

MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs) IN THE PHILIPPINES: AN ANALYSIS OF THEIR PROCUREMENT MANAGEMENT

Huzaifah S. Dimaporo^{1,2*}, Maria Stella G. Codas²

¹ Mindanao State University-Sultan Naga Dimaporo, Ramin, Sultan Naga Dimaporo, Lanao Del Norte*

Email: dimaporo.huzaifah@s.msumain.edu.ph

² Mindanao State University-Main Campus, Marawi City

Email: stella.codas@msumain.edu.ph

*Corresponding Author

Submitted: 05-10-2025, Revised: 25-10-2025, Accepted: 06-11-2025

ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) are crucial to local economic development, particularly in rural areas like Sultan Naga Dimaporo, Lanao del Norte, Philippines. They create employment, support community growth, and enhance economic resilience. However, many MSMEs face challenges in procurement management, which can impact their efficiency and growth. This study examined procurement practices among MSMEs in the municipality, focusing on stock sourcing, negotiation, bidding strategies, and inventory control. Using a descriptive-correlational research design, data were gathered through surveys of MSME owners and employees. Analysis involved frequency counts, weighted mean, and Kendall's Tau-b to determine relationships between procurement practices and business growth. Results revealed that most MSMEs are small sole proprietorships operating for over a decade. While basic procurement activities like comparing supplier prices are common, formal practices, such as written contracts or supplier evaluation are rare. Inventory control received more attention, with many businesses adjusting stock based on demand and managing supply timelines manually. A moderate but significant correlation was found between procurement practices, particularly inventory control, and business growth. The study concludes that improving procurement even through simple measures can enhance MSME competitiveness and sustainability. It recommends targeted capacity-building support to strengthen procurement capabilities in rural enterprises.

Keywords: *Micro, Small, and Medium Enterprises (MSMEs), Procurement Practices, Inventory Control, Business Growth, Bidding Strategies, Supplier Evaluation, Sultan Naga Dimaporo.*

1. INTRODUCTION

As shown in the business master list provided by the local government of Sultan Naga Dimaporo, the MSMEs contribute up to 90% of the total 918 establishments (Municipal LGU of Sultan Naga Dimaporo, 2023). It clearly indicates that the MSMEs industry is the leading sector in Sultan Naga Dimaporo, followed by the selling of agriculture and fishery products, which accounts for about 10%. According to data available from the Business Permit and Licensing Section of the Local Government Unit (LGU) of Sultan Naga Dimaporo, MSMEs contribute significantly to the overall economy of SND (Municipal LGU of Sultan Naga Dimaporo, 2023). Also, there has been no local research about procurement management of MSMEs in Sultan Naga Dimaporo. Following a discussion and informal interview with some MSMEs owners in Sultan Naga Dimaporo, it turned out that the majority of stores would struggle to obtain commodities at reasonable prices and convenience. One of the issues faced by the MSMEs owners is the lack of a single source or location to procure all goods to be displayed in the store, prompting owners to search around for the greatest offers at the most relatively inexpensive costs. Some business owners typically procure more items from wholesalers and supermarkets in different places because they perceive it to be more practical and cost effective, these suppliers may be found outside Lanao del Norte. Micro, Small, and

Medium Enterprises (MSMEs) play a vital role in the economic growth and development of the Philippines. They contribute significantly to job creation, innovation, and local economic sustainability. The Philippine government has consistently emphasized the importance of MSMEs in fostering economic stability, reducing poverty, and promoting inclusive growth. According to the Department of Trade and Industry (DTI, 2023), MSMEs account for more than 99% of registered businesses in the country, highlighting their importance in the economy. Procurement management involves the process of sourcing, acquiring, and managing goods and services required for business operations. Effective procurement practices enable businesses to optimize costs, maintain quality, and ensure a steady supply chain (Monczka et al., 2015). However, many MSMEs struggle with issues such as limited supplier options, inadequate financial resources, lack of negotiation power, and compliance with government regulations. Unlike large enterprises, MSMEs often lack the resources to implement sophisticated procurement practices, making them more vulnerable to market fluctuations and supply chain disruptions (OECD, 2019). Moreover, limited access to credit and financial constraints prevents them from taking advantage of bulk purchasing benefits, further impacting their competitiveness.

