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Resolving Supplier Payment Bottlenecks: A Strategic Framework for Improving Disbursement Processes

Syrah D. Dollente
University of Perpetual Help System Dalta
carinokambal@gmail.com

Josielyn M. Mendoza
University of Perpetual Help System Dalta
dr.jhomendoza@gmail.com

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Abstract

This study examined the supplier payment bottlenecks and their impact on disbursement management at Harbor Star Shipping Services, Inc. Specifically, it assessed the effectiveness of company practices in addressing payment bottlenecks in terms of throughput, operational expense, and inventory; analyzed operational challenges in disbursement management across cost, quality, service, and speed; determined the relationship between practices and operational challenges; and proposed a Supplier Disbursement Framework. A descriptive–quantitative design was employed, with data gathered from 87 purposively selected company personnel across branches and departments directly involved in supplier payments. Data were collected using a validated researcher-made questionnaire and analyzed through descriptive statistics, t-tests, ANOVA, and Pearson's correlation. Findings revealed that company practices were rated "evident" but unevenly implemented, with operational expense management as the strongest area and throughput as the weakest. Operational challenges were assessed as generally "effective," with service and speed rated highest, while cost remained the most vulnerable. Correlation analysis indicated a low but significant positive relationship ($r = .367$, $p < .001$) between company practices and operational challenges, confirming that inefficiencies in payment processes directly affect cost, quality, speed, and service outcomes. The study concludes that strengthening supplier payment practices is essential not only for financial accuracy and timeliness but also for overall operational efficiency. It recommends adopting automation, centralized monitoring, continuous training, and Lean Six Sigma methods to minimize bottlenecks and build a sustainable disbursement framework.

Keywords: *Supplier payments, disbursement management, operational challenges, process bottlenecks, framework*

INTRODUCTION

In business operations, process bottlenecks in supplier payments refer to delays, inefficiencies, or breakdowns that occur within the financial workflow responsible for compensating vendors. These

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bottlenecks often arise from outdated systems, manual processes, lack of coordination between departments, or miscommunication with suppliers. When such issues persist, they not only delay payment schedules but also damage vendor relationships and increase operational risks. Addressing these bottlenecks requires adopting digital payment solutions, automating repetitive tasks, and strengthening interdepartmental collaboration (Sallam et al., 2023). Moreover, enhancing financial visibility through data integration and supplier communication protocols can reduce delays and improve efficiency, leading to stronger accountability and supply chain performance.

In the Philippines, disbursement management remains fraught with operational challenges. Disbursement, which involves the allocation and release of funds to suppliers, is often hindered by fraud risks, compliance issues, multi-channel systems, and inaccurate cash flow forecasting. Studies such as Abejo (2023) emphasize that Philippine companies can improve disbursement operations through enterprise resource planning (ERP) integration and stronger internal audit systems to ensure transparency and accountability. Despite technological advances, many mid-sized enterprises continue to rely on manual, non-standardized processes, leading to late disbursements, errors in fund allocation, and strained supplier relationships. Ugbebor et al. (2023) observed that while financial digitalization has improved transaction accuracy, the absence of system-wide automation in many local firms leaves space for delay-prone interventions. Additionally, compliance with the Government Procurement Reform Act (RA 9184) and its Implementing Rules and Regulations (IRR)—which stress timely supplier payments as a national efficiency standard—remains inconsistent across organizations.

At Harbor Star Shipping Services, Inc., a maritime company in the Philippines, these issues are evident in recurring disbursement bottlenecks such as delayed buyer updates, discrepancies between purchase orders and invoices, late or missing supporting documents, cancellation of checks due to errors in supplier details, and risks of duplicate requests. Such challenges reflect common inefficiencies faced by many firms, resulting in delayed payments, strained vendor trust, and added administrative burdens. These gaps underscore the need for a focused examination of how supplier payment bottlenecks directly affect operational challenges in disbursement management, particularly with respect to efficiency, compliance, and supplier satisfaction.

