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Analysis The Impact Of Vendor Delivery Delays On Distribution Effectiveness And The Formulation Of Procurement Strategies at PT. Ivo Mas Tunggal

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Abstract

This study aims to analyze the impact of delays in goods delivery by vendors on distribution effectiveness and procurement strategy formulation at PT Ivo Mas Tunggal. The background of this study is based on the company's high demand for the timely availability of goods and services to support operational activities. Internal and external constraints in the procurement process have caused delivery delays, which affect distribution activities and disrupt the company's overall operational performance. The results of this study indicate that delays in goods delivery by vendors are caused by several factors, including limited stock availability (indent), shipping delays by logistics providers, imported goods procurement processes, regulations on certain restricted goods, and specification mismatches resulting in return processes. These conditions impact delays in fulfilling operational needs and reduce the effectiveness of goods distribution within the company. Therefore, effective communication and coordination with vendors are essential to minimize delivery delays and improve procurement performance.

Keywords: Delivery Delays, Vendor, Distribution Effectiveness, Procurement Strategy, Procurement

INTRODUCTION

In an increasingly competitive global era, companies are required to have integrated and global operational systems, particularly in supply chain management. Effective supply chain management can enhance company speed, efficiency, and competitiveness (Heizer dan Render, 2020). A critical component is the procurement and

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distribution process, which determines the smooth flow of goods and information. PT Ivo Mas Tunggal, as the regional representative office in Riau for procurement and distribution of goods and services in palm oil agribusiness under Sinarmas Agribusiness and Food, operates complex processes dependent on vendor supply continuity.

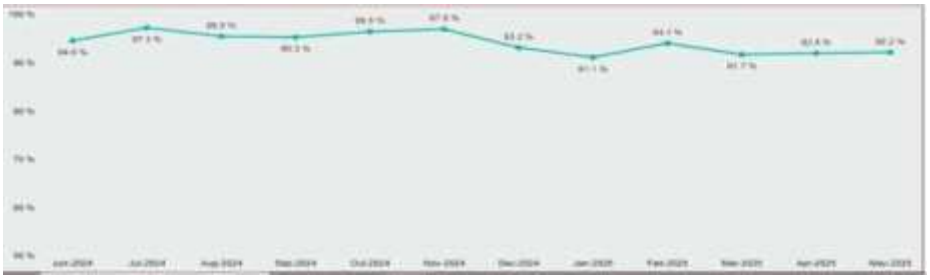


Figure 1. On-time Delivery Chart

A primary challenge faced by PT Ivo Mas Tunggal's procurement division is vendor delivery delays, disrupting operational and distribution activities. These delays stem from multiple vendor constraints including out-of-town expeditions, indent goods, international purchases, and restricted goods *(lartas)* requiring complex government regulatory compliance. Additional internal and external obstacles include returned goods due to specification mismatches, damaged items, quantity discrepancies, wrong deliveries, and internal request errors. These delays are reflected in the on-time delivery and vendor performance charts below:

Count of PO	Month									
	Januari		Februari		Maret		April		Mei	
Row Labels	On-Time	Late	On-Time	Late	On-Time	Late	On-Time	Late	On-Time	Late
10000006 PT. BIMARUNA NIAGA SEJAHTERA	100%	0%	80%	20%	100%	0%	100%	0%	83%	17%
10000495 PT RIAU MITRA BUANA	100%	0%	100%	0%	83%	17%	100%	0%	100%	0%
1002145 PT Multi Medika Laboratory	13%	88%	100%	0%	81%	19%	77%	23%	87%	13%
12424 PT. ALAM JEMBAR BARU	0%	100%	67%	33%	85%	15%	47%	53%	80%	20%
12867 CV. INDOPURA JAYA ENTERPRISE	43%	57%	100%	0%	63%	38%	50%	50%	100%	0%
13880 PT. FORTUNA ANEKAMULTI GEMILANG	91%	9%	87%	13%	91%	9%	99%	1%	91%	9%
14287 PT. BUDIJAYA MAKMURSENTOSA	100%	0%	95%	5%	85%	15%	76%	24%	88%	13%
Grand Total	83%	17%	87%	13%	88%	13%	86%	14%	90%	10%