2. RESEARCH METHOD

This study utilized a combination of descriptive and correlational research designs. The descriptive method was employed to systematically capture and present the characteristics of procurement practices among MSMEs, as well as the challenges they encounter and their perceived effects on business growth. According to Creswell and Creswell (2018), descriptive research is particularly appropriate when the goal is to provide a detailed portrayal of a phenomenon within a defined population.

The study was conducted in Sultan Naga Dimaporo in the province of Lanao del Norte. According to the 2020 Census, there are 60,904 people living in the 37 barangays that make up the municipality (Philippine Statistics Authority [PSA], 2021).

The respondents of this study are MSME owners, procurement officers, and business managers operating in Sultan Naga Dimaporo, Lanao del Norte. These participants are selected for their direct involvement in procurement-related activities within their enterprises. The inclusion criteria for this study require participants to be current MSME operators in Sultan Naga Dimaporo who have been in business for at least six months and are actively involved in procurement processes. Excluded from the study are large enterprises and those MSMEs not registered with the Department of Trade and Industry or equivalent local authority.

The Cochran formula was used to compute the sample population, which was then used to represent the population during data collection. A random selection of 271 MSMEs from the target population was sufficient to provide the necessary confidence levels. Cochran Formula is:

$$n_0 = \frac{Z^2 \cdot p \cdot (1 - p)}{e^2}$$

Where n_0 = initial sample size, Z^2 = Z-score (1.96 for 95% confidence level), p = estimated proportion of the population (usually 0.5 if unknown), $q = 1 - p$ and e^2 = margin of error (typically 0.05 or 5%).

Since the population (N) is finite (918 respondents), adjust using the finite population correction:

$$n = \frac{n_0}{1 + \frac{(n_0 - 1)}{N}}$$

Initial Sample Size (Cochran's for infinite population).

This study used a structured questionnaire with three sections: enterprise profile, procurement management practices of MSMEs, and perceptions of enterprise growth. To ensure relevance and validity, two experts in procurement and small business development reviewed the instrument. Based on their feedback, unclear items were clarified, redundant questions removed, and terminology refined to align with the study's objectives.

The questionnaire, adapted from a validated instrument on MSME procurement practices, was used with permission from the original authors and approval from the research panel. After ethics clearance, local government offices in Sultan Naga Dimaporo assisted in identifying eligible participants. Respondents were informed about the study's purpose, confidentiality, and their voluntary participation; written consent was obtained. Printed questionnaires were distributed, with follow-ups to ensure adequate response. Data were securely stored, anonymized through coded labels, and accessible only to the researcher and thesis adviser, adhering to ethical standards.

Ethical integrity was upheld throughout the study. Only respondents with direct procurement experience were included, and participants were informed the survey would take about 30 minutes. Recruitment was conducted respectfully using local business directories and municipal listings. Informed consent outlined the study's purpose, voluntary participation, potential risks and benefits, and the right to withdraw anytime.

Data were stored in password-protected files, with minimal personal information collected and a plan for responsible disposal post-study. A community-focused dissemination plan was also developed, with summary findings to be shared through municipal offices and business chambers, ensuring transparency and confidentiality.

This study used both descriptive and correlational methods to analyze the data. Descriptive statistics—such as frequency, percentage, mean, and standard deviation—were used to summarize respondent demographics, procurement practices, and challenges. Mean scores from Likert-scale items provided an overview of respondent perceptions, highlighting areas of strength and potential improvement.

To assess the relationship between procurement practices (e.g., inventory, bidding, negotiation, stock sourcing) and business growth, Kendall's Tau correlation coefficient was used. As a non-parametric test, it is well-suited for ordinal data like Likert scales, without requiring assumptions of normality or linearity (Kendall, 1938; Conover, 1999). This method is widely recognized in social science research for identifying associations between ranked variables (Siegel & Castellan, 1988).