This study addresses these gaps by examining the underlying causes of delays and inefficiencies in supplier payments and their impact on the broader disbursement process. It is anchored on the Theory of Constraints, which evaluates performance through throughput, inventory, and operational expense, and the Business Process Reengineering framework, which emphasizes redesigning processes for improvements in cost, quality, service, and speed. By applying these theories, the study seeks to identify operational pain points and assess practices implemented by the company to overcome supplier payment challenges. Ultimately, the research aims to propose a Supplier Disbursement Framework that enhances compliance, efficiency, and vendor trust, offering a scalable solution for strengthening disbursement systems in Philippine enterprises.

Statement of the Problem

This study aims to determine the process bottlenecks in supplier payments addressing operational challenges in disbursement management which will serve as a basis for supplier disbursement framework.

Specifically, it will answer these following questions:

1. What is assessment of the respondents on the practices implemented by the company in addressing the supplier payments bottleneck in terms of the following measures of the theory of constraint:
   - 1.1 Throughput;
   - 1.2 Operational Expense;

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1.3 Inventory?

2. What is the assessment of the respondents on the operational challenges in disbursement management of the company with regards to the following factors described in the Theory of Business Process Reengineering:
   2.1 Cost;
   2.2 Quality;
   2.3 Service;
   2.4 Speed?
3. Is there a significant relationship between the company's practices in addressing the supplier payments bottleneck and the operational challenges in disbursement management encountered by the company?
4. Based on the findings of the study, what supplier disbursement framework shall be formulated to ensure effectiveness and compliance of the supplier disbursement system?

METHODOLOGY

The study employed a descriptive–quantitative research design, combining descriptive analysis with structured survey methods to investigate supplier payment bottlenecks and operational challenges in disbursement management. Descriptive research systematically outlines phenomena without manipulation and is well suited to organizational settings where conditions must be observed as they naturally occur (Zikmund et al., 2022). The quantitative approach made use of survey questionnaires to generate measurable data, enabling statistical analysis of the frequency and severity of disbursement bottlenecks, as well as the operational factors contributing to delays (Bell, Bryman, & Harley, 2022). This design provided a data-driven basis for developing a supplier disbursement framework that enhances efficiency, compliance, and accountability.

The respondents consisted of 87 personnel from Harbor Star Shipping Services, Inc., purposively selected for their direct involvement in disbursement management and supplier payment processes. Company participants were drawn from both branch offices—Batangas, Cebu, Cagayan de Oro (CDO), Davao, Iloilo, and Zamboanga—and internal departments, including the General Services Department (GSD), Operations, Accounting, and Treasury. Specific roles included Branch Heads, Administrative Assistants, Warehouse staff, Operations Specialists, Accounting Managers and Assistants, and Treasury Managers and Officers. Inclusion criteria required current employment in relevant departments, direct engagement in supplier payment and disbursement tasks, at least one year of experience, and willingness to participate. Supplier representatives were likewise selected based on their active transactions with the company during 2024–2025.

Data were collected using a researcher-made survey questionnaire and interview guide designed in line with the study objectives. The instrument comprised three sections: (1) respondent profile (age, gender, length of service, and level of involvement); (2) assessment of company practices in addressing supplier payment bottlenecks in terms of throughput, operational expense, and inventory; and (3) assessment of operational challenges in disbursement management in terms of cost, quality, service, and speed. A five-point Likert scale was employed to quantify levels of agreement across indicators (Villanueva, 2023).

The instrument underwent expert validation by a research adviser, a statistician, and three professionals in business administration, finance, and operations to confirm content relevance and coverage. A pilot test with 25 participants not included in the final sample was conducted to evaluate clarity, structure, and sequence of questions. Internal consistency was measured using Cronbach's alpha, which confirmed the reliability of the tool in capturing operational challenges and strategies.

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Upon validation, formal permission was sought from company administrators. Data were gathered through both face-to-face and online distribution, depending on respondent availability. For in-person administration, the researcher explained the study objectives and ethical considerations; for online surveys, screening questions were included to confirm eligibility. Respondents were assured of confidentiality and provided with informed consent prior to participation.

