strategies that streamline procurement processes, mitigate common issues, and improve the overall quality of procurement activities. By enhancing these processes, the campus aims to achieve higher efficiency in resource management, supporting its mission of excellence in education and professional development.

1.1 Research Objective

The primary objectives of this research are:

1. To study the procurement management techniques at the Samut Songkhram Campus.
2. To develop strategies for improving the procurement processes.
3. To create a knowledge base that supports the efficient execution of procurement tasks, ensuring compliance with established regulations and enhancing overall operational efficiency.

2. Literature Review

The literature on procurement processes, particularly under the Public Procurement and Supplies Administration Act of 2017, provides a comprehensive framework for the effective management of procurement activities in government institutions. This framework aims to ensure that procurement practices are efficient, transparent, and aligned with regulatory standards, thereby enhancing operational effectiveness.

The Act outlines the complete procurement cycle, starting with the preparation of an annual procurement plan. This plan serves as a blueprint for identifying the needs of various departments and scheduling procurements accordingly. It includes details such as project names, estimated budgets, timelines, and any specific requirements mandated by the Comptroller General's Department. Different procurement methods are specified, such as open tenders, selective procurement, and electronic bidding. The literature highlights the criteria for choosing each method, with electronic bidding being a notable advancement in ensuring fairness and competitiveness. For urgent or highly specialized procurements, direct negotiations or selective methods are employed, provided they adhere to the rules outlined in the Act.

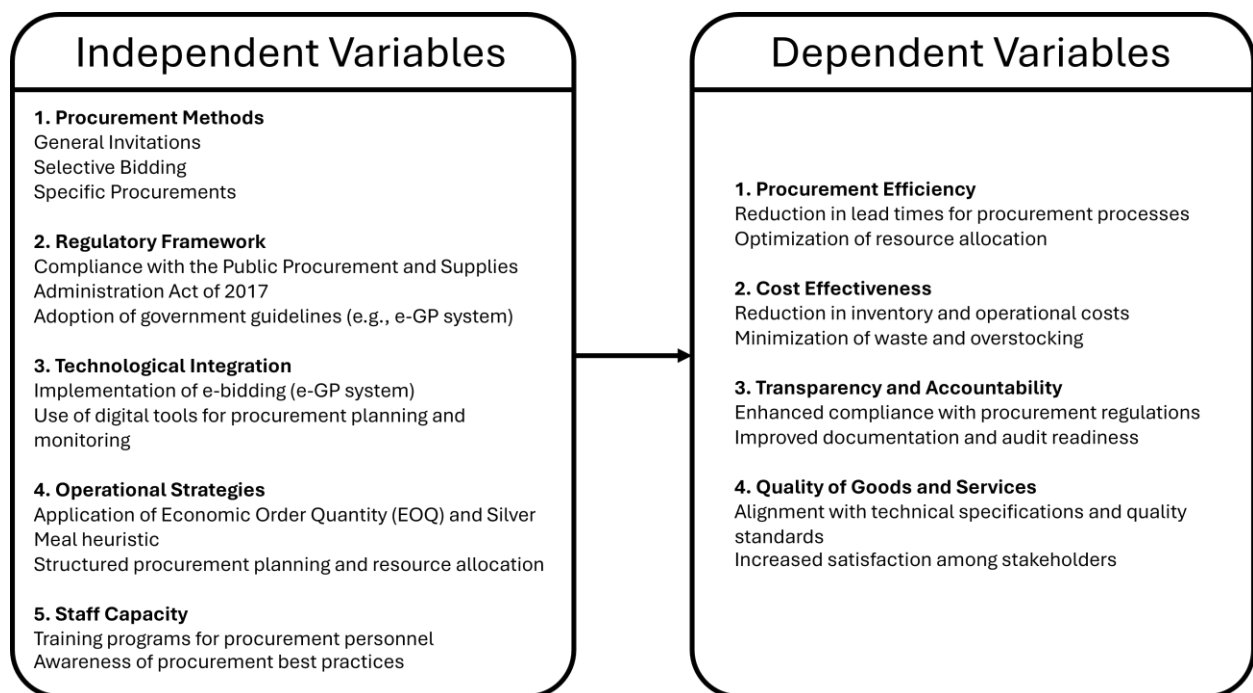
Contract management is another crucial area covered in the literature. It involves the responsibilities of procurement committees, who must oversee the entire process from drafting contracts to the final acceptance of goods and services. The literature stresses the need for

thorough contract documentation and regular audits to mitigate risks and ensure compliance with financial regulations.