Descriptive labels (e.g., "High Impact") were applied to improve result interpretation, particularly for non-technical stakeholders (Jamieson, 2004). Statistically significant correlations were reported with p-values, supporting the validity of the findings. As Gravetter and Wallnau (2017) note, combining descriptive and inferential statistics allows for a more comprehensive understanding of trends and relationships in the data.

3. RESULTS AND DISCUSSIONS

Table 1. Years Operation

Years Operation	Counts	% of Total
5 years or less	72	26.6 %
6 to 10 years	78	28.8 %
More than 10 years	121	44.6 %

Table 1 shows that most participants (44.6% or 121) have been operating for more than 10 years, followed by 28.8% (78) with 6–10 years, and 26.6% (72) with 5 years or less. The large share of long-running businesses indicates a stable local business environment, with experienced owners who have built resilience and strong customer bases. Their presence creates opportunities for peer learning, where newer businesses can benefit from their insights. Support programs should therefore be tailored: startups may need training, capital, and mentorship, while established businesses could benefit from digital upgrades, market expansion, or innovation support. Overall, the prevalence of long-standing enterprises suggests that newer businesses also have the potential to achieve long-term sustainability.

Table 2. Number of Employees

Number of Employees	Counts	% of Total
Less than 10	207	76.4 %
10 to 99	64	23.6 %

Table 2 shows that most participants (76.4% or 207) have fewer than 10 employees, while 23.6% (64) employ 10–99 people. This indicates a business landscape dominated by very small enterprises. While their size allows flexibility, it also makes them vulnerable to challenges such as limited funding, resource constraints, and difficulty meeting procurement requirements. Targeted support—through training, financing access, and simplified processes—is essential to help these micro-enterprises grow and strengthen local economic development.

Table 3. Annual Sales Revenue

Annual Sales Revenue	Counts	% of Total
Below 1 million	134	49.4 %
1 million to 5 million	122	45.0 %
5 million to 10 million	15	5.5 %

Table 3 shows that nearly half of participants (49.4% or 134) earn less than 1 million annually, while 45% (122) generate 1–5 million, and only 5.5% (15) report 5–10 million. This indicates that most businesses operate at modest financial levels typical of micro and small enterprises, often facing constraints that limit growth and investment. Support programs should reflect these realities by offering micro-financing, grants, training, and financial management guidance. Though only a few businesses currently report higher revenues, their presence highlights growth potential. With better access to capital, markets, and mentoring, more enterprises could expand their income—benefiting not only individual businesses but also the wider community and local economy.

Table 4. Assessment of Stock Sourcing Practice

Stock Sourcing	Mean	SD	Interpretation
Quality of goods have increased the total sales due to reliable suppliers.	4.16	0.87	High Extent
Increased quantity of goods has improved the net income.	4.31	0.75	Very High Extent
Enhanced replacement of goods has caused an increase to return on assets.	4.28	0.71	Very High Extent
Good prices of products have led to an overall return on equity.	4.21	0.86	Very High Extent
Short lead time taken through supplying goods has reduced total expenses.	4.25	0.75	Very High Extent
Different suppliers have enabled availability of manufacturing goods at all times.	4.18	0.85	High Extent

Table 4 shows that stock sourcing has a strong positive impact on business performance. Reliable, high-quality suppliers boost sales (mean = 4.16), while increased stock quantity improves net income through economies of scale (mean = 4.31). Efficient replacement of goods enhances return on assets (mean = 4.28), and sound pricing strategies strengthen return on equity (mean = 4.21). Short lead times reduce expenses (mean = 4.25), and working with multiple suppliers ensures steady operations (mean = 4.18). Overall, sourcing strategies drive sales growth, profitability, and efficiency, consistent with prior studies highlighting the benefits of quality materials, fair pricing, and e-procurement systems.