Quantitative data were encoded in Microsoft Excel and analyzed using SPSS Version 27. Descriptive statistics such as frequency and percentage distributions were used to describe respondent profiles (Rosario, 2022). Weighted mean summarized perceptions of practices and operational challenges (Malik & Singh, 2023), while standard deviation measured variability in responses (Alonzo, 2021). Inferential tools included independent samples t-tests and one-way ANOVA to examine differences in perceptions based on demographic variables (Tan & Yeo, 2021; Herrera & Chong, 2024). Correlation analysis tested the relationship between practices in addressing supplier bottlenecks and operational challenges in disbursement management. The level of significance was set at $p \leq 0.05$ for hypothesis testing.

The study followed ethical standards throughout the research process. Participants were informed of the study's purpose and voluntarily consented to take part. They were assured of anonymity, confidentiality, and the right to withdraw at any point. Data were securely stored and used strictly for academic purposes, in compliance with the Data Privacy Act of 2012.

RESULTS AND DISCUSSIONS

Table 1
The Assessment on the Practices Implemented by the Company in Addressing the Supplier Payments Bottleneck

INDICATORS	MEAN	SD	INTERPRETATION	RANK
1. Throughput	2.25	1.04	Disagree / Slightly Evident	3
2. Operational Expense	3.28	0.79	Agree / Evident	1
3. Inventory	2.64	1.07	Agree / Evident	2
Overall Mean	**2.72**	**0.97**	**Agree / Evident**	

LEGEND: STRONGLY AGREE/HIGHLY EVIDENT (4)=3.51-4.0); AGREE/EVIDENT (3)=2.51-3.50); DISAGREE/SLIGHTLY EVIDENT (2)=1.51-2.50); STRONGLY DISAGREE/NOT EVIDENT AT ALL (1)=1.0-1.50)

Table 1 presents the Assessment on the Practices Implemented by the Company in Addressing the Supplier Payments Bottleneck, presents the overall evaluation of respondents. Results show that among the three dimensions, Operational Expense obtained the highest mean (M = 3.28, SD = 0.79), interpreted as Agree / Evident. This was followed by Inventory with a mean of 2.64 (SD = 1.07), also interpreted as Agree / Evident. The lowest rating was recorded in Throughput, which had a mean of 2.25 (SD = 1.04), interpreted as Disagree / Slightly Evident. The overall mean of 2.72 (SD = 0.97) suggests that practices addressing supplier payment bottlenecks are evident, but only partly effective in reducing inefficiencies.

Among the three dimensions, Operational Expense gained the highest mean (M = 3.28, SD = 0.79, Rank 1), interpreted as Agree / Evident. This suggests that the company is understood to be more effective in managing costs associated with supplier payments. Efficient resource allocation, process reviews, and using automation tools appear to contribute to cost control, reflecting the company's stronger performance

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in this aspect. Prior studies support this outcome, highlighting that effective cost management and the adoption of digital tools significantly reduce administrative overhead and improve financial efficiency (Chen, 2022). The company's stronger performance in this dimension reinforces the argument that organizations tend to prioritize financial savings as a direct indicator of operational success.

Inventory followed with a mean of 2.64 (SD = 1.07, Rank 2), also interpreted as Agree / Evident. This indicates that while bottlenecks related to document handling, coordination, and tracking exist, employees acknowledge ongoing efforts to address them. However, the presence of backlogs, duplicate requests, and the absence of centralized monitoring show that there is a need of further improvements. This aligns with Nguyen et al. (2022), who emphasized that fragmented monitoring systems weaken visibility and create bottlenecks in payment cycles. Similarly, Basu and Srinivasan (2024) argue that the absence of ERP integration prolongs reconciliation tasks and diminishes compliance efficiency. This results echo Zhang et al. (2025), who found that manual verification significantly hinders transaction speed, prolonging payment cycles and reducing supplier satisfaction. PWC (2022) also reported that digital transformation enhances disbursement throughput by reducing errors and streamlining approval system.