Figure 2. Vendor Performance

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This issue is critical as delivery delays disrupt unit operations due to untimely material availability for production, creating significant operational impacts. This demonstrates that unresponsive and poorly integrated procurement systems can disrupt overall supply chain efficiency. Therefore, comprehensive understanding of delay causes and distribution system evaluation is essential to formulate adaptive procurement strategies, improve vendor performance, and ensure stable, timely goods availability. This research is highly relevant to management, particularly operations management, as it focuses on procurement strategy effectiveness. Procurement management aims to ensure that goods and services needed by the organization are available in sufficient quantities, adequate quality, timely delivery, and efficient costs (Trinowati Josiah, Iwan Riswandi, Tukimun, 2024). Within PT Ivo Mas Tunggal's operational system, appropriate procurement and distribution strategies can address vendor delivery delays and enhance company performance through effective operations management principles.

From a management perspective, this research relates closely to operational management, supply chain management, and procurement risk management. The objective extends beyond evaluating vendor performance and distribution system effectiveness to providing recommendations for optimizing more effective and sustainable procurement strategies. Through comprehensive understanding of delay causes and impacts, companies can enhance competitiveness and create sustainable added value (Schlegel & Trent, 2014).

Objectives

This study aims to obtain accurate data to analyze the impact of vendor delivery delays on distribution effectiveness and procurement strategy formulation at PT. Ivo Mas Tunggal. Specifically, the research objectives are to identify the constraints faced by vendors during the procurement and delivery process, analyze the extent to which delivery delays impact distribution smoothness and operational effectiveness, and determine effective strategies to prevent future delivery and distribution delays.

LITERATURE REVIEW

Operations Management

Operations management designs, controls, and improves value-creating transformation systems, emphasizing integrated management of materials, information, capacity, time, and quality for operational effectiveness. Ivanov and Dolgui (2020) link superior operational systems to adaptability to disruption amid supply uncertainty, lead

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time volatility, and demand fluctuations, positioning timely procurement as integral to operational continuity thereby framing vendor delays at PT Ivo Mas Tunggal as systemic disruptions. Heavey and Murphy (2022) assert that synchronizing planning, procurement, inventory, and distribution prevents bottlenecks, delays trigger cascading inefficiencies, including idle capacity and reduced productivity. Van Hoek (2020) associates operational resilience with sourcing flexibility, supplier diversification, and early-warning mechanisms directly relevant to PT Ivo Mas Tunggal's indent procurement, cross-regional logistics, and regulatory constraints. Dubey et al. (2021) emphasize cross-functional coordination among procurement, warehousing, logistics, and vendors to ensure accurate information flow and mitigate delays. Consequently, operations management provides the conceptual foundation for analyzing vendor delays as systemic imbalances requiring enhanced coordination, risk management, and performance evaluation.

Supply Chain Management

Supply chain management (SCM) strategically integrates flows of goods, information, and finances from suppliers to end consumers. Siagian et al. (2024) stress that SCM effectiveness relies on business process integration, inter-organizational coordination, and internal capacity alignment, positioning organizational success as a function of collective network performance. Guo et al. (2022) affirm that collaborative supply chain relationships accelerate transformation in dynamic environments. Grounded in Supply Chain Integration Theory, SCM distinguishes internal integration (synchronizing production, procurement, warehousing, marketing) and external integration (strategic collaboration with suppliers and logistics partners). Kieu et al. (2026) demonstrate that integration enhances operational flexibility, demand responsiveness, and stability. In this qualitative context, the theory explains how coordination practices and inter-actor relationships shape operational dynamics and determine overall supply chain effectiveness.