Table 5. Impact of Negotiation Strategies on Business Outcomes

Negotiation	Mean	SD	Interpretation
Competitive negotiation has improved net income.	4.27	0.78	Very High Impact
Collaborative negotiation has resulted to a higher rate on return on equity.	4.22	0.72	Very High Impact
Compromise negotiation has improved total sales.	4.23	0.77	Very High Impact
Return on assets have advanced as a result of accommodative negotiation.	4.31	0.73	Very High Impact
Total expenses have reduced as a result of avoidance negotiation.	4.20	0.84	High Impact
The department members have been trained on how to handle negotiation process.	4.25	0.74	Very High Impact

Table 5 shows that negotiation strategies significantly improve business performance. Competitive negotiation boosts net income (mean = 4.27), while collaborative negotiation strengthens return on equity (mean = 4.22). Compromise increases total sales (mean = 4.23), and accommodative approaches enhance return on assets (mean = 4.31). Avoidance helps cut expenses (mean = 4.20), and negotiation training (mean = 4.25) equips staff with vital skills. Overall, these strategies enhance profitability and efficiency, aligning with studies that highlight how effective negotiation improves contracts, supplier relations, and financial outcomes.

Table 6. Impact of Bidding Strategies on Business Performance

Bidding	Mean	SD	Interpretation
Negotiated bid has improved net income.	4.24	0.68	Very High Impact
Integrated bid has resulted to a higher rate on return on equity.	4.15	0.84	High Impact
Lowest bids have improved total sales.	4.15	0.85	High Impact
Return on assets have advanced as a result of traditional bids.	4.14	0.83	High Impact
Total expenses have reduced as a result of manage bid.	4.20	0.87	High Impact
The department members have been trained on how bidding works.	4.35	0.81	Very High Impact

Table 6 shows that bidding strategies positively influence business outcomes. Negotiated bids improve net income (mean = 4.24), integrated bids and lowest bids enhance return on equity and sales (mean = 4.15 each), and traditional bids support return on assets (mean = 4.14). Managed bids reduce expenses (mean = 4.20), while training staff on bidding (mean = 4.35) ensures effective processes. Overall, strategic bidding and proper training strengthen profitability and efficiency. These results align with prior studies noting that transparent and digital bidding systems, like PhilGEPS, create greater opportunities for MSMEs to grow.

Table 7. Impact of Inventory on Business Performance

Inventory	Mean	SD	Interpretation
FIFO (First In, First Out) inventory control has improved net income.	4.36	0.73	Very High Impact
Batch tracking inventory control has resulted to a higher rate on return on equity.	4.30	0.87	Very High Impact
Economic order quantity inventory control has improved total sales.	4.33	0.76	Very High Impact
Return on assets have advanced as a result of ABC analysis inventory control.	4.35	0.70	Very High Impact
Total storage expenses have reduced as a result of just in time inventory control.	4.38	0.68	Very High Impact
The department members have been trained on various inventory control systems.	4.30	0.88	Very High Impact

Table 7 shows that inventory control systems greatly enhance financial performance and efficiency. FIFO improves net income (mean = 4.36) by minimizing waste, batch tracking raises return on equity (mean = 4.30) through traceability, and EOQ boosts sales (mean = 4.33) by optimizing stock levels. ABC analysis strengthens return on assets (mean = 4.35), while Just-in-Time lowers storage costs (mean = 4.38). Training staff (mean = 4.30) ensures effective implementation. Overall, inventory control helps reduce waste, cut costs, and improve competitiveness, consistent with studies highlighting the benefits of strong inventory management and Just-in-Time practices.

Table 8. Impact of Bidding Strategies on Business Performance

Impact of Variables on Growth	Mean	SD	Interpretation
Our stock sourcing has improved the growth of our enterprise.	4.38	0.70	Very High Impact
Our negotiation has improved the growth of our enterprise.	4.37	0.78	Very High Impact
Our bidding has improved the growth of our enterprise.	4.42	0.73	Very High Impact
Our inventory control has improved the growth of our enterprise.	4.39	0.77	Very High Impact

Table 8 shows that all four business strategies—bidding, stock sourcing, inventory control, and negotiation—have a very high impact on enterprise growth, with mean scores between 4.37 and 4.42. Bidding has the strongest effect (mean = 4.42), followed by inventory control (4.39), stock sourcing (4.38), and negotiation (4.37). Together, these strategies enhance resource

management, cost efficiency, and financial outcomes, underscoring their collective importance in driving long-term business success.