The lowest-rated dimension was Throughput, with a mean of 2.25 (SD = 1.04, Rank 3), interpreted as Disagree / Slightly Evident. This reveals that respondents perceive delays in approvals, untimely processing, and lack of real-time monitoring as erratically handled compared to operational costs and inventory practices. The determination of manual verification, in particular, continues to hinder efficiency in payment throughput.

The findings imply that while the company has made great progress in controlling operational expenses, it faces greater challenges in improving throughput and inventory management in supplier payments. The stronger performance in cost-related practices suggests that financial efficiency is a central focus, but the slower pace of improvements in processing speed and documentation flow underline the need for automation, centralized tracking, and streamlined approval mechanisms.

Overall, the results suggest that the company's efforts are partly successful, but addressing throughput and inventory concerns will be critical to fully eliminating supplier payment bottlenecks. This supports the perspective of Basu and Srinivasan (2024) and Nguyen et al. (2022), who stress that sustainable supplier payment improvements require automation and centralized system. This is essential to fully eliminate bottlenecks and establish more resilient financial operations workflow.

Table 2
Assessment of Operational Challenges in Disbursement Management

INDICATORS	MEAN	SD	INTERPRETATION	RANK
1. Cost	3.14	0.91	Agree / Effective	4
2. Quality	3.41	0.76	Agree / Effective	3
3. Service	3.51	0.69	Strongly Agree / Highly Effective	1
4. Speed	3.48	0.75	Agree / Effective	2
Overall Mean	**3.39**	**0.78**	**Agree / Effective**	

LEGEND: STRONGLY AGREE/HIGHLY EFFECTIVE (4)=3.51-4.0); AGREE/EFFECTIVE (3)=2.51-3.50); DISAGREE/SLIGHTLY EFFECTIVE (2)=1.51-2.50); STRONGLY DISAGREE/NOT EFFECTIVE AT ALL (1)=1.0-1.50)

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Table 2 shows the assessment of operational challenges in disbursement management. The overall composite mean of 3.39 (SD = 0.78), interpreted as agree/effective, indicates that respondents generally perceive the company's practices in managing disbursement operations as effective. However, the difference in mean scores across the four dimensions highlights specific strengths and areas that still require improvement.

Among the indicators, Service ranked the highest with a mean of 3.51 (SD = 0.69), interpreted as strongly agree/highly effective. This suggests that employees and suppliers recognize the company's great attention on communication, transparency, and responsiveness in its disbursement practices. Open communication and timely updates appear to promote trust and strengthen relationships with both internal and external stakeholders.

Hence, the lowest-rated dimension was Cost (M = 3.14, SD = 0.91), still evaluated as agree/effective but with the most modest evaluation. This indicates that while cost-saving measures and efficient resource allocation are acknowledged, challenges such as delays, payment errors, and reworks continue to trigger administrative and operational expenses. Thus, cost control remains the area requiring the most improvement in disbursement management. Prior studies confirm that transparent communication and timely payment processing, supported by automation and clear workflows, improve supplier confidence and reduce risks of supply chain disruptions (Lopez, 2024).

In summary, the findings show that the company's operational strengths lie in Service and Speed, which directly builds trust and promotes reliability to the suppliers. On the other hand, Cost efficiency is the most critical area for improvement, as it remains vulnerable to the effects of bottlenecks and inefficiencies in the disbursement process. Addressing cost-related challenges would not only escalate financial control but also build up overall effectiveness of disbursement management.

Table 3
Significant Relationship between the Company's Practices in Addressing the Supplier Payments Bottleneck and the Operational Challenges in Disbursement Management Encountered by the Company

Variable Tested		*R*-Value	Degree of Correlation	Sig Value (2 tailed)	Decision on HO	Interpretation
Company's Practices in Addressing the Supplier Payment Bottleneck	Operational Challenges in Disbursement Management Encountered by the Company	.367	Low to Positive Correlation	.000	Reject/Ho not Supported	Significant

Table 3 presents the significant relationship between the company's practices in addressing the supplier payments bottleneck and the operational challenges in disbursement management. The computed R-value of 0.367 indicates a low positive correlation between the two variables. This means that when the company enhances its strategy in resolving supplier payment delays, the disbursement management becomes easy on its operation although the connection between the two remains relatively weak.