Risk Management

Risk management systematically addresses uncertainties disrupting procurement and distribution. At PT Ivo Mas Tunggal, vendor delays pose critical supply risks that affect distribution effectiveness and operational continuity. Sharifi and Haimzad (2026) note that modern supply chain risks stem from internal factors (planning errors, misalignment, specification issues) and external constraints (stock limitations, logistics barriers, regulatory uncertainty). From a Supply Chain Risk Management (SCRM)

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perspective, vendor delays disrupt material flows and trigger cascading failures. Shafiqi and Ghayas (2025) argue organizations reliant on external suppliers require proactive risk identification via performance evaluations and enhanced collaboration. At PT Ivo Mas Tunggal, delays from indent items, overseas procurement, trade restrictions, and returns illustrate interconnected procurement, logistical, quality, and coordination risks. Aziz and Buchdadi (2026) find robust vendor evaluation systems reduce disruptions by enabling early high-risk supplier identification. Thus, integrating SCRM and vendor risk management provides a theoretical foundation for analyzing delay causes, distribution impacts, and mitigation strategies, positioning risk management as a strategic instrument for building responsive, integrated procurement systems.

House of Risk Concept

The House of Risk (HOR) is a proactive model identifying risk agents, assesses their impact on risk events, and prioritizes mitigation actions through root-cause analysis. In this study, vendor delays at PT Ivo Mas Tunggal constitute the risk event underlying causes vendor stock shortages, expedition delays, import procedures, trade restrictions (LARTAS), returns, and specification mismatches serve as risk agents. Pujawan, Karningsih, and Ristono (2020) demonstrate HOR's effectiveness in procurement for systematically mapping cause-effect relationships and generating urgency-based mitigation priorities. Safitri, Pujawan, and Suparno (2021) highlight HOR's suitability for complex supply chains, linking single risk sources to multiple operational consequences directly reflecting PT Ivo Mas Tunggal's context where vendor delays cascade into receiving bottlenecks, distribution disruptions, and increased costs. Fernandes et al. (2026) emphasize that effective risk management must account for organizational factors, including cross-functional coordination and response agility. Thus, HOR provides a robust framework for identifying delay root causes, mapping risk priorities, and formulating adaptive procurement strategies, functioning as a strategic instrument for building resilient procurement systems when integrated with vendor evaluation and SCOR modeling.

SCOR Model

The Supply Chain Operations Reference (SCOR) model integrates five core processes Plan, Source, Make, Deliver, Return supported by Enable, to map and enhance supply chain performance. APICS (2022) positions SCOR as a strategic tool for identifying bottlenecks causing inefficiencies and distribution delays, making it relevant

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for analyzing vendor delay impacts at PT Ivo Mas Tunggal. The Plan process emphasizes requirement planning, forecasting, and supplier capacity alignment planning inaccuracies increase urgent orders and stockouts. Souza, Oliveira, and Mendes (2022) note that planning deficiencies fundamentally trigger supply chain disruptions. Source and Deliver are critically linked: Source covers vendor selection, evaluation, and monitoring. Deliver covers warehousing and internal fulfillment. Khan, Rahman, and Abdullah (2023) establish that suboptimal sourcing integration directly compromises delivery reliability. While Make is less relevant given the company's procurement-support focus, Return is significant, as returns from damage, specification mismatches, or shipping errors reflect integration quality. Yoo and Park (2021) assert that return mechanisms serve as vital indicators for evaluating supplier relationship management. Disruptions in Plan, Source, or Return cascade into operational inefficiencies. Integrating SCOR with HOR is strategically aligned: SCOR maps process-level disruption points, while HOR identifies root risk sources and prioritizes mitigation, enabling PT Ivo Mas Tunggal to develop resilient, efficient procurement strategies.

METHODOLOGY

Research Approach

This study employs a qualitative approach to gain in-depth understanding of phenomena within specific contexts. Qualitative research is defined as an approach to comprehend meanings, concepts, characteristics, symptoms, symbols, and descriptions of phenomena deeply. This study uses a qualitative approach because data collection involves various techniques, including direct interviews with informants. The main objective is to obtain clear descriptions of field conditions and facts as a basis for answering the problem formulation. Obtained data are subsequently analyzed using relevant qualitative methods. The units of analysis are the procurement division, warehouse staff, and vendors as external company partners. These three units were selected due to their direct involvement in PT Ivo Mas Tunggal's procurement and delivery processes, ensuring data provides realistic operational descriptions.