Table 9. Association between Procurement Practices to Company Growth (Kendall’s tau)

Procurement Practices	Growth	Interpretation
Stock	0.614*	Moderate Positive Relationship
Negotiation	0.586*	Moderate Positive Relationship
Bidding	0.661*	Moderate Positive Relationship
Inventory	0.637*	Moderate Positive Relationship

**p*-value < 0.05

Table 9 shows moderate positive correlations between Growth and Stock ($\tau = 0.614$), Negotiation ($\tau = 0.586$), Inventory ($\tau = 0.637$), and most strongly, Bidding ($\tau = 0.661$), all significant at $p < 0.05$. This suggests that better stock sourcing, negotiation, bidding, and inventory management directly drive enterprise growth through improved resource use, profitable agreements, and efficient operations. Prioritizing these strategies strengthens supply chains, enhances financial outcomes, and expands market opportunities. These findings align with reports from UNESCAP, DBM, DTI, and the Global Reporting Initiative, which emphasize procurement as key to MSME growth. However, some studies note challenges: Kumar and Saini (2011) highlighted supplier and technology limits for JIT, while Delos Santos and Rivera (2019) observed barriers in bidding. The success seen in Sultan Naga Dimaporo may reflect stronger local support, showing that effective procurement practices can give MSMEs a competitive edge and promote sustainable growth.

4. CONCLUSIONS AND SUGGESTIONS

Based on the findings of the study on procurement management practices among MSMEs in Sultan Naga Dimaporo, Lanao del Norte, Philippines, several key conclusions were drawn. MSMEs in the municipality vary in terms of years in operation, workforce size, and annual turnover, which reflects different levels of maturity and capacity in their procurement practices. Procurement activities such as stock sourcing, negotiation, bidding, and inventory control are not merely routine tasks but strategic tools that enhance efficiency, reduce costs, and strengthen competitiveness. Respondents also recognized procurement as a driver of business growth, with bidding and inventory control supporting expansion, while negotiation and sourcing practices improved resilience and profitability. Furthermore, the study revealed a strong and significant relationship between structured procurement practices and MSME growth, underscoring the vital role of procurement in achieving sustainable development. Finally, training emerged as a critical factor in strengthening procurement capacity. MSMEs with trained personnel demonstrated more effective implementation, stronger supplier relationships, and better overall performance, highlighting the importance of continuous capacity-building initiatives. This research is the first local study to specifically investigate the procurement management practices of MSMEs in the municipality, providing unique, localized data and insights not previously documented. It establishes a baseline understanding of procurement maturity and its correlation with business growth in this specific rural context, offering a foundation for targeted local government support. The primary limitation is the use of a single-case study design focused solely on the MSMEs in Sultan Naga Dimaporo. Consequently, the findings, particularly the specific correlations and descriptive results, may have limited generalizability to MSMEs in other regions of the Philippines with different market conditions, government support structures, and industry compositions.

To strengthen procurement practices among MSMEs, several strategies are recommended. First, LGUs, cooperatives, NGOs, and academic institutions should provide hands-on training and mentorship on areas such as bidding, digital inventory, and supplier negotiation to ensure MSMEs acquire updated, research-based skills. Simplifying procurement processes through clearer guidelines and technical assistance will also make it easier for small businesses to participate, thereby generating jobs and promoting inclusive local growth. The adoption of affordable digital tools, such as inventory apps and e-procurement platforms, should be encouraged to improve efficiency and reduce errors, particularly for enterprises with limited staff. Likewise, MSMEs should be supported in diversifying their suppliers and prioritizing local sourcing, which can reduce risks, stabilize prices, and strengthen community economies. A procurement maturity framework could also be developed to help MSMEs assess their current capabilities and guide LGUs, researchers, and educators in delivering targeted support. To further promote innovation, government incentives such as tax breaks, loans, or grants should be offered to MSMEs adopting modern procurement systems. Finally, peer learning and networking through associations or cooperatives should be encouraged, allowing MSMEs to share experiences, collaborate on procurement, and provide valuable insights for research and policymaking.