The corresponding p-value of 0.000, which is less than the 0.05 level of significance, led to the rejection of the null hypothesis (Ho). This confirms that there is a statistically significant relationship between the two variables. In other words, company practices attain to address bottlenecks in supplier payments significantly influence the operational challenges experienced in disbursement management.

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This result gives hint to the vital role in aligning operational practices with efficiency measures. Ineffective management of payment bottlenecks such as delays, inconsistencies, or lack of process integration can directly increase expenses, reduced quality, slower speed, and weakened service in disbursement operations. Conversely, payment practice improvements, such as automation, streamlined approvals, and real-time monitoring, can substantially mitigate these challenges. Inefficient handling of payment activities characterized by delays, mismatched procedures or poor system integration has been attached to increase operational costs lower process efficiency, and longer completion times. On the contrary, adopting measures like automation, simplified approval workflows, and real time tracking can improve oversight and drive stronger operational outcomes (Wamba et al., 2020).

Overall, the findings advise that the company's ability to address supplier payment bottlenecks plays a critical role in defeating operational challenges. Strengthening practices in this area is therefore not just a matter of financial accuracy and timeliness but also a strategic approach that ensure operational efficiency and sustainability.

Proposed Strategic Framework of Dollente for Improving Disbursement Processes

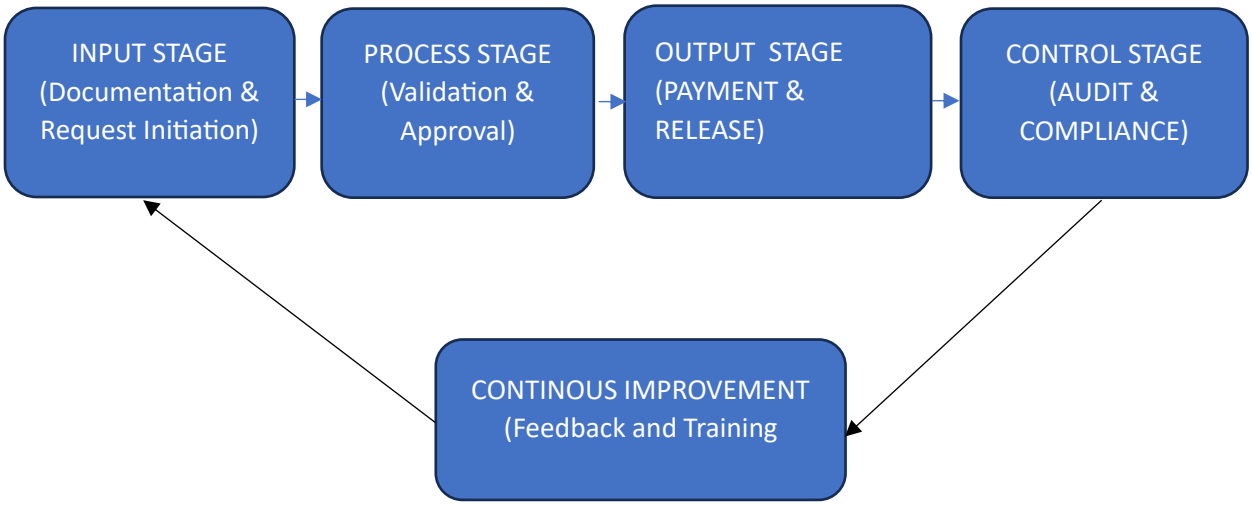

FIGURE 1
DOLLENTE STRATEGIC FRAMEWORK FOR IMPROVING DISBURSEMENT PROCESS (2025)

The supplier disbursement process needs systematic approach that balances operational efficiency with regulatory compliance. Drawing on the study findings and relevant literature, a five-stage framework is proposed: Input, Process, Output, Control, and Continuous Improvement.