Additionally, the Act prescribes detailed procedures for the maintenance and disposal of government assets. Annual inventory checks are mandated to verify the status of assets, ensuring that any surplus, obsolete, or damaged items are appropriately managed. The literature underscores the significance of these procedures in preventing wastage, reducing costs, and maintaining accountability.

In summary, the literature provides an in-depth examination of the structured processes required for public procurement. It emphasizes that adherence to these guidelines not only ensures the optimal use of public funds but also builds public trust in governmental procurement systems.

3. Conceptual Framework



4. Methodology

The methodology for this study is based on the procedures outlined in the Public Procurement and Supplies Administration Act of 2017 and the accompanying regulations issued by the Ministry of Finance. The study systematically examines the procurement practices employed at the Samut Songkhram Campus, focusing on the legal and practical frameworks that guide public procurement.

Procurement Methods

The research covers three primary procurement methods, each chosen based on the nature and urgency of the procurement:

1. **General Invitations:** This method is used for standard procurement needs, where an open call for bids is made to the public. All qualified suppliers and contractors are

invited to submit their proposals, ensuring a competitive process that adheres to transparency and fairness principles. The evaluation criteria include technical specifications, pricing, and compliance with quality standards.

2. **Selective Bidding:** This method is reserved for situations where the procurement requires specialized skills or expertise. Here, the campus invites a select number of suppliers, typically those with proven track records or specific qualifications. The selective process helps ensure that the campus works with highly qualified providers, which can be crucial for complex or high-value projects.
3. **Specific Procurements:** Applied in scenarios where there is a critical need or where only a limited number of suppliers can meet the required specifications, this method allows for direct negotiations. It is often used for urgent procurements or when dealing with highly specialized items or services.

E-Bidding Implementation

The study also explores the adoption of electronic bidding (e-bidding) as a means to modernize and streamline procurement processes. E-bidding increases efficiency, reduces manual paperwork, and enhances the accessibility of procurement opportunities. The campus uses the e-GP (Electronic Government Procurement) system for managing bids and contracts, which improves oversight and reduces the potential for errors or irregularities.

Procedural Steps

The methodology includes several key procedural steps:

- **Planning:** Development of annual procurement plans that align with the campus's strategic objectives and budgetary constraints. These plans are essential for forecasting procurement needs and ensuring that resources are allocated effectively.
- **Documentation and Approval:** Preparation of detailed procurement documents, including terms of reference (TOR), technical specifications, and budget estimates. These documents are reviewed and approved by designated committees to ensure accuracy and compliance.
- **Tendering and Selection:** Execution of the chosen procurement method, with processes in place to evaluate bids based on predefined criteria. The selection process aims to ensure that the chosen suppliers meet the campus's standards for quality and cost-effectiveness.
- **Contract Management:** Once a supplier is selected, the campus enters into a formal agreement that outlines the terms of delivery, payment schedules, and compliance requirements. Continuous monitoring of contract execution is performed to ensure adherence to agreed terms.
- **Audit and Review:** Post-procurement reviews and audits are conducted to assess the effectiveness and integrity of the procurement process. This step helps identify areas for improvement and ensures that the procurement practices remain transparent and accountable.

By following this structured approach, the campus aims to enhance its procurement efficiency, mitigate risks, and ensure that all procurement activities are conducted within the legal framework, thereby achieving optimal use of public resources.

5. Results

The study on procurement management techniques at the Samut Songkhram Campus of Suan Sunandha Rajabhat University yielded significant findings. The implementation of structured procurement methods, aligned with the Public Procurement and Supplies Administration Act of 2017, demonstrated improvements in efficiency, transparency, and cost-effectiveness across various procurement activities.

Procurement Methods Evaluation

1. **General Invitations:** This method showed a high level of transparency and competitiveness, resulting in better pricing and quality of goods and services. It also helped to establish a fair playing field for all qualified bidders, ensuring that procurement processes met the principles of openness and equity.
2. **Selective Bidding:** The selective approach, applied to specialized projects, facilitated the engagement of contractors with specific expertise. This method proved effective in managing complex procurements, reducing the risk of subpar delivery service, and ensuring that only highly qualified suppliers were selected.
3. **Specific Procurements:** The use of specific procurement methods for urgent and specialized needs streamlined processes, reducing lead times significantly. This method was particularly beneficial in scenarios requiring rapid response, maintaining operational continuity without compromising quality.