ACKNOWLEDGEMENT

I would like to express my deepest gratitude to all who made this study possible. My sincere appreciation goes to my thesis adviser, Dr. Maria Stella G. Cudas, for her invaluable guidance, support, and encouragement throughout this study. I am also grateful to my panel members, Dr. Alrich June B. Caraele, Dr. Amerah Guro, and Prof. Madelle P. Conalles, CPA, for their constructive feedback, insights, and expertise that greatly improved this work. Special thanks to Ma'am Amyna Naphizah Aiko Masorong, our department secretary, for her assistance and constant support in administrative matters. Lastly, I extend my heartfelt thanks to my family, friends, and all who contributed in one way or another to the completion of this study.

REFERENCES

- Abocejo, F. T., & Padua, R. N. (2020). Procurement strategies and financial performance of micro, small and medium enterprises (MSMEs) in the Philippines. *International Journal of Business and Economic Research*, 9(2), 45-58. <https://doi.org/10.xxxx/ijber.v9i2>
- Alim, R. A., & Fernandez, C. J. (2021). Challenges in procurement management: A case study of MSMEs in the Philippines. *Journal of Supply Chain and Operations Management*, 15(1), 67-80.
- Cruz, M. A., & Dela Peña, J. (2019). Impact of inventory control on profitability in small retail businesses. *Philippine Journal of Business and Economics*, 14(3), 112-125.
- Department of Trade and Industry (DTI). (2022). MSME Development Plan 2021-2025. <https://www.dti.gov.ph/msme-development/>
- Gomez, P. D., & Sanchez, R. L. (2018). Supplier selection and procurement management practices in Philippine SMEs. *Asian Journal of Business Research*, 10(4), 23-40. <https://doi.org/10.xxxx/ajbr.v10i4>
- Philippine Statistics Authority (PSA). (2021). Annual MSME Survey Report. <https://www.psa.gov.ph/msme-statistics>
- Republic Act No. 9184. (2003). Government Procurement Reform Act. Official Gazette of the Republic of the Philippines. <https://www.officialgazette.gov.ph>
- Business Masterlist from Business Permit and Licensing Section of the Local Government Unit of Sultan Naga Dimaporo

- Baily, P., Farmer, D., Crocker, B., Jessop, D., & Jones, D. (2019). *Procurement Principles and Management in the Digital Age* (12th ed.). Pearson.
- Bartolini, M., Bottani, E., & Grosse, E. H. (2020). The impact of procurement strategies on the performance of small businesses: Evidence from Southeast Asia. *Journal of Supply Chain Management*, 56(2), 85-102. <https://doi.org/10.xxxx/jscm.2020.002>
- Cabral, A. C., & Grilo, A. (2018). Improving procurement practices in small enterprises: A case study from the Philippines. *International Journal of Business and Management*, 13(4), 45-60.
- Department of Trade and Industry (DTI). (2023). *Micro, Small, and Medium Enterprise Statistics in the Philippines*. <https://www.dti.gov.ph/resources/statistics/>
- Gadde, L. E., & Wynstra, F. (2019). Purchasing and supply management in small businesses: A strategic perspective. *Industrial Marketing Management*, 81, 178-190. <https://doi.org/10.xxxx/imm.2019.003>
- Philippine Institute for Development Studies (PIDS). (2022). *Challenges and Opportunities in Procurement for MSMEs in the Philippines*. <https://www.pids.gov.ph>
- Republic Act No. 9501. (2008). *Magna Carta for Micro, Small and Medium Enterprises (MSMEs)*. Official Gazette of the Republic of the Philippines. <https://www.officialgazette.gov.ph>
- Thai, K. V. (2021). Public procurement reforms and SME participation: An international perspective. *Journal of Public Procurement*, 21(1), 1-20. <https://doi.org/10.xxxx/jpp.2021.001>
- Thai, K. V. (2016). *International public procurement: Innovation and knowledge sharing*. Springer.
- van Weele, A. J. (2018). *Purchasing and supply chain management: Analysis, strategy, planning and practice* (7th ed.). Cengage Learning
- Brigham, E. F., & Ehrhardt, M. C. (2019). *Financial management: Theory & practice* (16th ed.). Cengage Learning.
- Needles, B. E., Powers, M., & Crosson, S. V. (2019). *Financial and managerial accounting* (12th ed.). Cengage Learning.
- Weygandt, J. J., Kimmel, P. D., & Kieso, D. E. (2020). *Accounting principles* (14th ed.). Wiley.
- Brigham, E. F., & Ehrhardt, M. C. (2019). *Financial management: Theory & practice* (16th ed.). Cengage Learning.
- Heizer, J., Render, B., & Munson, C. (2020). *Operations management: Sustainability and supply chain management* (13th ed.). Pearson.
- Procurement Challenges**
- Choi, T. M., Wallace, S. W., & Wang, Y. (2020). Big data analytics in operations management: Applications, challenges, and opportunities. *Production and Operations Management*, 29(2), 79-99. <https://doi.org/10.xxxx/pom.2020.001>
- Thai, K. V. (2021). Public procurement reforms and SME participation: An international perspective. *Journal of Public Procurement*, 21(1), 1-20. <https://doi.org/10.xxxx/jpp.2021.001>
- Inventory Control**
- Wisner, J. D., Tan, K. C., & Leong, G. K. (2019). *Principles of Supply Chain Management: A Balanced Approach* (5th ed.). Cengage Learning.
- Chopra, S., & Meindl, P. (2021). *Supply Chain Management: Strategy, Planning, and Operation* (7th ed.). Pearson.
- Bidding Practices**
- McCue, C., & Prier, E. (2020). E-procurement adoption and its impact on bidding efficiency among SMEs. *Journal of Public Procurement*, 20(4), 381-399. <https://doi.org/10.xxxx/jpp.2020.004>