A. Input Stage (Documentation and Request Initiation)

This stage demonstrates the foundation of the disbursement process by requiring complete and accurate submission of documents. To resolve the primary cause of delays which is the manual verification of documents, the framework emphasizes standardized submission of purchase orders, invoices, receipts, and BIR Form 2307, through adaptation of a digital document management system

Process Stage (Validation and Approval)

This stage ensures efficiency in validation and approval through automation and clear workflows.

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Automated Validation. Linking the ERP or payment system with the supplier database lessen the risk of mismatching.

Streamlined Approval Flow. Introducing an electronic approval hierarchy minimizes bottlenecks Streamlined approval processes increase accountability and shorten cycle times.

Centralized Monitoring. Centralized tracking by using dashboard monitoring enhances visibility, ensures timely decision-making, and avoids unnecessary delays,

B. Output Stage (Payment and Release)

This stage focus shifts to delivering timely and transparent payments. Automated payment scheduling through checks or electronic banking supports consistency in timeliness. Additionally, incorporating a supplier notification system via SMS or email encourages trust and promotes transparency.

D. Control Stage (Compliance and Audit)

The control phase presents measures ensuring accountability and compliance. Regular internal audits of supplier payments not only prevent irregularities but also promote cost savings, consistent with COSO's (2013) recommendations on internal control. This stage also includes alignment with cost-saving measures and by using exception reporting systems in identifying errors such as duplicate requests or delayed disbursements.

E. Continuous Improvement (Feedback and Training)

The last stage ensures that the process remains adaptive and sustainable. Digital tool trainings and disbursement procedures, suggests highly effective and strengthens competency of employees. Feedback mechanisms with suppliers, improves responsiveness quality service delivery. Finally, embedding Lean Six Sigma's DMAIC cycle ensures continuous evaluation, reduction of waste, and shorter cycle times.

This framework is designed to directly address the operational challenges identified in the study while grounding the process in proven theoretical and practical approaches. By standardizing inputs, automating validation, ensuring transparent payment releases, embedding strong control mechanisms, and promoting continuous improvement, the model strengthens both efficiency and compliance. It also supports long-term supplier trust and aligns with recognized financial governance standards, making it both academically robust and practically applicable.

Conclusions

Based on the summary of findings, the following conclusions are drawn:

1. The company's current practices in addressing supplier payment bottlenecks are fairly effective, particularly in managing operational expenses, but throughput-related delays and inventory inefficiencies remain visible.
2. Operational challenges are generally managed effectively, with service and speed as strengths, while cost control remains the weakest point, of which it is recommendable for an improved efficiency measure.
3. The significant correlation between practices and operational challenges validates that bottleneck issues in supplier payments directly influenced cost, quality, speed, and service in disbursement

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management. This confirms the applicability of Theory of Constraints (TOC) and BPR Theory, as inefficiencies increase costs and disrupt system integration.

Recommendations

Based on the conclusions, the following recommendations are created:

1. **Enhance Throughput Efficiency**
   - Implement real-time monitoring systems for disbursement requests to minimize approval delays and processing bottlenecks.
   - Streamline manual verification processes through adaptation of digital document management tools.
2. **Strengthen Cost Management**
   - Conducting of regular audits and reviews of disbursement practices to identify root of delays and reworks that increase transaction costs.
   - Adopt automation technologies that can lessen administrative costs and errors.
3. **Improve Inventory and Documentation Handling**
   - Develop a centralized disbursement tracking system to prevent duplication, backlogs, and missing records.
   - Enhance interdepartmental collaboration and communication system to reduce inconsistencies in supplier details.
4. **Sustain Service and Speed Excellence**
   - Institutionalize supplier communication process to ensure regular updates and transparency.
   - Provide continuous training and capacity building for employees to maintain speed, accuracy, and service quality in disbursement processing.
5. **Policy and Strategic Alignment**
   - Align disbursement management policies with Lean Six Sigma and DMAIC methodologies to continuously improve processes.
   - Integrate cost-saving measures, ensuring long-term operational sustainability without compromising value.
6. **Further Research**
   - Future studies may expand to include comparative analysis across different industries or branches of the company.
   - Qualitative insights from suppliers could also verify and upgrade findings on disbursement challenges.

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