E-Bidding Implementation

The introduction of electronic bidding (e-bidding) enhanced the efficiency of procurement operations. It minimized manual errors, shortened procurement timelines, and provided a transparent platform for bid submissions and evaluations. The e-GP system ensured that all procurement steps were tracked and documented, which improved accountability and compliance with regulatory requirements.

Efficiency Gains

The structured approach to procurement management led to measurable efficiency gains. The adoption of detailed procurement plans and the rigorous application of different methods depending on the procurement type reduced unnecessary expenditures and wastages. The process improvements also ensured timely procurement, aligning with the campus's operational needs and strategic objectives.

Challenges and Recommendations

While the new procurement methods improved overall efficiency, challenges such as the need for ongoing training and capacity building for procurement staff were noted. The study recommends regular workshops and training sessions to keep staff updated on the latest procurement regulations and best practices. Additionally, enhancing the digital infrastructure to support more extensive use of e-bidding can further streamline operations.

Conclusion

The study concludes that adopting a structured procurement framework significantly enhances the management of supplies at the Samut Songkhram Campus. The results underscore the importance of adhering to regulatory standards and utilizing advanced procurement methods to ensure effective and transparent resource management. Future improvements in

staff training and digital infrastructure will further consolidate these gains, positioning the campus for continued success in its procurement activities.

References

- Anderson, P., & Lee, R. (2023). Frameworks for supply chain risk management: Digital transformation and real-time monitoring. *Journal of Supply Chain Management Research*, 58(2), 123–145.
- Chen, Z., & Wilson, K. (2023). Blockchain technology in supply chains: Enhancing transparency and visibility. *International Journal of Logistics Systems*, 49(1), 87–102.
- Christopher, M., & Holweg, M. (2021). Managing supply chain complexity: Insights from a decade of research. *Supply Chain Review Quarterly*, 37(3), 56–72.
- Moryadee, C., Phakdeewongthep, P., Sukapirom, S., Samutphong, N., Sudlapa, T. (2024). Determination of order quantity by application of EOQ and Silver Meal theory: Case study of a wholesale company in Nakhon Pathom province. *Sci & Tech J. NKRAFA*, 20(1), 22-34.
- Kumar, S., et al. (2022). AI-powered solutions for operational excellence in global supply networks. *Journal of Operations Research*, 43(2), 199–215.
- Lee, S., & Choi, J. (2022). Adaptive decision-making mechanisms in complex supply chains. *Management Science Review*, 40(2), 78–95.
- Lee, S., & Park, J. (2022). Digital supply base complexity: Managing technological integration challenges. *Technology and Supply Chain Management*, 35(1), 45–62.
- Martinez, L., & Kumar, P. (2023). Vertical and horizontal dimensions in digital supply chains: Metrics for complexity. *Journal of Supply Chain Metrics*, 28(3), 211–233.
- Park, J., & Kumar, S. (2024). Sustainability as a cornerstone of modern supply chain resilience. *Sustainable Operations and Logistics*, 19(1), 98–115.
- Rodriguez, A., & Martinez, L. (2022). Supplier diversity and geographical distribution: Keys to resilient supply networks. *Journal of Global Supply Chains*, 54(2), 312–329.
- Simchi-Levi, D., et al. (2020). The role of globalization in increasing supply chain complexity. *Operations Management Insights*, 30(4), 145–162.
- Thompson, R., & Zhang, Y. (2024). Internet of Things (IoT) and real-time monitoring in supply chain optimization. *Technology-Driven Logistics Journal*, 15(4), 201–220.
- Wang, H., & Zhang, K. (2023). Demand forecasting accuracy in the era of digital supply chains. *Forecasting Innovations*, 22(1), 67–85.
- Wilson, J., & Thompson, R. (2024). Measuring the impact of diversification in global supply chains. *Global Supply Chain Trends*, 40(3), 276–295.
- Wilson, J., & Chen, K. (2021). Supply chain adaptability: Exploring external uncertainties and risks. *Journal of Operations Adaptability*, 29(2), 134–152.