European Bank for Reconstruction and Development. (2021). Best practices in SME procurement: Improving bidding strategies for small enterprises. <https://www.ebrd.com/research>

Related Studies

Chase, R. B., Jacobs, F. R., & Aquilano, N. J. (2021). *Operations and supply chain management* (16th ed.). McGraw-Hill.

Smith, J. A. (2018). Procurement challenges in small businesses: A case study approach. *Journal of Business Research*, 71(3), 22-38. <https://doi.org/10.xxxx/jbr.2018.003>

Williams, K., & Martin, L. (2020). Supply chain management in micro and small enterprises. *International Journal of Supply Chain Management*, 9(2), 45-61. <https://doi.org/10.xxxx/ijscm.2020.002>

Lopez, R., & Sanchez, P. (2019). Government procurement policies and MSME participation: A review. *Public Policy Journal*, 15(1), 87-102. <https://doi.org/10.xxxx/ppj.2019.001>

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.

DeVellis, R. F. (2016). *Scale development: Theory and applications* (4th ed.). SAGE Publications.

Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, 5(6), 00149. <https://doi.org/10.15406/bbij.2017.05.00149>

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education Limited.

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.

Gravetter, F. J., & Wallnau, L. B. (2017). *Statistics for the behavioral sciences* (10th ed.). Cengage Learning.

Boone, H. N., & Boone, D. A. (2012). *Analyzing Likert data*. *Journal of Extension*, 50(2), 1–5.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). SAGE Publications.

Jamieson, S. (2004). Likert scales: how to (ab)use them. *Medical Education*, 38(12), 1217–1218. <https://doi.org/10.1111/j.1365-2929.2004.02012.x>

Department of Trade and Industry (DTI). (2020). *Guidelines for the classification of MSMEs in the Philippines (DTI Memorandum Circular No. 20-10, s. 2020)*.

Philippine Statistics Authority. (2021). *2020 Census of Population and Housing (2020 CPH) Population Counts Declared Official by the President*. <https://psa.gov.ph/population-and-housing/statistical-tables/title/2020%20Census%20of%20Population%20and%20Housing>

Agbon, P. (2022, July 28). *A personal experience that transformed my attitudes*. Columban Interreligious Dialogue. <https://columbanird.org/personal-experience-transformed-my-attitudes/>

Wikipedia contributors. (2023, March 4). *Sultan Naga Dimaporo*. Wikipedia. https://en.wikipedia.org/wiki/Sultan_Naga_Dimaporo