Data Collection and Validation

Primary data were gathered through direct observation and in-depth interviews with PT Ivo Mas Tunggal's internal staff (procurement and warehouse) and external vendors. Observation monitored operational behaviors, contextual situations, and end-to-end workflow performance, while interviews explored supply chain dynamics, distribution

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bottlenecks, and procurement strategy formulation. Secondary data comprised internal records (SOPs, work guidelines, vendor delay logs), annual reports, and peer-reviewed literature on operations management, supply chain, risk management, and procurement strategies to contextualize findings. Methodological rigor was ensured through data triangulation, cross-verifying information from multiple sources and methods to examine interrelated phenomena (Nurfajriani et al., 2024). Member checking, wherein preliminary insights were validated with key informants. Reliability was maintained via a systematic audit trail documenting all research phases, alongside dependability checks that ensured data consistency through repeated cross-referencing of interview and observation results with internal operational documents.

Data Analysis Techniques

This research uses qualitative analysis to deeply understand existing problems and their impacts on distribution effectiveness at PT Ivo Mas Tunggal. Through thematic analysis, found data are grouped into frequently appearing main themes such as delivery delay causes, vendor constraints, inter-division coordination systems, and delay impacts on distribution smoothness. Narrative analysis is also used to understand informants' experiences and perspectives more deeply. Information and explanations from procurement staff, warehouse staff, and vendors are analyzed as narratives describing actual procurement and distribution processes in the field. Lastly, grounded theory is used to help researchers connect various field findings through staged coding processes aimed at building conceptual understanding of relationships between vendor performance, delivery delays, and distribution effectiveness.

RESULTS AND DISCUSSION

Results

Initial findings revealed that delivery delays were influenced by various factors from both vendors and internal processes, including limited stock, delivery from outside regions, indent goods, and import restrictions (*lartas*) regulations. These delays directly impacted operational effectiveness, disrupting unit needs fulfillment, increasing inter-divisional coordination burden, and potentially hindering overall operational activities.

Data Coding

Interview data from procurement staff, warehouse staff, and vendors were transcribed and repeatedly reviewed. Thematic coding grouped statements based on

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similar meanings to identify main themes. Initial categories included vendor delivery constraints, procurement coordination, delivery delays, and distribution impact.

Three main themes emerged as vendor constraints, which most of respondents indicated delays were caused by external factors including stock limitations, indent goods, and deliveries from outside regions. As N2 (buyer staff) said that most delays occur because goods must be indented or shipped from outside the city or abroad, so vendors cannot meet schedules according to PO. This was reinforced by K1 (vendor representative), *"Beberapa barang memang tidak selalu ready stok, apalagi yang harus didatangkan dari luar daerah atau pun indent diluar negeri. Proses pengiriman juga tergantung jadwal ekspedisi dan regulasi yang berlaku."* which some goods are not always ready in stock, especially those from outside regions or indented from abroad. The delivery process also depends on expedition schedules and applicable regulations.

As for coordination and communication, lack of initial communication regarding specifications and delivery estimates increased delay potential. N4 (warehouse staff) noted that often goods arriving don't match specifications or quantities are insufficient, requiring returns that slow distribution to units. K2 (vendor representative) also acknowledged, *"Kadang ada perubahan spesifikasi atau permintaan mendadak dari perusahaan, sementara barang sudah kami proses sebelumnya, jadi perlu waktu tambahan untuk penyesuaian ulang."* which means sometimes there are specification changes or sudden requests from the company while they've already processed the goods requiring additional time for readjustment. The delays postponed operational needs fulfillment because it will potentially disrupt production activities. N1 also stated *"Kalau barang datang terlambat, unit jadi menunggu dan operasional bisa terganggu karena material belum tersedia"*. K3 (vendor representative) itself acknowledged that we understand that delivery delays can impact company operations, so we usually try to provide early information if there are potential delays.

Thematic Analysis

Results showed that vendor delivery delays are multidimensional problems influenced by interrelated factors. The vendor constraints theme addressed the first research question regarding types of obstacles vendors face. The delivery delay impact theme showed how problems affect internal distribution effectiveness, addressing the second research question. The relationship between procurement coordination and delay impact demonstrated that distribution effectiveness depends not only on vendor performance but also on company communication systems and procurement

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management. These findings provide the basis for (APICS, 2022) (Souza, Oliveira, & Mendes, 2022) (Khan, 2020) in addressing the third research question regarding the need for more adaptive and integrated procurement strategies to minimize future delay risks.

DISCUSSION

Contextualization of Findings

Findings indicate that vendor delivery delays stem from interrelated internal and external factors. External drivers include vendor stock constraints, indent items, cross-regional or overseas shipments, trade restrictions (LARTAS), and natural conditions. Internal factors center on procurement coordination and communication gaps between internal teams and vendors. This aligns with Supply Chain Management (SCM) theory, which frames vendor delays as operational risks shaped by internal and external supply chain dynamics. These findings directly address the research questions on delay causes and distribution impacts, demonstrating that delays disrupt internal distribution flow, particularly in meeting unit operational needs. Consequently, distribution effectiveness depends not merely on product availability, but critically on delivery timeliness and vendors' capacity to fulfill procurement commitments.

Relation to Literature

These findings align with Supply Chain Management (SCM) theory, which posits that distribution performance hinges on coordination among all supply chain actors. Chopra & Meindl (2016) identify supply delays as critical operational risks that impair corporate performance if inadequately managed. The observed vendor constraints and coordination weaknesses further corroborate prior studies linking delivery delays to logistical uncertainties (Hiezer & Render, 2015). Within the SCOR framework, the identified procurement and distribution issues (Pujawan & Geraldin, 2009) directly correspond to the Source and Deliver processes, particularly regarding reliability and responsiveness dimensions.

Practical Implications

This study yields several actionable implications for PT Ivo Mas Tunggal. First, implementing periodic vendor performance evaluations focusing on delivery timeliness and stock readiness will enable evidence-based vendor prioritization and collaboration scheme improvements. Second, strengthening vendor coordination through standardized procurement information protocols and integrated procurement systems is essential to

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minimize specification errors, information delays, and return rates. Third, adopting adaptive procurement strategies, such as maintaining safety stock for critical items and implementing medium-term procurement planning, will effectively mitigate delivery delay risks. Collectively, these measures are expected to enhance distribution effectiveness and sustain overall operational continuity.

CONCLUSION

This study concludes that vendor delivery delays at PT Ivo Mas Tunggal stem from interconnected external factors (stock constraints, indent items, cross-regional/overseas shipments, LARTAS regulations, and natural conditions) and internal factors (suboptimal procurement coordination, specification gaps, and non-anticipatory planning). These delays directly impair distribution effectiveness, disrupting operational workflows, increasing delay risks, and reducing efficiency due to unplanned waiting and adjustments. The findings directly address the research objectives by demonstrating that delays arise from multidimensional internal-external interactions rather than isolated causes, significantly impact distribution continuity, and can be mitigated through targeted, systemic interventions. Theoretically, this research reinforces supply chain literature by emphasizing that effective buyer-vendor coordination and communication are critical for distribution reliability and overall performance. This aligns with Chopra and Meindl (2016), who assert that supply chain integration enhances responsiveness and reliability. The findings also support the SCOR model's reliability and responsiveness dimensions, illustrating how delivery delays reflect weaknesses in Source and Deliver processes, thereby enriching theoretical understanding of vendor performance-distribution effectiveness relationships in manufacturing contexts.

Practically, the study provides actionable recommendations for PT Ivo Mas Tunggal: (1) implement periodic vendor evaluations using clear KPIs (on-time delivery, specification compliance, responsiveness) to guide partnership decisions, (2) standardize procurement SOPs to minimize specification errors and returns, (3) adopt anticipatory planning with safety stock for critical items and medium-term forecasting to buffer against delays, (4) optimize integrated information systems for real-time tracking and early disruption detection, and (5) establish transparent communication forums for collaborative problem-solving. Managerially, these insights underscore the need to integrate vendor performance into strategic supplier management, reinforce operational control through documented SOPs, and prioritize proactive, risk-based planning. Collectively, these measures ensure sustained operational continuity and distribution effectiveness while

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providing a foundation for future research on supply chain resilience across industrial contexts.

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